

AccuSEQ™ Real-Time PCR Software v3.1

Windows™ 10 Operating System

Catalog Numbers A48509 and A48592

Pub. No. 100094288 Rev. A

This document contains basic information that is required to use the Applied Biosystems™ AccuSEQ™ Real-Time PCR Software v3.1. For more information, see the *AccuSEQ™ Real-Time PCR Software v3.1 User Guide* (Pub. No. 100094287).

Biosystems™ ViralSEQ™ viral detection assays. Security, audit, and e-signature capabilities help enable 21 CFR Part 11 compliance. For more information about the AccuSEQ™ Real-Time PCR Software, see thermofisher.com/accuseq.

Product description

The AccuSEQ™ Real-Time PCR Software v3.1 analyzes data generated on the QuantStudio™ 5 Real-Time PCR Instrument using 0.1-mL 96-well plates. The software analyzes data for the Applied Biosystems™ MycoSEQ™ Mycoplasma Real-Time PCR Detection Kit, the Applied Biosystems™ ProteinSEQ™ protein quantitation systems, and the Applied Biosystems™ resDNASEQ™ Quantitative DNA Kits. It also includes a custom template option to support real-time PCR assays without a pre-defined template, such as the Applied

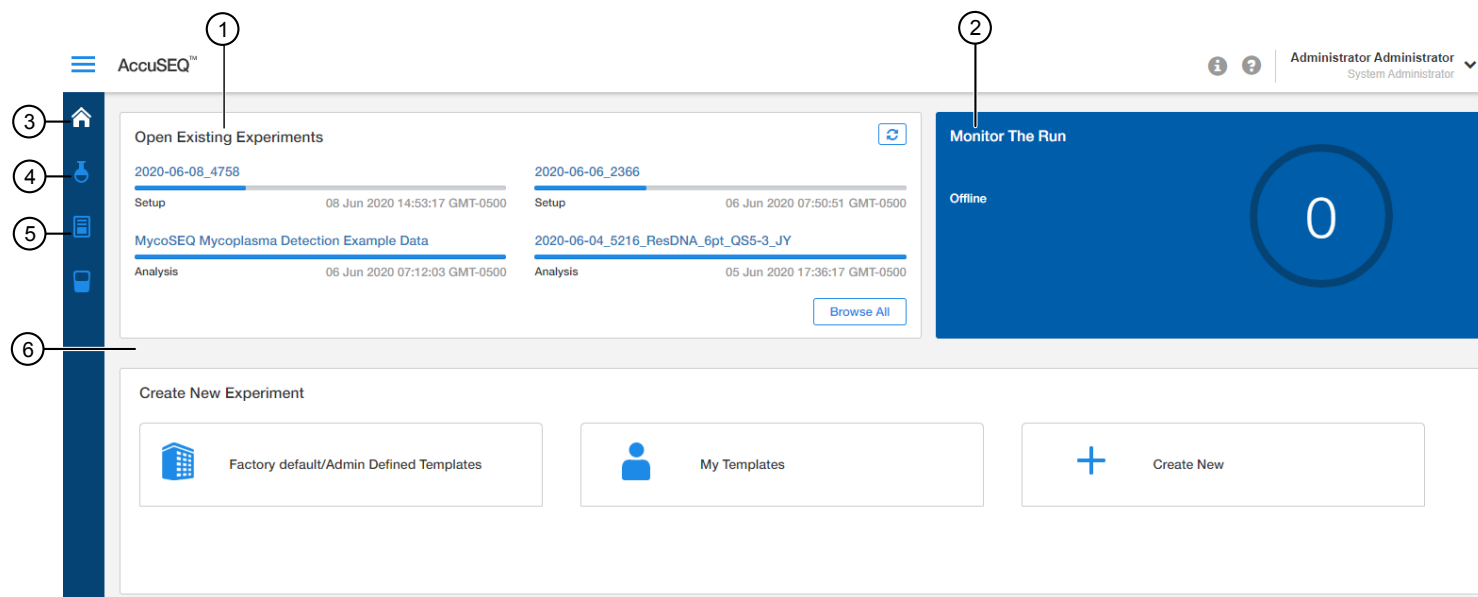
Sign in to the AccuSEQ™ Real-Time PCR Software

1. Launch the AccuSEQ™ Real-Time PCR Software by double-clicking the AccuSEQ icon .
2. Enter the **Username**, then **Password**.

(First login only) The default username is **Administrator** and the default password is **Administrator**.

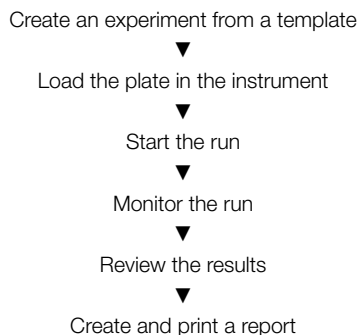
3. Click **Sign in**.

Home screen



- ① **Open Experiment**—View the last 4 experiments run on the instrument. Click **Browse All** to open a full list of experiments.
- ② **Monitor the Run**—View the time remaining for the run; view the instrument calibration status. For information on instrument calibration, see the *QuantStudio™ 3 and 5 Real-Time PCR Systems Installation, Use, and Maintenance Guide* (Pub. No. A43322).
- ③ **Experiments list**
- ④ **Templates list**
- ⑤ **Instrument status**
- ⑥ **Create Experiment**—Select from existing templates or create a new one.

Workflow



Create an experiment from a template

1. Open a template by doing one of the following:
 - In the **Create New Experiment** pane of the **Home** screen, select an existing template from the **Factory default/Admin Defined Templates** or **My Templates** tabs.
 - From the **Home** screen, click **Templates** for a full list of templates. Select a template, then click **+ (Create Experiment)**.
2. In the **Experiment Properties** pane of the **Setup** tab:
 - a. (Optional) Change the system-generated name of the experiment.
 - b. (Optional) Enter the plate **Barcode**.
 - c. (Optional) Enter **Comments**.
 - d. Check that the **Experiment Type**, **Chemistry**, and **Ramp Speed** are correct for the assay that you are running.
 - e. Click **Next**.
3. In the **qPCR Method** pane of the **Setup** tab:
 - a. Check that the reaction volume and cycling conditions are correct for the assay that you are running.
 - b. Click **Next**.
4. In the **Plate Setup** pane of the **Setup** tab:
 - a. Enter **Samples**, **Targets**, and standards.
 - b. Click **Next**.


Prepare the samples according to instructions in the user guide for the kit that you are using, then immediately load the plate into the instrument.

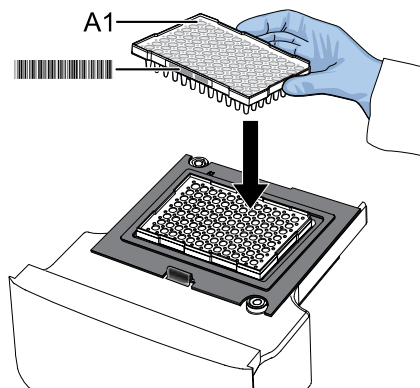
Load the plate in the instrument



CAUTION! Use optical flat caps for tubes. Rounded caps can damage the heated cover.

Load the plate.

1. Touch  to eject the instrument drawer.
2. Load the plate onto the plate adapter so that:
 - Well A1 of the plate is in the top-left corner of the plate adapter.
 - The barcode faces the front of the instrument.




IMPORTANT! The instrument should be used by trained operators who have been warned of the moving parts hazard.

Note: Do not remove the black plate adapter before loading a plate or tube strips. If used, tube strips can fit loosely in the adapter, but the heated cover applies the appropriate pressure to seat the tube strips securely in the adapter.



CAUTION! PHYSICAL INJURY HAZARD. During instrument operation, the plate temperature can reach 100°C. Allow it to cool to room temperature before handling.

3. Touch  to close the instrument drawer.

Start the run


Start the run in the AccuSEQ™ Software.

Option	Description
If the experiment is open	Click Start Run .
If the experiment is closed	1. Open the experiment. 2. Click the Run tab. 3. Click Start Run .

A message stating **Run has been started successfully** is displayed when the run has started.

Monitor the run

Monitor the run from one of the following places:

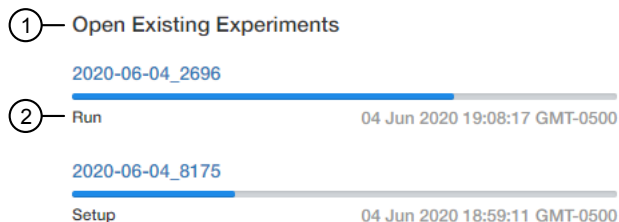
- On the instrument touchscreen.
- In the **Monitor the Run** pane of the AccuSEQ™ Software  (**Home**) screen.



- ① Instrument name
- ② Instrument status (Ready, Running, Offline)
- ③ Calibration status
- ④ Time lapsed (if a run is in progress)
- ⑤ Total run time
- ⑥ Experiment name

- In the **Open Existing Experiments** pane of the AccuSEQ™ Software  (**Home**) screen. The experiment being run is the first experiment listed. Status is **Run**.

Note: When the run is complete, the status changes to **Analysis** and the bar changes to completely blue.



- ① **Open Existing Experiments** pane
- ② Experiment status

- In the **Run** tab of the AccuSEQ™ Real-Time PCR Software.
 - Select wells in the plate layout to highlight respective curves in the plot.
 - Hover over curves in the plot for well information.
 - (Optional) Change what is displayed in the table wells, by selecting **Sample Name**, **Sample Color**, or **Target** in the **View** dropdown list.

On run completion, the **Post Run Summary** displays the run length, user and instrument information, and a list of any errors that occurred. When the run is complete, unload the plate from the instrument.

Review the results

Review and analyze run data in the **Result** tab.

Fig. 1 Result tab

- ① **Result Summary**—Populated for MycoSEQ™ experiments only; displays the overall **Plate Call** and the **Well Call** for individual wells.
- ② **Result Analysis**— Displays plots and well information such as sample name and flags.
- ③ **Analysis Settings**— Click **Analysis Settings** to access analysis settings.
- ④ **Analyze** button—Click **Analyze** after omitting wells or changing the analysis settings.
- ⑤ **E-sign** button—Click **E-sign** to sign the experiment.




Note: The analysis settings and plots that are available vary by experiment type. See the kit user guide for more information.

E-sign an experiment

In the Results tab, click the **E-Sign** button, then enter your user name and password.

Note: Users without **E-Signature** permissions will not be allowed to sign.

Table 1 E-signature status

If the experiment is	Icon displayed in Experiments screen
Signed	 (Gray locked icon)
Partially signed	 (Blue locked icon)
Unsigned	 (Gray unlocked icon)

If no additional e-signatures are required, the **E-Signature** status at the top of the screen and in the **Experiments** screen is set to **Signed**.

Create and print a report

To create a report, an experiment must have a status of **Analysis**.

1. Navigate to the **Report** tab, then the **Print Report** pane.

Export Results **Print Report**

Items to be included in the Report

- Experiment Summary
- Analysis Settings
- Result Summary
- Call Summary
- Plate Layout
- Run Method
- QC Summary
- Experiment Action Audit
- Experiment Detailed Action Audit
- E-Signature Report

Plots

- Select All
- Amplification Plot (Rn vs Cycle)
- Amplification Plot (dRn vs Cycle)
- Amplification Plot (Ct vs Well)
- Melt Curve (Normalized Reporter)
- Melt Curve (Derivative Reporter)
- Standard Curve

Results Table

- Select All
- Results By Well
- Results By Unknown
- Results By Standards
- Results By Spikes
- Extra Metrics

Create Report

- ① **Report** tab
- ② **Print Report** pane
- ③ SAE attributes
- ④ **Create Report** button

2. Select the **Items to be included in the Report**.

Note: Default attributes are preselected when using factory default templates.

IMPORTANT! To select and print SAE attributes, the user must have permission to print.

3. Click **Create Report**.

The report opens with options to **Print**, **Download**, or **View PDF** the report.

4. (Optional) Click **Previous** to go back and make different selections for the report.

Export results

1. Navigate to the **Report** tab, then the **Export Results** pane.
2. Enter a **File Name**, then select the File Type (XLS, XLSX, TXT, or CSV).
3. Select the **Content** to export, then click **Export**.
4. (Optional) Click **Customize Export** to select additional columns to include in the report.
 - a. Select the **Content** to be customized, then **Select Table Fields** to be customized.
 - b. Click **Save**.

✕
Customize Export

Content:
Sample Setup

Select Table Fields

- Select Fields
- Well
- Well Position
- Sample Name
- Sample Color
- Target Name
- Target Color
- Task
- Reporter
- Quencher
- Quantity
- Comments

Well ↕	Well Positi...	Sample Na...	Sample Col...	Target Nam...	Target Colo...
A1	1	NTC	RGB(255,0,0)	E coli	RGB(255,0,0)
A1	1	NTC	RGB(255,0,0)	IPC	RGB(255,1...
A2	2	NTC	RGB(255,0,0)	E coli	RGB(255,0,0)
A2	2	NTC	RGB(255,0,0)	IPC	RGB(255,1...
A3	3	NTC	RGB(255,0,0)	E coli	RGB(255,0,0)
A3	3	NTC	RGB(255,0,0)	IPC	RGB(255,1...
A4	4				
A5	5				
A6	6				
A7	7				

Cancel
Apply

5. Click **Export**.

Note: The Results are exported to the Windows™ Downloads folder. You can change the Chrome™ browser settings to ask where to save each file before downloading.



Life Technologies Corporation | 200 Oyster Point Blvd | South San Francisco, CA 94080 | USA
 For descriptions of symbols on product labels or product documents, go to [thermofisher.com/symbols-definition](https://www.thermofisher.com/symbols-definition).

The information in this guide is subject to change without notice.

DISCLAIMER: TO THE EXTENT ALLOWED BY LAW, THERMO FISHER SCIENTIFIC INC. AND/OR ITS AFFILIATE(S) WILL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, MULTIPLE, OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING FROM THIS DOCUMENT, INCLUDING YOUR USE OF IT.

Revision history: Pub. No. 100094288

Revision	Date	Description
A	16 June 2020	New document for the AccuSEQ™ Software v3.1 on the QuantStudio™ 5 Real-Time PCR System.

Important Licensing Information: These products may be covered by one or more Limited Use Label Licenses. By use of these products, you accept the terms and conditions of all applicable Limited Use Label Licenses.

©2020 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific and its subsidiaries unless otherwise specified. Chrome™ is a trademark of Google Inc.