

3M™ Molecular Detection System Software 2.5.0.0 Upgrade/Installation Instructions

This document is a supplement to the 3M™ Molecular Detection System User Manual. This supplement contains instructions for upgrading the 3M Molecular Detection System Software application to version 2.5.0.0. The upgrades provide the following necessary improvements:

1. SQL qualification to include default of SQL 2014 Server and compatibility with SQL Server 2016 and SQL Server 2017.
2. Enabling Automation-Support feature.
3. Addition of Signature module to Run Report.
4. Defaulting of import/export file location to public folder.
5. Enabling of “View Sample ID” on Results screen.
6. Bug Fixes / Security Enhancements.

Minimum Computer/Server Requirements

- Microsoft® Windows® 7 (32- or 64-bit), Microsoft® Windows® 8 (32- or 64-bit), Microsoft® Windows® 8.1 (32- or 64-bit), or Microsoft® Windows® 10 (Ultimate, Professional, and Enterprise editions)
- Microsoft® SQL Server 2008; Microsoft® SQL Server 2012, 2014, 2016 and 2017.
- 2.0 GHz Intel Pentium 4 or similar/faster processor
- 2 GB RAM (4 GB size recommended)
- 20 GB free hard disk space
- USB 2.0

How to Download the Latest Version of the Software

Software download page

https://www.3m.com/3M/en_US/food-safety-us/support/software-support/

Navigate to 3M™ Molecular Detection System Support

Click on the download software button to go to registration page

3M™ Molecular Detection System Support



Download Software

Log in to access software updates, downloads and resources for your 3M™ Molecular Detection System.

Fill in the info, select 3M™ Molecular Detection System (MDS100) and submit.

Software Download Registration

All fields are required unless indicated optional

Business Email Address

First Name

Last Name

Company

Country

State/Province

Zip or Postal Code

Business Phone

Instrument type

- 3M™ Clean-Trace™ Hygiene Monitoring and Management System (LM1)
- 3M™ Molecular Detection System (MDS100) → Select the software
- 3M™ Petrifilm™ Plate Reader (6499)
- 3M™ Microbial Luminescence System (MLS II)

Stay current

- I would like to receive electronic messages from 3M Food Safety.

3M takes your privacy seriously. 3M and its authorized third parties will use the information you provided in accordance with our [Privacy Policy](#) to send you communications which may include promotions, product information and service offers. Please be aware that this information may be stored on a server located in the U.S. If you do not consent to this use of your personal information, please do not use this system.

SUBMIT

After registration, an e-mail will be sent to download the software.



Thank you for registering your 3M™ Molecular Detection System

Download Instructions:

1. Click on "Download Now" to begin download
2. Select "Save As" and save file to PC desktop or server
3. Right click on file from PC desktop or server and Select "Run as administrator" or "Run with Elevated Privileges"

DOWNLOAD FULL INSTALLATION

[Upgrade Installation Software version 2-5-0-0](#)

Need additional info?

Our [software download and support page](#) may help answer any additional questions you might have.

Click on appropriate button to download full installation or upgrade installation file. Select "Save As" and save file to PC Desktop

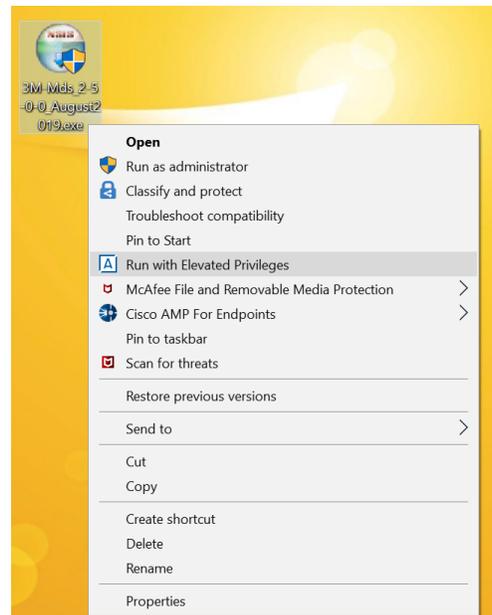
Installation and Upgrade Instructions

It is strongly recommended to perform a database backup per the software user manual before upgrading from a previous version of the 3M Molecular Detection System Software. Close all open applications before starting the installation of 3M Molecular Detection System Software.

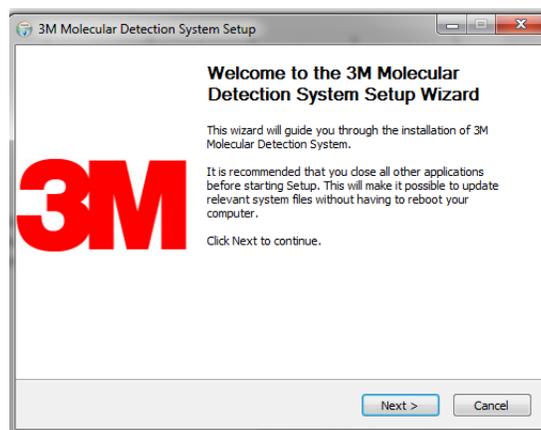
Upgrading from a Previous Version

1. Locate

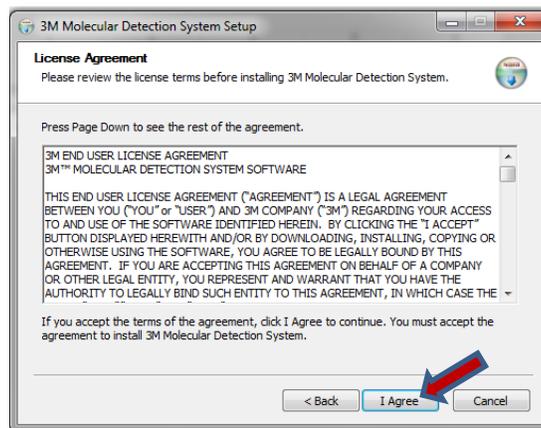
3M-Mds_2-5-0-0_August2019.exe file, right-click on the file and select Run as administrator or Run with Elevated Privileges to start the installation wizard.



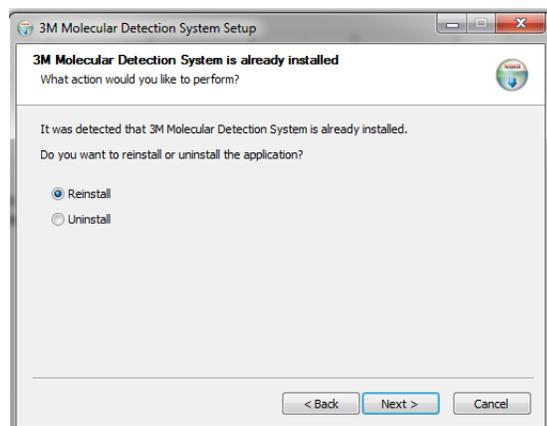
2. The Welcome screen is presented. It may take a few minutes for this screen to appear. Click [Next] to continue.



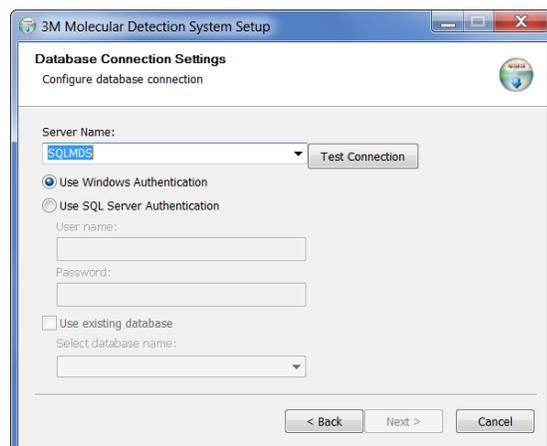
3. Read the 3M End User License Agreement, and click the [I Agree] button to accept the agreement to continue with the installation.



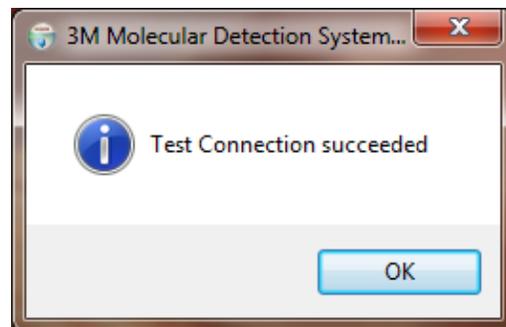
4. The existing 3M Molecular Detection Software installation is detected. Reinstall is selected by default. Click [Next] to continue.



5. A list of existing SQL Database servers is provided on the Database Connection Settings screen. Select the intended SQL database server or enter the server name as “<Computer_Name>\SQLMDS” if the intended Server Name is not populated. The default Use Windows Authentication should be selected.

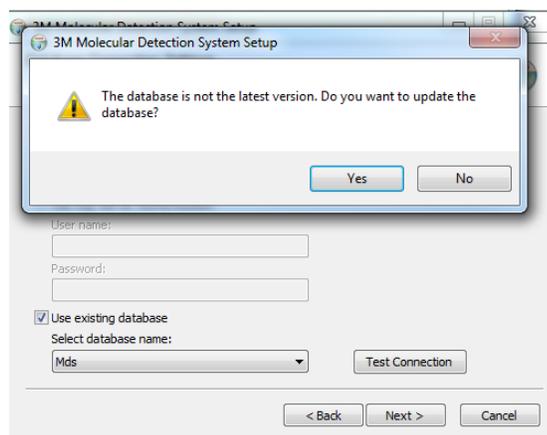


6. Click the [Test Connection] button to verify connection to the Server Name. If the test is successful, click [Next]. If the connection fails, enter the <Computer_Name>\SQLMLDS as the Server Name.



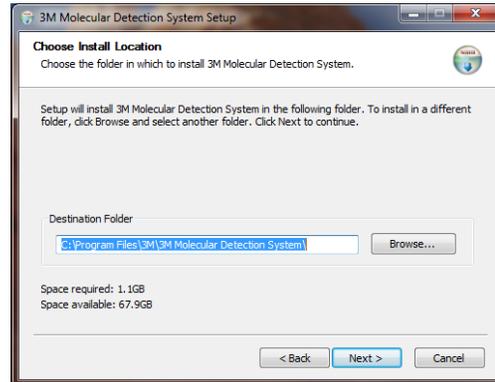
- Note: Use existing database is selected by default to connect to the existing database and preserve the data. If this option is not selected and you want to use the existing database, check the box and select the Mds database from the drop-down list. If a 3M Molecular Detection Software database is present, but you would like to create a new database, uncheck this setting. **This will erase all data in the existing database.**

- Note that a warning might be displayed if the existing database is different from the new database. Click [Yes] to update the database

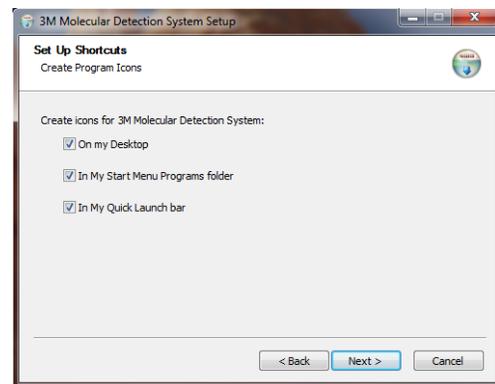


7. In the next three screens, the installation wizard asks for the Destination Folder, the locations for Application Shortcuts and the Start Menu Folder. You can modify the defaults for these fields if necessary however, the default values are recommended. Click [Next] to proceed through each screen.

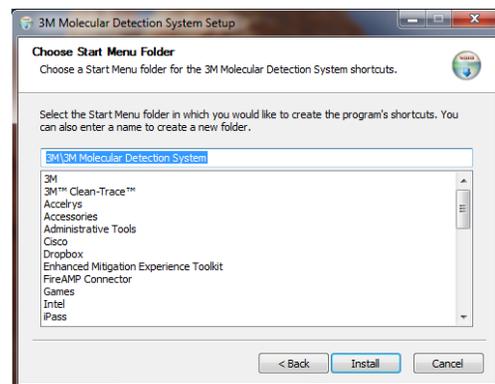
a. Destination Folder – This is the root installation directory for the 3M Molecular Detection Software.



b. 3M Molecular Detection System Application Shortcuts — These are the locations where the installation wizard will place the 3M Molecular Detection Software shortcuts.

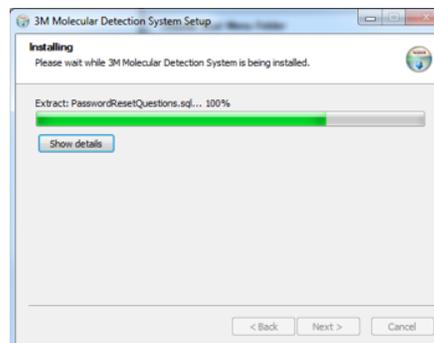


c. Start Menu Folder – This is the location within the Start menu where the installation wizard will place the 3M Molecular Detection Software shortcut.

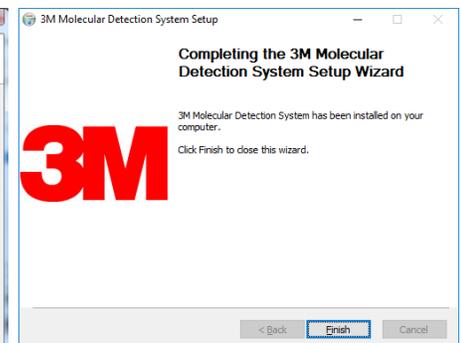


d. Click [Install].

8. A progress bar is shown. Click [Next] after progress bar is completed.



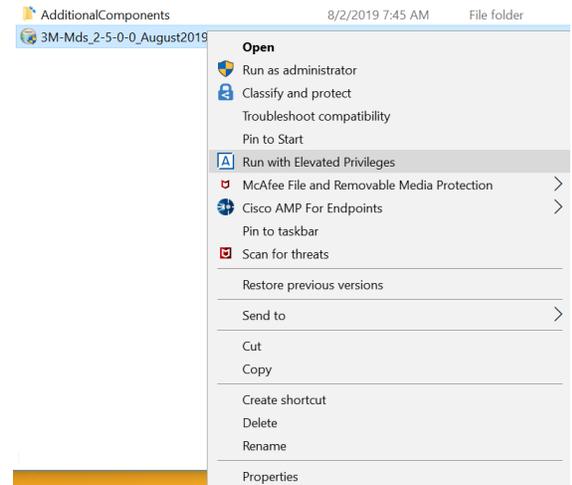
9. Click [Finish] when the installation wizard displays the Completing the 3M Molecular Detection Software Setup Wizard screen



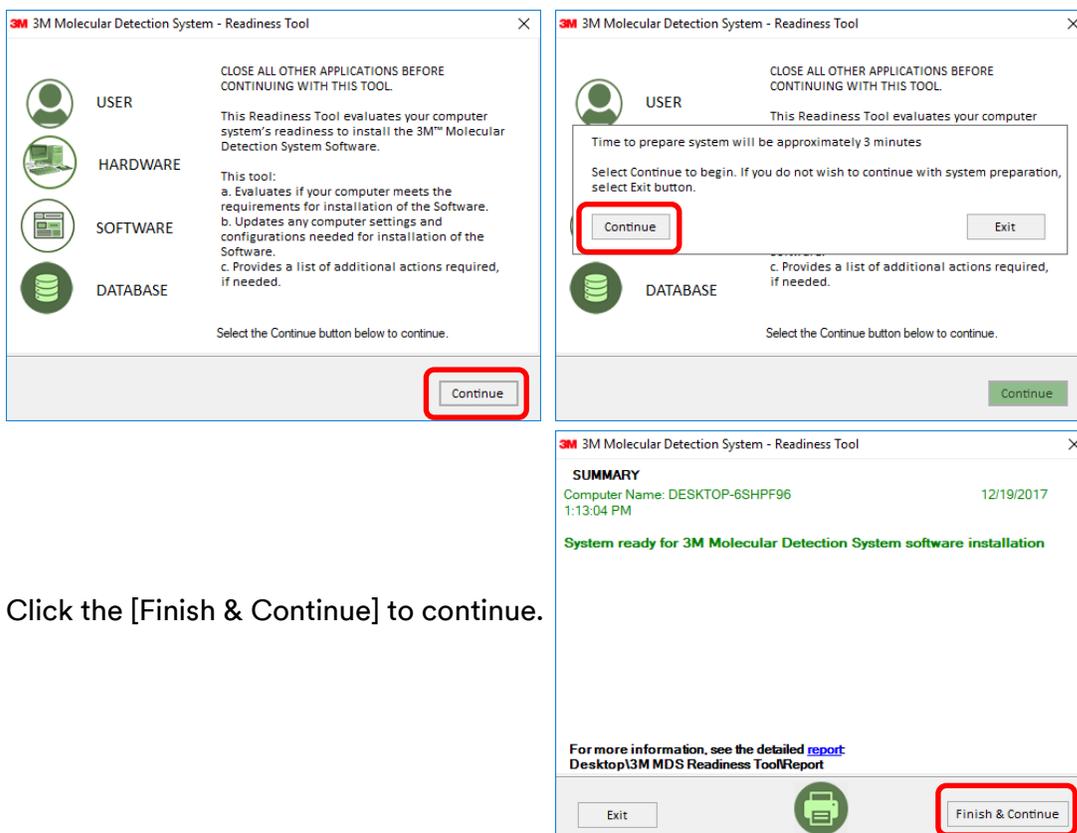
First-time Installation

3M Molecular Detection System Software Version 2.5.0.0 is packaged with the Microsoft® SQL Server® 2014 Express database platform, required for data storage. SQL Server will be installed automatically for a new software installation, prior to the installation of the 3M Molecular Detection Software.

1. After registration, click on **DOWNLOAD FULL INSTALLATION** button in the e-mail to download **3M-Mds_2-5-0-0.ZIP**. Save the file to desktop, extract the zip file and save contents to the folder **3M-Mds_2-5-0-0**.
2. Locate the **3M-Mds_2-5-0-0** folder, open the folder and right-click on the **3M-Mds_2-5-0-0_August2019.exe** file and select **Run as administrator** or **Run with Elevated Privileges** to start the installation wizard.



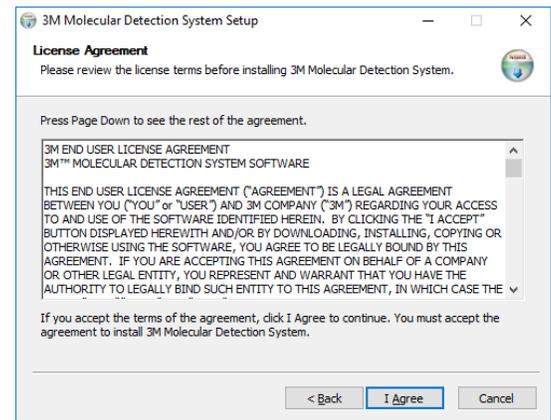
3. The Readiness Tool is presented. Click on the **[Continue]** button to proceed with evaluating that the computer system meets the minimum requirements for installation of the 3M Molecular Detection Software.



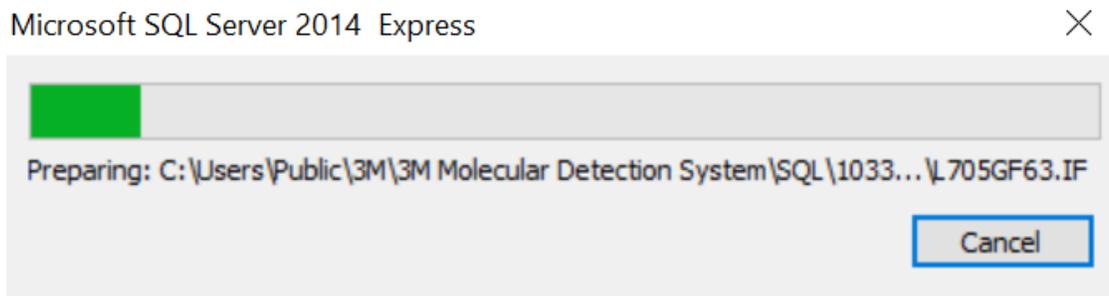
4. The Welcome screen is presented. It may take a few minutes for this screen to appear. Click [Next] to continue.



5. Read the 3M End User License Agreement, and click the [I Agree] button to accept the agreement to continue with the installation.



- a. SQL server installation will begin automatically if SQL database server is not detected on the computer and SQL Server 2014 will be installed. **Do not click cancel button.** The window will close after successful installation.



- b. Return to the 3M Molecular Detection System installation wizard after the SQL server installation screen closes.

6. Enter customer info, click [Next]

The screenshot shows the 'Customer Information' window of the 3M Molecular Detection System Setup. The window title is '3M Molecular Detection System Setup' and the subtitle is 'Customer Information'. Below the subtitle is the instruction 'Enter customer information'. The form contains several input fields: 'Customer name:', 'State/Province:', 'Address 1:', 'Zip/Postal code:', 'Address 2:', 'Address 3:', and 'City:'. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

7. Enter admin name, user name, password and click [Next].

The screenshot shows the 'Administrator Settings' window of the 3M Molecular Detection System Setup. The window title is '3M Molecular Detection System Setup' and the subtitle is 'Administrator Settings'. Below the subtitle is the instruction 'Set administrator user name and password'. The form contains four input fields: 'Full Name:', 'User Name:', 'Password:', and 'Confirm Password:'. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

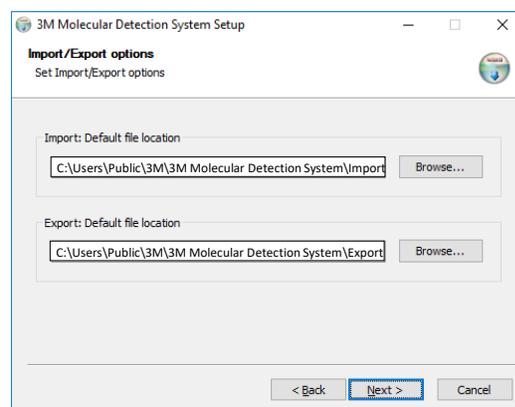
8. Set format for run ID and click [Next].

The screenshot shows the 'Run ID Format' window of the 3M Molecular Detection System Setup. The window title is '3M Molecular Detection System Setup' and the subtitle is 'Run ID Format'. Below the subtitle is the instruction 'Set format for Run ID'. The form contains a dropdown menu labeled 'Run ID Format:' with the value 'MMDDYYYY(%d)' selected. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

9. Configure custom fields as needed (or leave it default) and click [Next].

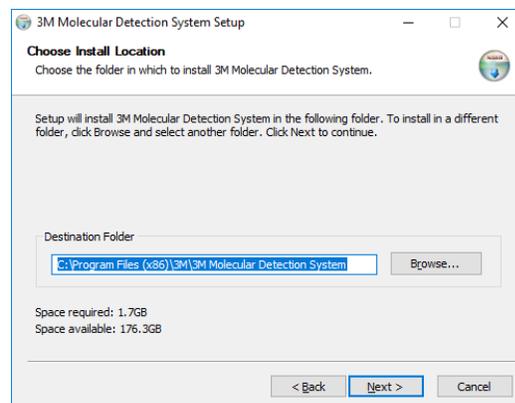
The screenshot shows the 'Custom Fields Configuration' window of the 3M Molecular Detection System Setup. The window title is '3M Molecular Detection System Setup' and the subtitle is 'Custom Fields Configuration'. Below the subtitle is the instruction 'Configure custom fields'. The form contains a table with the following columns: 'Field 1:', 'Field Name:', 'Field Type:', 'Field Values:', and 'Show:'. The table has one row with the following values: 'Field1', 'Sample Type', 'List', 'Raw', and a checked checkbox. At the bottom right, there are three buttons: '< Back', 'Next >', and 'Cancel'.

10. Configure the location for importing and exporting of input and output files

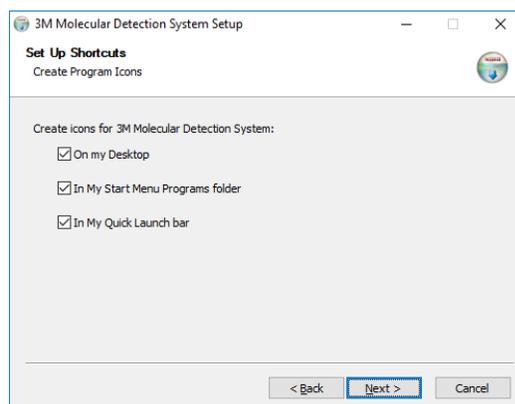


11. In the next three screens, the installation wizard asks for the Destination Folder, the locations for Application Shortcuts and the Start Menu Folder. You can modify the defaults for these fields if necessary. If you don't have a specific reason to modify these fields, the default values are recommended. Click [Next] to proceed through each screen.

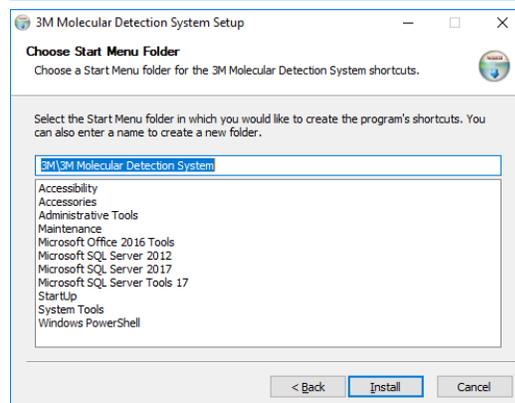
a. Destination Folder — This is the root installation directory for the 3M Molecular Detection Software.



b. 3M Molecular Detection System Application Shortcuts — These are the locations where the installation wizard will place the 3M Molecular Detection Software shortcuts.

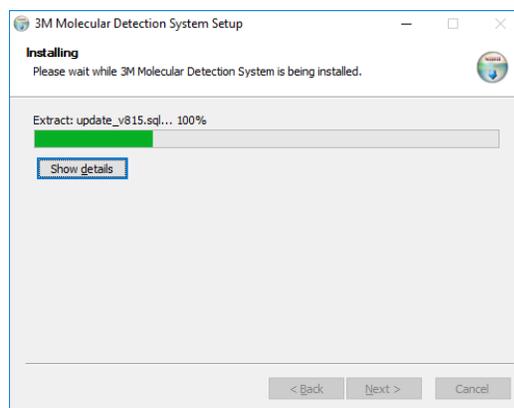


c. Start Menu Folder — This is the location within the Start menu where the installation wizard will place the 3M Molecular Detection Software shortcut.

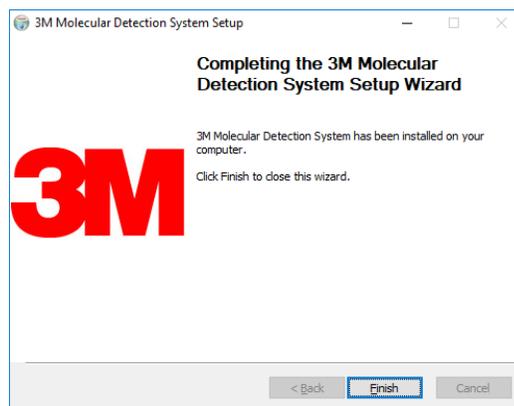


d. Click [Install]

12. A progress bar is shown. Click [Next] after progress bar is completed.



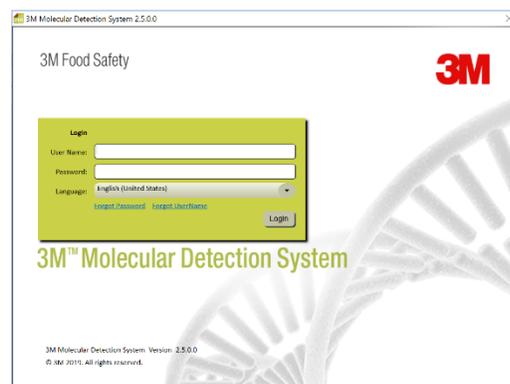
13. Click [Finish] when the installation wizard displays the Completing the 3M Molecular Detection Software Setup Wizard screen.



Starting 3M Molecular Detection System software

1. Double click 3M Molecular Detection System Software icon on desktop.

2. Enter user name and password (as set up during installation). Choose language and click [Login].



3. “Reset Security Questions” screen will appear upon logging in for the 1st time to allow for username recovery and password reset at Login Screen. Choose and answer three security questions, enter your e-mail address, and click save.

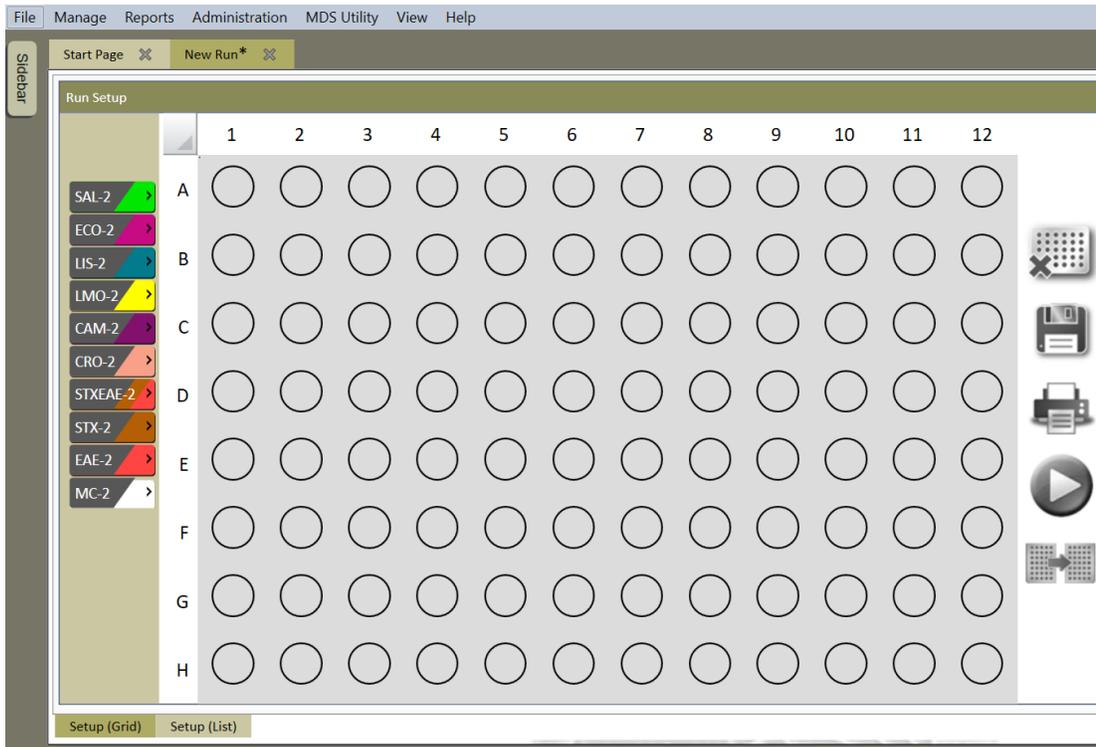
Security questions, answers and e-mail address can be changed by clicking Administration>Reset Security Questions.



4. Forgot Password:
 - a) If you forget your password, enter your username and click Forgot Password.
 - b) Answer the three security questions and click Confirm.
 - c) If your answers are correct, a temporary password will be generated. Record the password.
 - d) The password will be automatically entered into the Password field. Click the Login button.
 - e) The Change Password screen will appear. Enter the temporary password and your new password. Click OK to set the new password.
 - f) Passwords can be changed by clicking Administration>Change Password.
5. Forgot Username:
 - a) If you forget your username, click Forgot Username.
 - b) Enter your email address in the Verify Email screen.
 - c) If your email address is correct (matches the email address entered into the software), your password will be shown.

Enabling 3M Molecular Detection Assay 2

Default Assay icons for MDA2 version (SAL-2, ECO-2, LIS-2, LMO-2, CAM-2, CRO-2, STX/EAE-2 and MC-2) are located on the left side of the Setup (Grid) view. All assays (MDA1 and MDA2) are available under Administration > Options... in the main menu. The user can enable/disable the assay by selecting/deselecting the box.



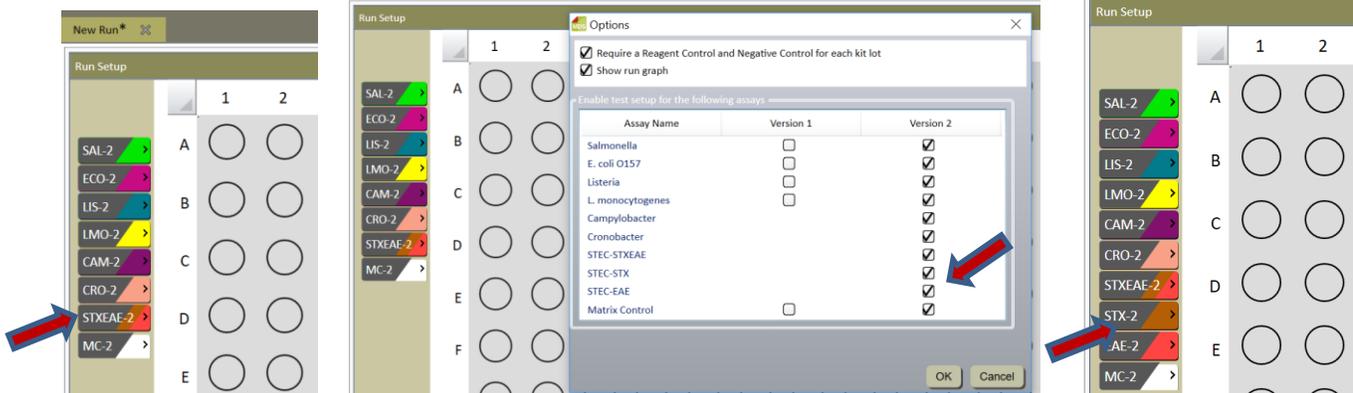
STEC Gene Screen (stx and eae) and STEC Gene Screen (stx)

To enable individual STX and EAE assays, they need to be selected under options menu.

Default

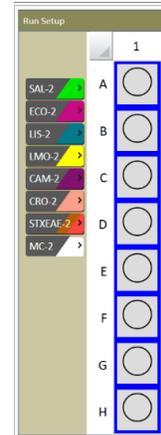
Options to select assays

STX and EAE assay selected

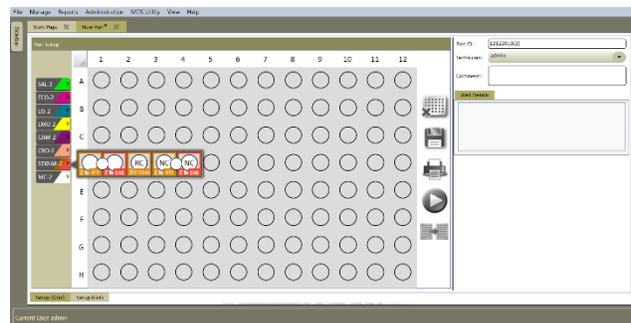


Running STEC (*stx* and *eae*) assays

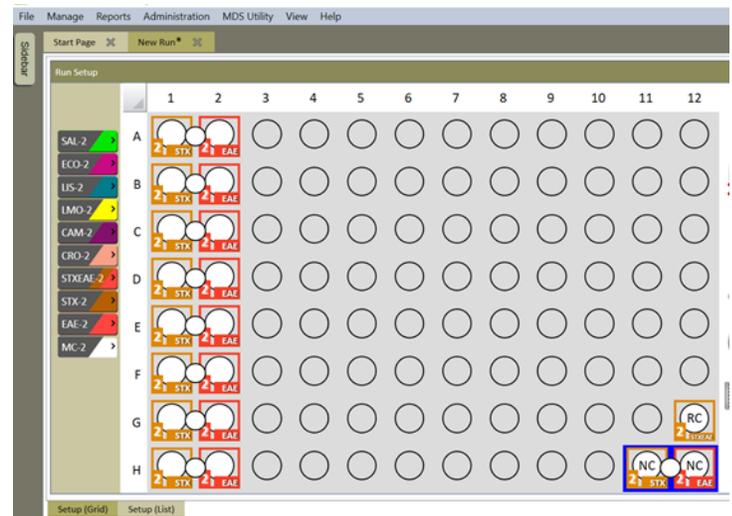
1. Select wells to run assay (example A1 to H1)



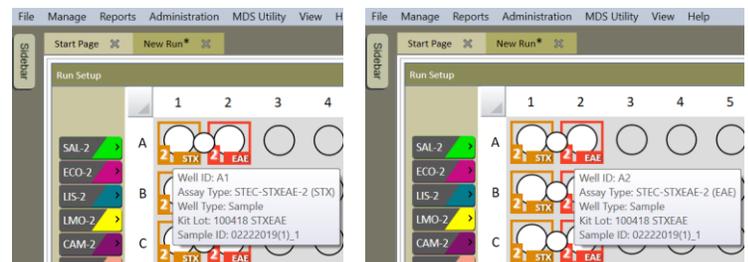
2. Select the Sample icon for STX/EAE-2.



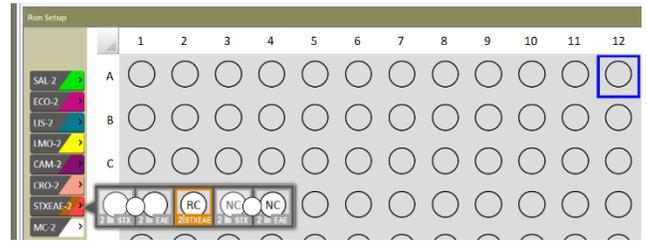
3. Both wells in column 1 and 2 are selected as dual assays (*stx* and *eae*) are run for STEC. NC should be run for both assays and only one RC is run as both assays are in the same kit.



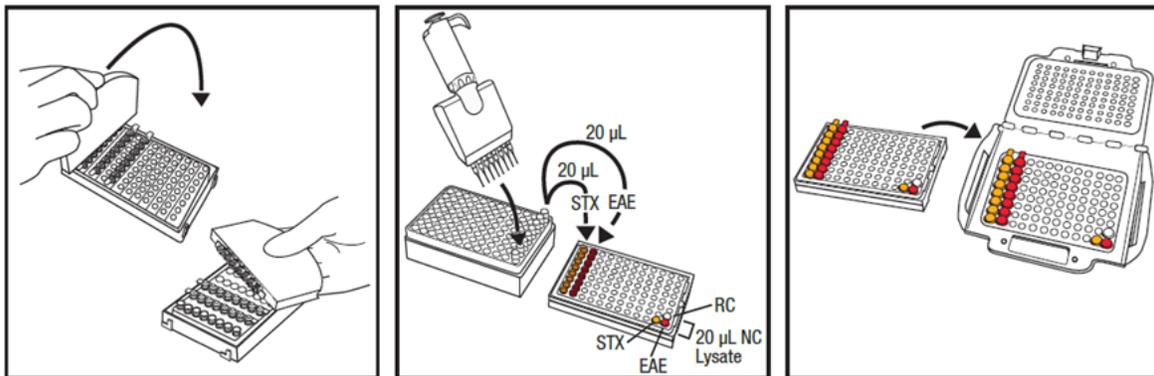
4. Enter Sample ID, Kit lot number. Both wells (*stx* and *eae*) get same sample ID as the assays are linked to the same sample. Linking is indicated by the circle between two wells. A1 is *stx* and A2 is *eae*.



5. Column 12 cannot be selected for STX/EAE-2 assay as it needs two columns for populating assays. The icons are grayed out except for RC.



6. Running assay (see product instructions for detailed information)
- Lyse enriched samples using 3M lysis tubes in a heat block at $100 \pm 1^\circ \text{C}$ for 15 min.
 - Cool at ambient temperature for 5 min in a chill block
 - One 3M Molecular Detection Assay 2 - STEC Gene Screen (*stx*) and one 3M Molecular Detection Assay 2 - STEC Gene Screen (*eae*) Reagent Tube is required for each sample and the NC.
 - Set up reagent tubes, one for *stx* in one column like A1 and one for *eae* in the right adjacent column like A2. The *eae* reagent tube has to be in right adjacent column for the software to interpret the results properly.
 - First, transfer each of the sample lysate to a 3M Molecular Detection Assay 2 - STEC Gene Screen (*stx*) Reagent Tube.
 - Second, transfer each of the same sample lysate using separate pipette tips to a 3M Molecular Detection Assay 2 - STEC Gene Screen (*eae*) Reagent Tube in the adjacent right column.
 - After all sample lysate transfer, add NC lysate to each of 3M Molecular Detection Assay 2 - STEC Gene Screen (*stx*) Reagent Tube and 3M Molecular Detection Assay 2 - STEC Gene Screen (*eae*) Reagent Tube.
 - Samples are loaded into 3M Molecular Detection Speed Loader Tray and then into instrument to start the run.



7. Results and interpretation

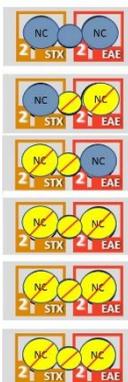
- a) Software calls out results for individual wells (positive, negative, error, inspect, inhibited if linked to MC).
- b) Final result is based on both stx and eae wells and is indicated in the link between the two wells.

Sample call out keys



- Both positive, final result positive
- stx positive, eae negative, final result negative
- stx positive, eae inspect, final result inspect, retest
- stx positive, eae error, final result error, retest
- stx negative, eae positive, final result negative
- stx negative, eae negative, final result negative
- stx negative, eae inspect, final result inspect, retest
- stx negative, eae error, final result error, retest
- stx inspect, eae positive, final result inspect, retest
- stx inspect, eae negative, final result inspect, retest
- stx inspect, eae inspect, final result inspect, retest
- stx inspect, eae error, final result error, retest
- stx error, eae positive, final result error, retest
- stx error, eae negative, final result error, retest
- stx error, eae inspect, final result error, retest
- stx error, eae error, final result error, retest

NC call out



- Valid for both, link valid
- Valid for one, other error, link error
- Valid for one, other invalid, link invalid
- Both error, link error
- Both invalid, link invalid
- One error, other invalid, link error

Run report

Run report and export result file has additional column for gene target for the assay.

Report is sorted by rows (like A1, A2,...A12, B1, B2,...B12, etc.) to have results for *stx* and *eae* together for a sample.

Both assay results are used to give final result in a separate column.

Run report example

Well ID	Sample ID	Assay Type	Gene Target	Well Type	Kit Lot Number	Result	Final Result	Comment
B1	01042019 (3)_2	STEC-STXEAE 2	STX	Sample	100418 STX-2, EAE-1	Positive	Positive	
B2	01042019 (3)_2	STEC-STXEAE 2	EAE	Sample	100418 STX-2, EAE-1	Positive		
B3	01042019 (3)_10	STEC-STXEAE 2	STX	Sample	100418 STX-2, EAE-1	Negative	Negative	
B4	01042019 (3)_10	STEC-STXEAE 2	EAE	Sample	100418 STX-2, EAE-1	Negative		
B5	01042019 (3)_18	STEC-STXEAE 2	STX	Sample	100418 STX-2, EAE-1	Positive	Positive	
B6	01042019 (3)_18	STEC-STXEAE 2	EAE	Sample	100418 STX-2, EAE-1	Positive		
B7	01042019 (3)_26	STEC-STXEAE 2	STX	Sample	100418 STX-2, EAE-1	Positive	Positive	
B8	01042019 (3)_26	STEC-STXEAE 2	EAE	Sample	100418 STX-2, EAE-1	Positive		
B9	01042019 (3)_34	Matrix Control-2		Matrix Control	112118MC	Valid		
B10	01042019 (3)_42	Matrix Control-2		Matrix Control	112118MC	Valid		
B11	01042019 (3)_50	Matrix Control-2		Matrix Control	112118MC	Valid		
B12	01042019 (3)_58	Matrix Control-2		Matrix Control	112118MC	Valid		

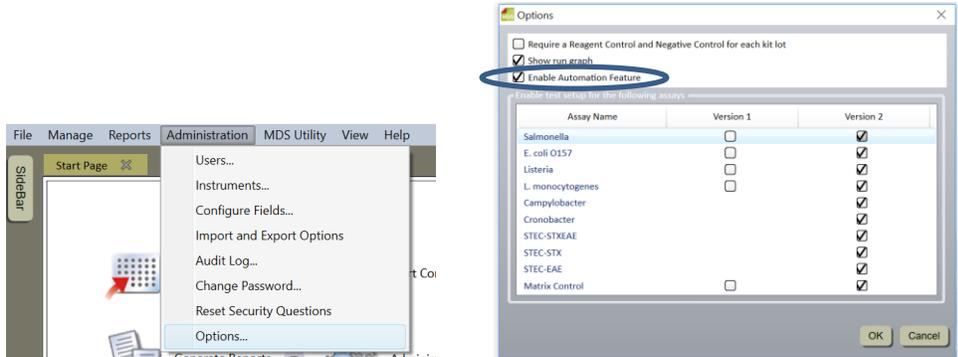
Export result example

RunID	WellID	AssayType	Gene Target	WellType	Cc Retest	Ret Ret	KitLotNum	Expiration	SampleID	Sar	De	Prc	Br	Lc	Lin	Qu	Result	Final Result
1.4.19 CB A1	A1	STXEAE-2	STX	SAMPLE	FALSE		100418 ST	EAE-1	01042019(3)_1								Positive	Positive
1.4.19 CB A2	A2	STXEAE-2	EAE	SAMPLE	FALSE		100418 ST	EAE-1	01042019(3)_1								Positive	
1.4.19 CB A3	A3	STXEAE-2	STX	SAMPLE	FALSE		100418 ST	EAE-1	01042019(3)_9								Positive	Positive
1.4.19 CB A4	A4	STXEAE-2	EAE	SAMPLE	FALSE		100418 ST	EAE-1	01042019(3)_9								Positive	
1.4.19 CB A5	A5	STXEAE-2	STX	SAMPLE	FALSE		100418 ST	EAE-1	01042019(3)_17								Positive	Positive
1.4.19 CB A6	A6	STXEAE-2	EAE	SAMPLE	FALSE		100418 ST	EAE-1	01042019(3)_17								Positive	
1.4.19 CB A7	A7	STXEAE-2	STX	SAMPLE	FALSE		100418 ST	EAE-1	01042019(3)_25								Positive	Positive
1.4.19 CB A8	A8	STXEAE-2	EAE	SAMPLE	FALSE		100418 ST	EAE-1	01042019(3)_25								Positive	
1.4.19 CB A9	A9	MC-2		MC	FALSE		112118MC		01042019(3)_33								Valid	
1.4.19 CB A10	A10	MC-2		MC	FALSE		112118MC		01042019(3)_41								Valid	
1.4.19 CB A11	A11	MC-2		MC	FALSE		112118MC		01042019(3)_49								Valid	
1.4.19 CB A12	A12	MC-2		MC	FALSE		112118MC		01042019(3)_57								Valid	

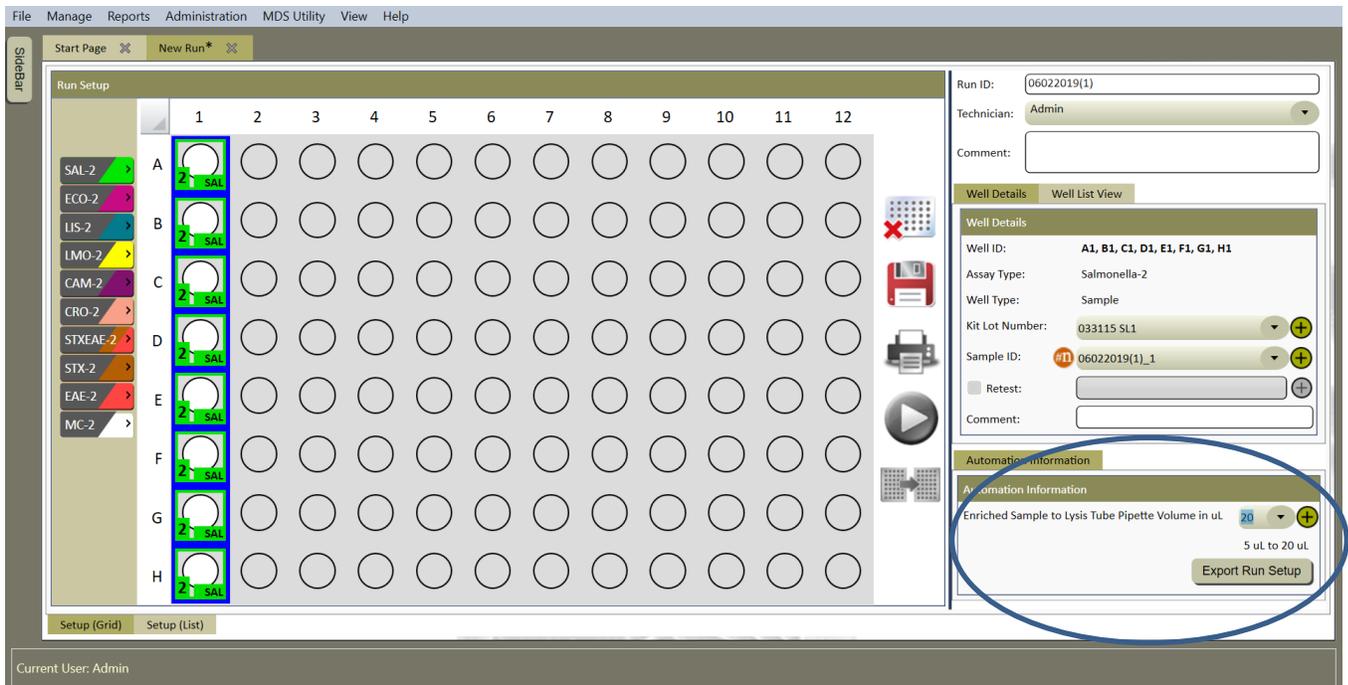
New Features in 2.5.0.0

1. Enabling automation feature option

Enable automation feature option under options menu



Enables selection of enriched sample volume to be added to lysis tube (5 to 20 µL) and export of run set up for worklist for the samples to be run by the automation method.



2. Addition of Signature module to Run Report

Enables manual audit tracking to meet CFR21 requirements. Using non-editable PDF file to generate run reports, the report can be printed and validated as shown below by signature fields. The run report header is not changing

Signature module

Test Completed by:

Full Name: _____

Initials & Date: _____

Report Printed by:

Full Name: _____

Initials & Date: _____

Comments: _____

Report Reviewed/Approved by:

Full Name: _____

Role: _____

Signature: _____

Date: _____

Comments: _____

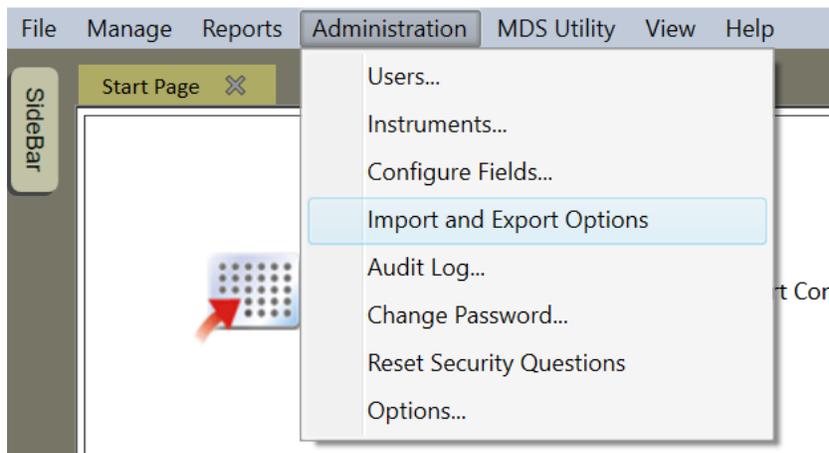
Example header of the run report

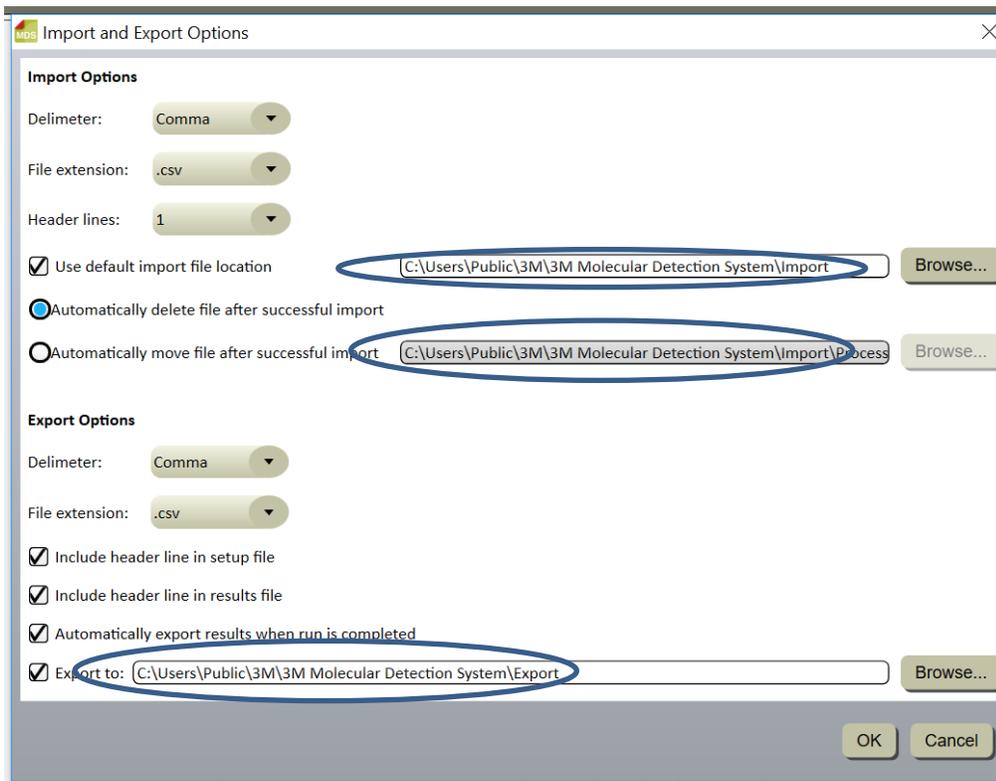
Run Report

Run ID	4.22.19_LM_Disinfectant Neutralization	Run Date	4/22/2019 2:05:20 PM
Run Status	Completed	User	Admin
Technician	Admin	Report By	Admin
Run Comment		Instrument	0213060193

3. Defaulting of import/export file location to public folder for fresh installation

The default folder during installation is changed to Public folder under users for both import and export options and not to the folder of log in user.





4. Showing of Sample ID on Results screen

Enabling sample ID view under view leads to showing the sample ID in the results grid (plate view)

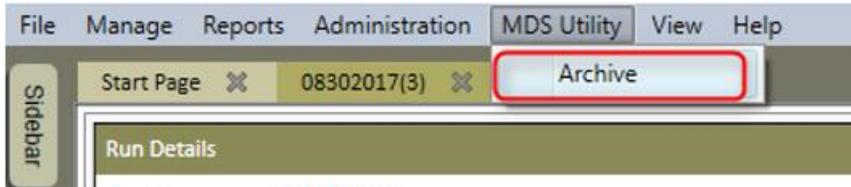
	1	2	3	4	5	6	7	8	9	10	11	12
A	 Sa..plo_1	 Sa..plo_9		 Sa..lo_17	 Sa..lo_25		 Sa..lo_38	 Sa..lo_41		 20...NB_1	 20...NB_9	 2 LMD
B	 Sa..plo_2	 Sa..lo_10		 Sa..lo_18	 Sa..lo_26		 Sa..lo_34	 Sa..lo_42		 20...NB_2	 20...NB_10	 2 LMD
C	 Sa..plo_3	 Sa..lo_11		 Sa..lo_19	 Sa..lo_27		 Sa..lo_35	 Sa..lo_43		 20...NB_3	 20...NB_11	
D	 Sa..plo_4	 Sa..lo_12		 Sa..lo_20	 Sa..lo_28		 Sa..lo_36	 Sa..lo_44		 20...NB_4	 20...NB_12	
E	 Sa..plo_5	 Sa..lo_13		 Sa..lo_21	 Sa..lo_29		 Sa..lo_37	 Sa..lo_45		 20...NB_5		
F	 Sa..plo_6	 Sa..lo_14		 Sa..lo_22	 Sa..lo_30		 Sa..lo_38	 Sa..lo_46		 20...NB_6		
G	 Sa..plo_7	 Sa..lo_15		 Sa..lo_23	 Sa..lo_31		 Sa..lo_39	 Sa..lo_47		 20...NB_7		
H	 Sa..plo_8	 Sa..lo_16		 Sa..lo_24	 Sa..lo_32		 Sa..lo_40	 Sa..lo_48		 20...NB_8		

Database archiving

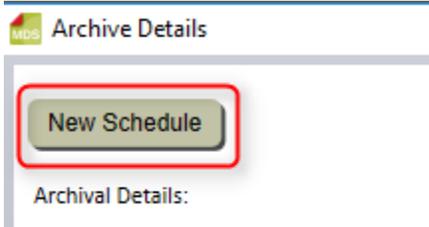
The performance of the 3M Molecular Detection Software can be improved by archiving older test results, which are no longer actively used, but might need to be retained for future reference or regulatory compliance. Archiving moves the selected results from the primary application database to another database on the SQL Database server.

Use the following steps for archiving MDS results:

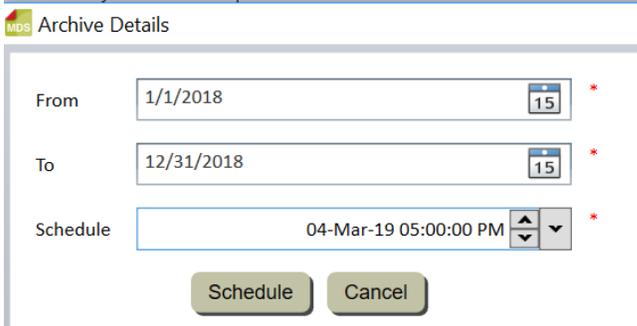
1. Select Archive from the MDS Utility menu



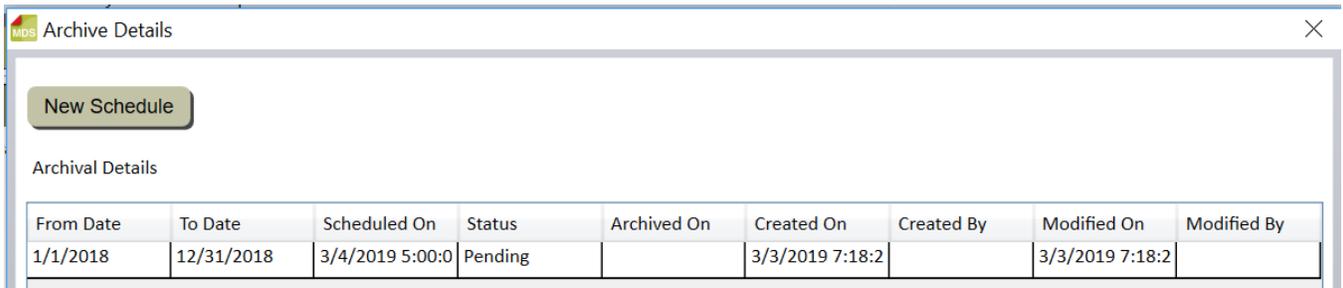
2. Select New Schedule



3. Choose the desired from and to date and select Schedule



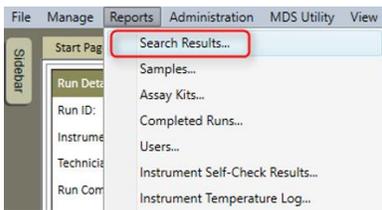
4. An entry will be added to the Archival Details section with a Pending status.



- Archiving will run automatically in the background. Archiving of data should take about 30 minutes and duration may vary depending on the computer system performance. A status of Completed will be displayed when the archiving process completes.

From Date	To Date	Scheduled On	Status	Archived On	Created On	Created By	Modified On	Modified By
1/1/2018	12/31/2018	3/4/2019 5:00:0	Completed		3/3/2019 7:18:2		3/3/2019 7:18:2	

- Archived results can be viewed by selecting Reports > Search Results...



- Then select All Dates or enter the desired date range, and select the Generate button.

Date Range

All Dates

Date From: 1/1/2018 To: 12/31/2018

User

Rerested

Assay Type

Salmonella Listeria-2

E. coli O157 L. monocytogenes-2

Listeria Campylobacter-2

L. monocytogenes Cronobacter-2

Matrix Control STEC-STXAE-2

Salmonella-2 STEC-STX-2

E. coli O157-2 STEC-EAE-2

Matrix Control-2

Well Type

Sample

Reagent Control

Negative Control

Kit Lot

Result

Not Tested

Positive

Negative

Valid

Invalid

Error

Inspect

Inhibited

Run ID

Instrument

Sample ID

Sample Type

Description

Product

Brand

Lot Number

Line

Customer

Generate Cancel

