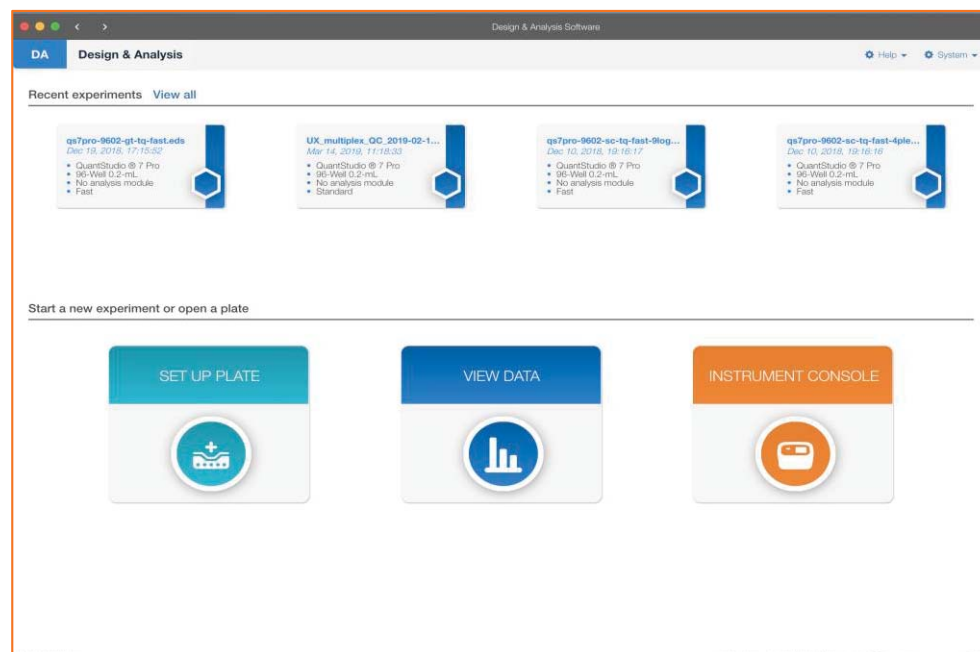


# Design and Analysis Software – Desktop & Online

- One experience for both desktop or online workflows
- Desktop version is compatible with PC and MAC computers
- Supports flexible decision making process – no experiment type
- Enables gene expression and genotyping on same run
- Take template driven approach for easy use and learning
- Interactive data visualization
- Streamlined QC



# Landing Page

Design & Analysis Software 2.0.0

DA Design & Analysis

Recent data files [View all](#)

Recent list of data files – system remembers the file locations

RTM Superplasmid Titration...  
Apr 4, 2019, 10:49:38

- QuantStudio™ 7 Pro
- 96-Well 0.2-mL
- Standard Curve
- Standard

SSO\_GTinAQ\_7Pro\_2019031...  
Mar 28, 2019, 09:50:47

- QuantStudio™ 7 Pro
- 96-Well 0.2-mL
- No analysis module
- Fast

RTM Superplasmid Titration...  
Apr 3, 2019, 10:33:39

- QuantStudio™ 7 Pro
- 96-Well 0.2-mL
- Standard Curve
- Standard

RTM Superplasmid Titration...  
Apr 3, 2019, 11:07:01

- QuantStudio™ 7 Pro
- 96-Well 0.2-mL
- No analysis module
- Standard

Set up a plate file, view data, or view instruments

SET UP PLATE

VIEW DATA

MANAGE INSTRUMENTS

Pre-run setup workflow

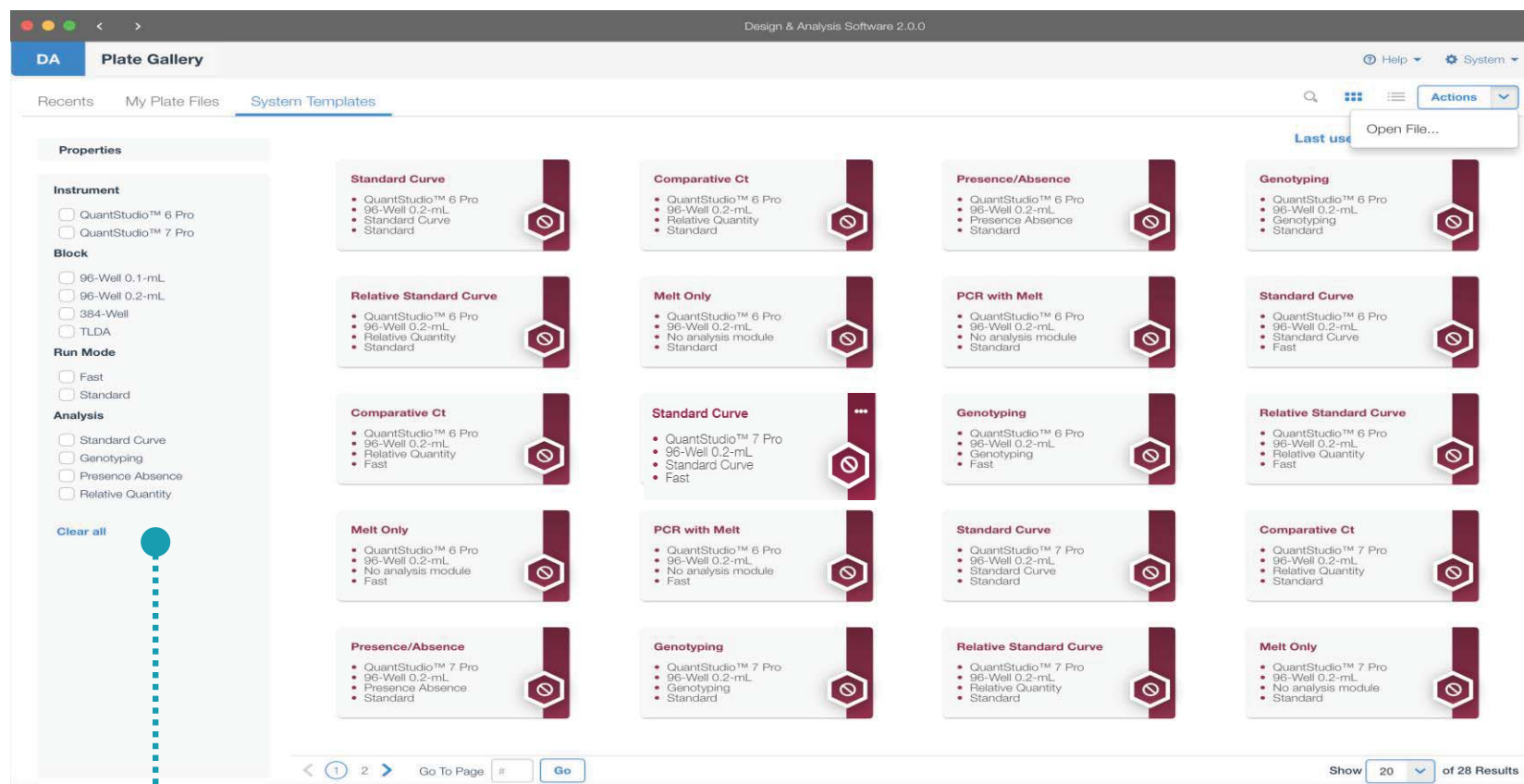
Post-run data review workflow

Instrument-oriented features

\*.edt = "plate file"

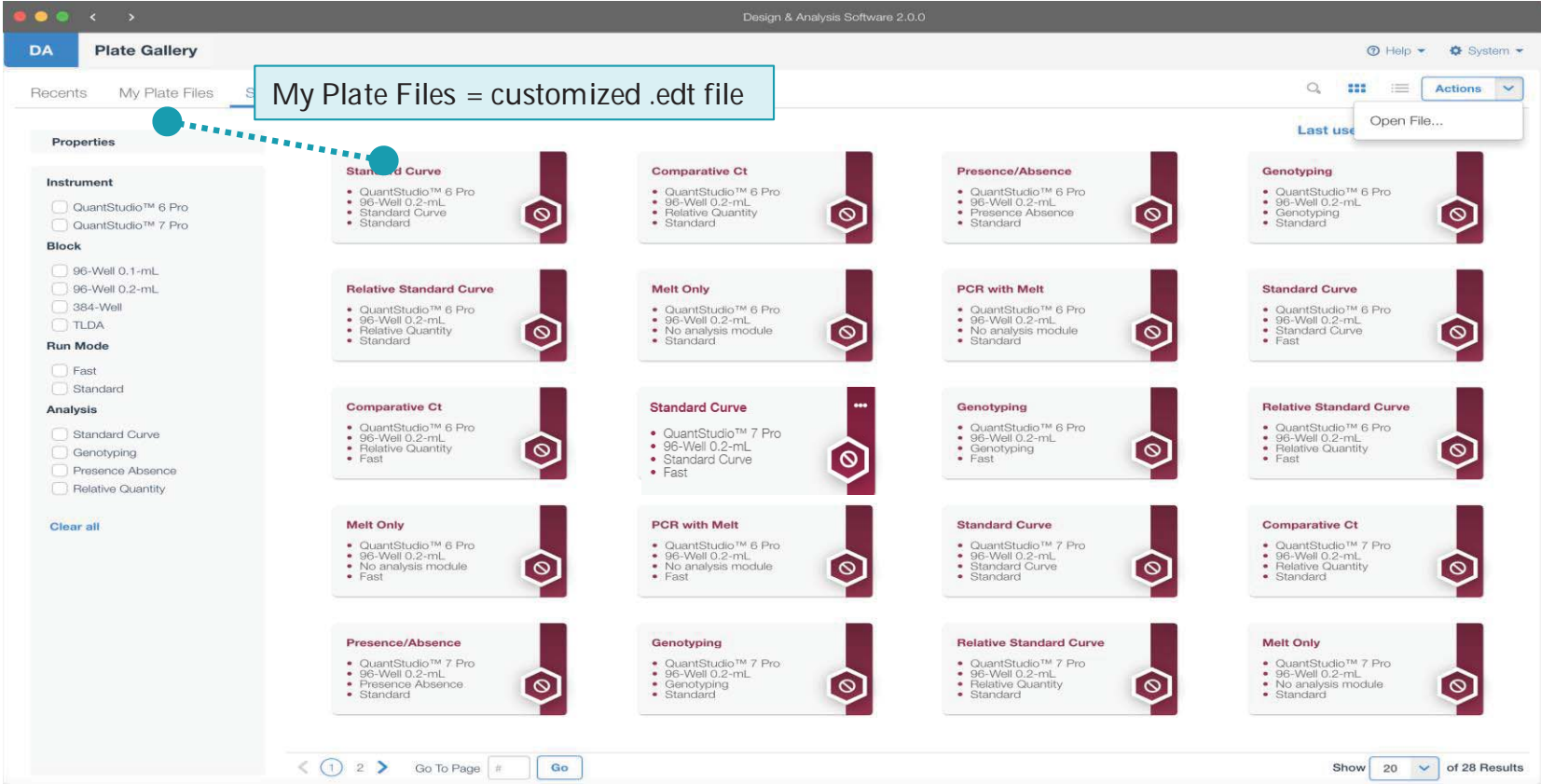
\*.eds = "data file"

# Pre-Run Plate Setup



Filter for templates

## Pre-Run Plate Setup



# Pre-Run Plate Setup

Design & Analysis Software 2.0.0

DA Plate Gallery

Recents My Plate Files System Templates

Properties

Instrument

- ☐ QuantStudio™ 6 Pro
- ☐ QuantStudio™ 7 Pro

Block

- ☐ 96-Well 0.1-mL
- ☐ 96-Well 0.2-mL
- ☐ 384-Well
- ☐ TLDA

Run Mode

- ☐ Fast
- ☐ Standard

Analysis

- ☐ Standard Curve
- ☐ Genotyping
- ☐ Presence Absence
- ☐ Relative Quantity

Clear all

Standard Curve

- QuantStudio™ 6 Pro
- 96-Well 0.2-mL
- Standard Curve
- Standard

Comparative Ct

- QuantStudio™ 6 Pro
- 96-Well 0.2-mL
- Relative Quantity
- Standard

Presence/Absence

- QuantStudio™ 6 Pro
- 96-Well 0.2-mL
- Presence Absence
- Standard

Genotyping

- QuantStudio™ 6 Pro
- 96-Well 0.2-mL
- Genotyping
- Standard

Relative Standard Curve

- QuantStudio™ 6 Pro
- 96-Well 0.2-mL
- Relative Quantity
- Standard

Melt Only

- QuantStudio™ 6 Pro
- 96-Well 0.2-mL
- No analysis module
- Standard

PCR with Melt

- QuantStudio™ 6 Pro
- 96-Well 0.2-mL
- No analysis module
- Standard

Standard Curve

- QuantStudio™ 6 Pro
- 96-Well 0.2-mL
- Standard Curve
- Fast

Comparative Ct

- QuantStudio™ 6 Pro
- 96-Well 0.2-mL
- Relative Quantity
- Fast

Genotyping

- QuantStudio™ 6 Pro
- 96-Well 0.2-mL
- Genotyping
- Fast

Relative Standard Curve

- QuantStudio™ 6 Pro
- 96-Well 0.2-mL
- Relative Quantity
- Fast

Comparative Ct

- QuantStudio™ 7 Pro
- 96-Well 0.2-mL
- Relative Quantity
- Standard

Standard Curve

- QuantStudio™ 7 Pro
- 96-Well 0.2-mL
- Standard Curve
- Standard

Comparative Ct

- QuantStudio™ 7 Pro
- 96-Well 0.2-mL
- Relative Quantity
- Standard

Quick start

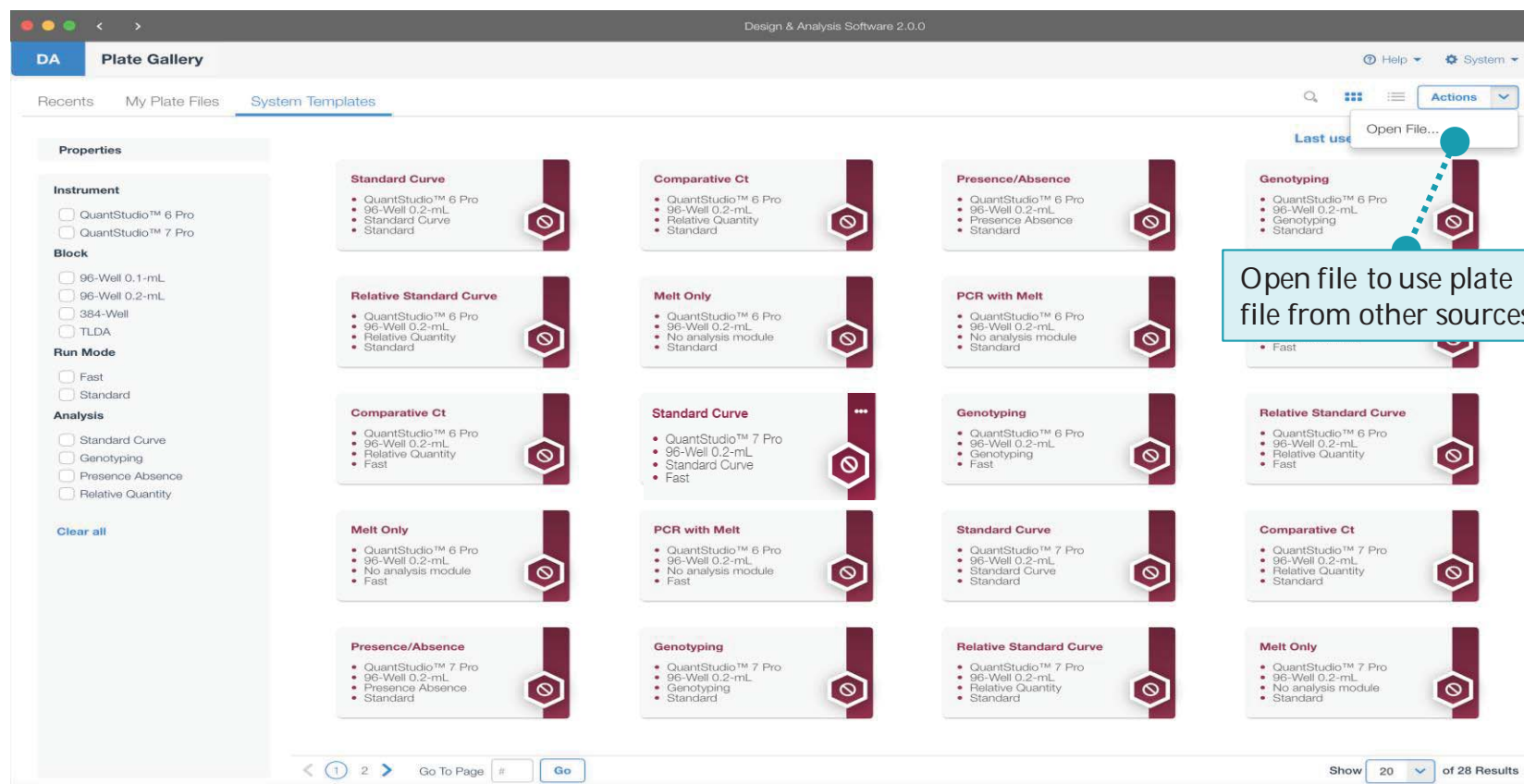
Quick start in new window

Create in new window

Open a plate file in the same window or in a new window. Open multiple plate files concurrently.

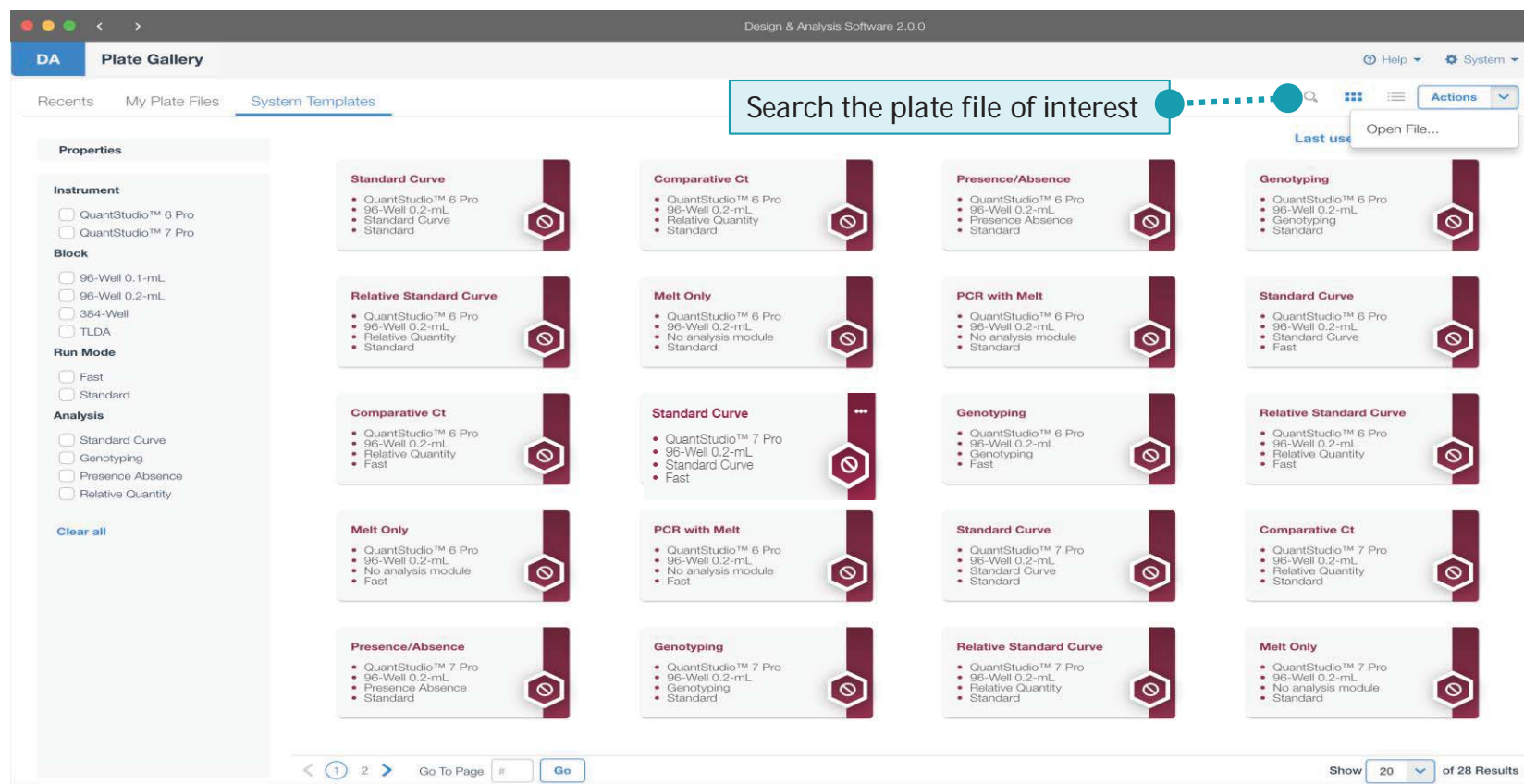
Show 20 of 28 Results

# Pre-Run Plate Setup





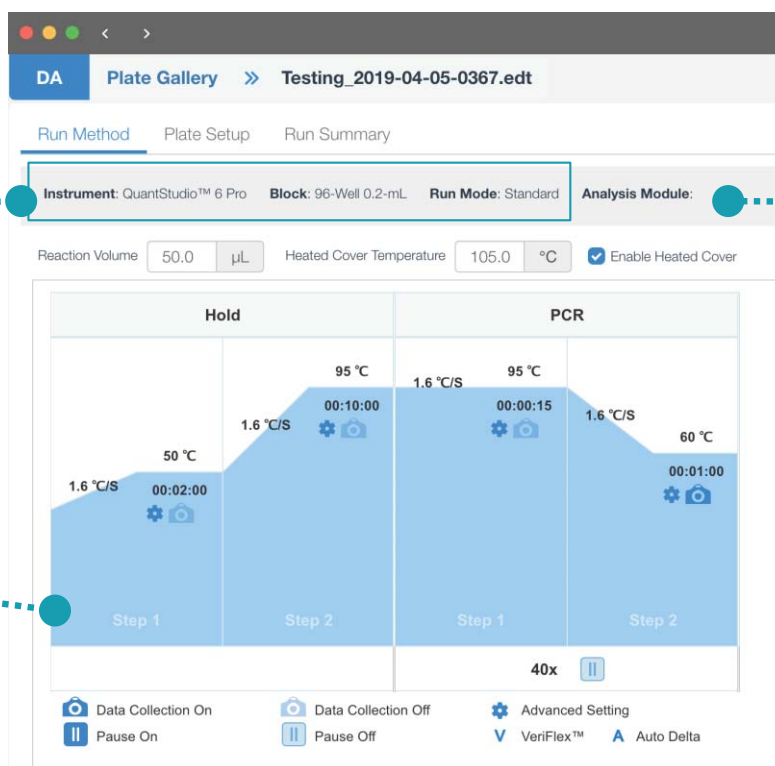
# Pre-Run Plate Setup



# Plate File - Run Method

Change attributes of the thermal protocol but not the instrument model, block or run mode.

Option to save the image .



Choose the analysis module(s) used for the data. None is needed for Cq value only.

Analysis Modules

☒ Standard Curve

☐ Genotyping (Not Installed)

☐ Presence Absence (Not Installed)

☐ Relative Quantity (Not Installed)

Cancel OK



# Plate File - Plate Setup

- Three methods for well assignment
  1. Excel style data entry, including copy & paste plate layout or just sample/target list
  2. Conventional “define & assign”
  3. Import from csv
- Navigation assistant
  1. Continuous zoom scale
  2. Thumb nail view of plate layout by sample/target
  3. Print plate layout by xls export

The screenshot displays the ThermoFisher Plate Setup software interface. The main window shows a 96-well plate layout with columns 1-12 and rows A-H. The plate is populated with sample names like 'Brain', 'Placenta', and 'NTC' in various wells. A context menu is open over the plate, showing options like 'Undo', 'Redo', 'Manage Dyes', 'Import Plate Setup', 'Export Plate Setup', 'Flip Plate Setup', 'Import AIF', and 'Print Layout'.

On the right side, there are two panels: 'Samples (5)' and 'Targets (4)'. The 'Samples' panel lists samples with checkboxes, names, colors, types, and quantities. The 'Targets' panel lists targets with checkboxes, names, colors, reporters, quenchers, and tasks.

<input type="checkbox"/>	Name	Color	Type	Quantity	<input type="checkbox"/>
<input type="checkbox"/>	Brain (No RT)	Green	NTC		<input type="checkbox"/>
<input checked="" type="checkbox"/>	Brain	Blue	Unknown		<input type="checkbox"/>
<input type="checkbox"/>	Placenta	Orange	Unknown		<input type="checkbox"/>
<input type="checkbox"/>	Placenta (No RT)	Red	NTC		<input type="checkbox"/>
<input type="checkbox"/>	NTC	Purple	NTC		<input type="checkbox"/>

<input type="checkbox"/>	Target	Color	Reporter	Quencher	Task
<input checked="" type="checkbox"/>	STMN1	Blue	FAM	NFQ-MGB	Unknown
<input type="checkbox"/>	IGF2	Orange	FAM	NFQ-MGB	
<input type="checkbox"/>	18s	Blue	FAM	NFQ-MGB	
<input type="checkbox"/>	ACTB	Green	FAM	NFQ-MGB	

At the bottom, there is a 'Passive Reference' dropdown set to 'ROX' and a zoom slider at 55%.

# Plate File - Plate Setup

- Each sample has a **sample type**
  - Define the purpose of the sample on the plate
  - System will set the “task” (definition as is) based on the sample type. User can change it on as needed basis, e.g. unknown or NTC.

DA Plate Gallery >> FAS Training\_GX\_RFID.edt

Run Method Plate Setup Run Summary

Target SNP

Actions

Save  
Save As...  
Add to My Plates  
Plate Information...  
Analysis Modules...  
Analysis Setting...  
Export...  
Export to RDML...

Samples (5)

<input type="checkbox"/>	Name	Color	Type	Quant
<input type="checkbox"/>	Brain (No RT)	Green	NTC	
<input checked="" type="checkbox"/>	Brain	Blue	Unknown	
<input type="checkbox"/>	Placenta	Orange	Unknown	
<input type="checkbox"/>	Placenta (No RT)	Red	NTC	
<input type="checkbox"/>	NTC	Purple	NTC	

Targets (4)

<input type="checkbox"/>	Target	Color	Reporter	Quencher	Task
<input checked="" type="checkbox"/>	STMN1	Blue	FAM	NFQ-MGB	Unknown
<input type="checkbox"/>	IGF2	Orange	FAM	NFQ-MGB	
<input type="checkbox"/>	18s	Blue	FAM	NFQ-MGB	
<input type="checkbox"/>	ACTB	Green	FAM	NFQ-MGB	

Passive Reference ROX

# Plate File - Plate Setup

- Add target and SNP to the same plate
- Add to My Plate library for re-use
- Flip plate setup – to accommodate change of plate orientation
- Use keyword tags as searchable terms for the plate in the gallery

DA Plate Gallery >> FAS Training\_GX\_RFID.edt

Run Method Plate Setup Run Summary

Target SNP

Undo Redo

Manage Dyes

Import Plate Setup

Export Plate Setup

Flip Plate Setup

Import AIF

Print Layout

Actions

- Save
- Save As...
- Add to My Plates
- Plate Information...
- Analysis Modules...
- Analysis Setting...
- Export...
- Export to RDML...

	1	2	3	4	5	6	7	8	9	10	11	12
A	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample
B	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample	Enter sample
C	Brain	Brain	Brain	Brain (No RT)	Brain (No RT)	Placenta	Placenta	Placenta	Placenta (No RT)	Placenta (No RT)	NTC	NTC
D	Brain	Brain	Brain	Brain (No RT)	Brain (No RT)	Placenta	Placenta	Placenta	Placenta (No RT)	Placenta (No RT)	NTC	NTC
E	Brain	Brain	Brain	Brain (No RT)	Brain (No RT)	Placenta	Placenta	Placenta	Placenta (No RT)	Placenta (No RT)	NTC	NTC
F	Brain	Brain	Brain	Brain (No RT)	Brain (No RT)	Placenta	Placenta	Placenta	Placenta (No RT)	Placenta (No RT)	NTC	NTC
G	Brain	Brain	Brain	Brain (No RT)	Brain (No RT)	Placenta	Placenta	Placenta	Placenta (No RT)	Placenta (No RT)	NTC	NTC
H	Brain	Brain	Brain	Brain (No RT)	Brain (No RT)	Placenta	Placenta	Placenta	Placenta (No RT)	Placenta (No RT)	NTC	NTC

Search or add a tag

55%

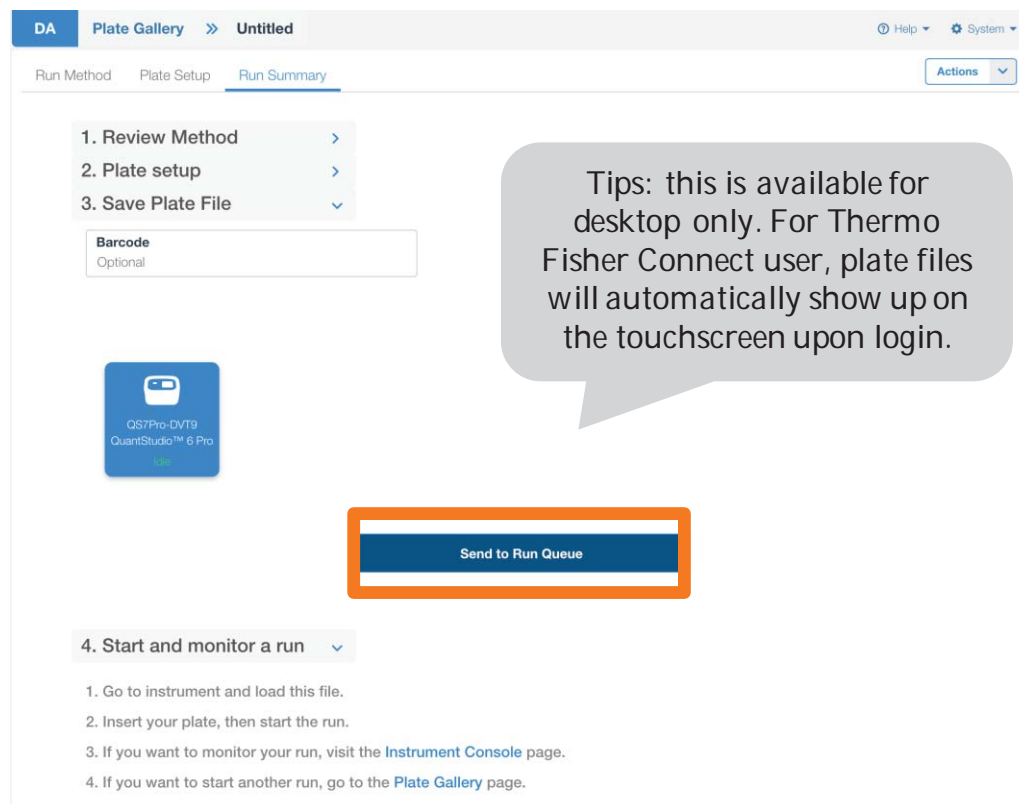
Targets (4)

	Target	Color	Reporter	Quencher	Task
<input checked="" type="checkbox"/>	STMN1	Blue	FAM	NFQ-MGB	Unknown
<input type="checkbox"/>	IGF2	Orange	FAM	NFQ-MGB	
<input type="checkbox"/>	18s	Blue	FAM	NFQ-MGB	
<input type="checkbox"/>	ACTB	Green	FAM	NFQ-MGB	

Passive Reference ROX

# Run Summary - Quick Check Before You Go

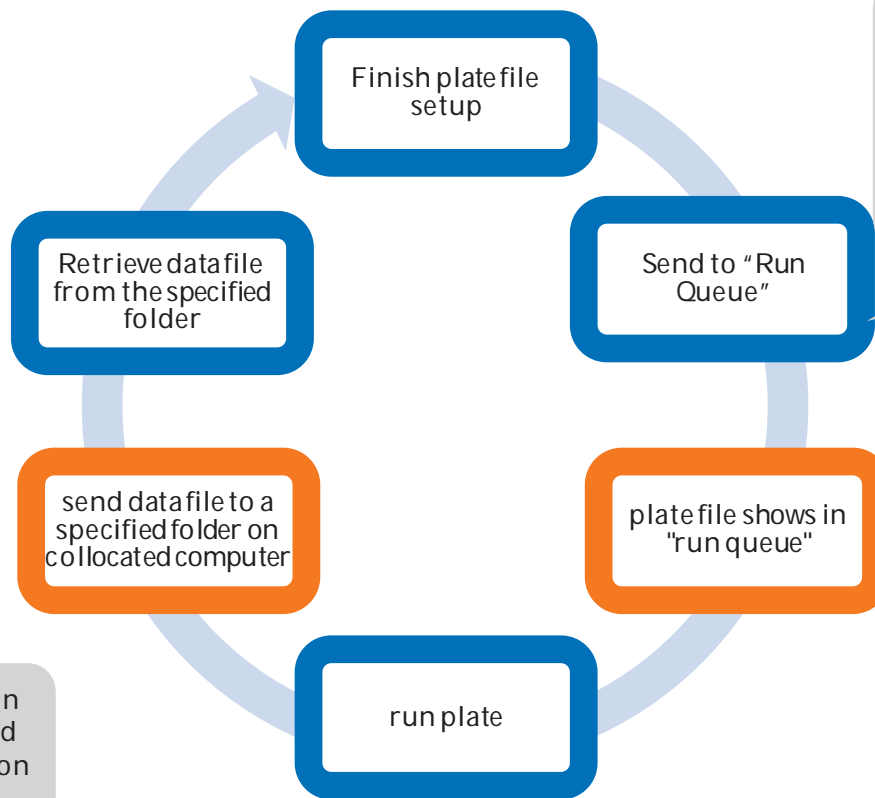
- Run Summary is designed for two objectives:
  - Review the setup at a glance – Run Method & Plate setup
  - Send the plate file to the connected instrument (aka run queue)
- Run queue (desktop version only)
  1. Check the instrument(s) available
  2. Select the instrument(s) of interest
  3. Send the plate file to the selected instruments
  4. The plate file will show up in the “run queue”



# Run Queue File Workflow in Collocated Configuration



Tips: "run queue" could work in similar fashion with networked configuration, for instruments on the same LAN.



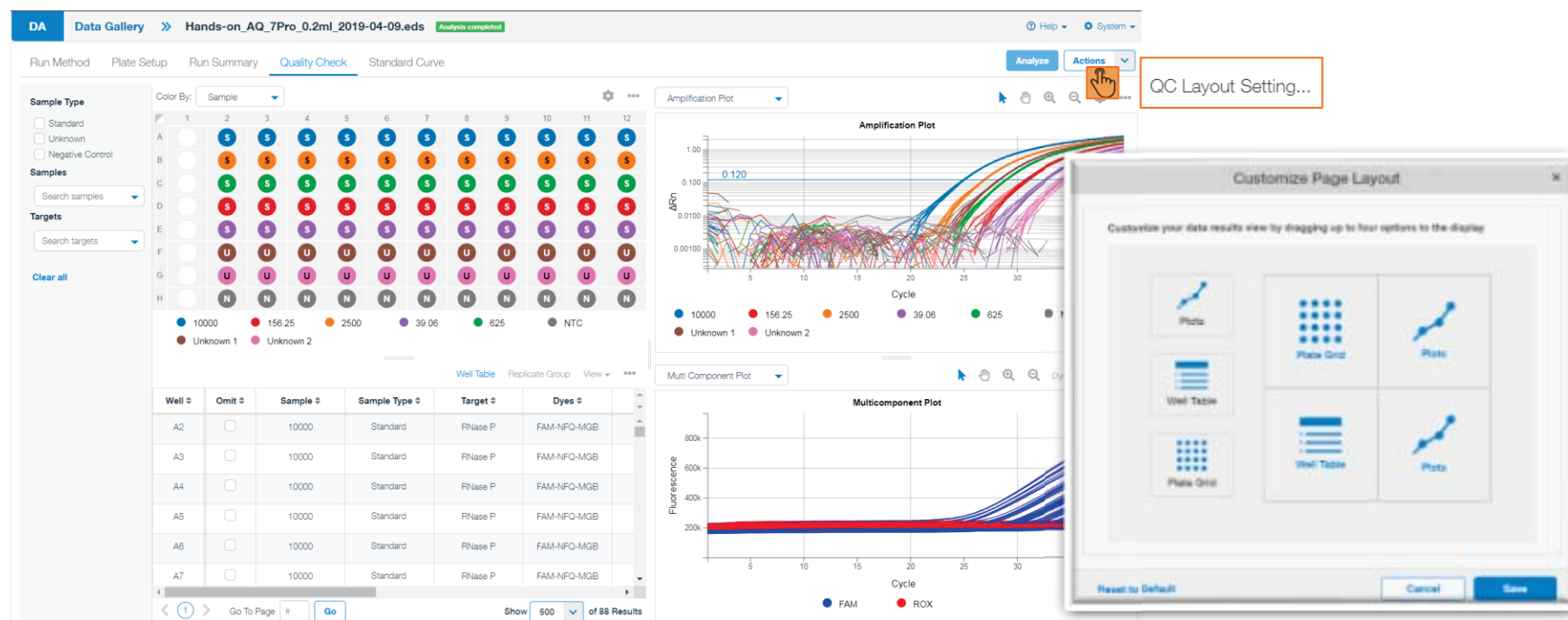
Tips: use "network drive" to designate the data file location, which should be a file folder on the collocated computer accessible to the instrument.

Instrument must be added to the DA software beforehand.



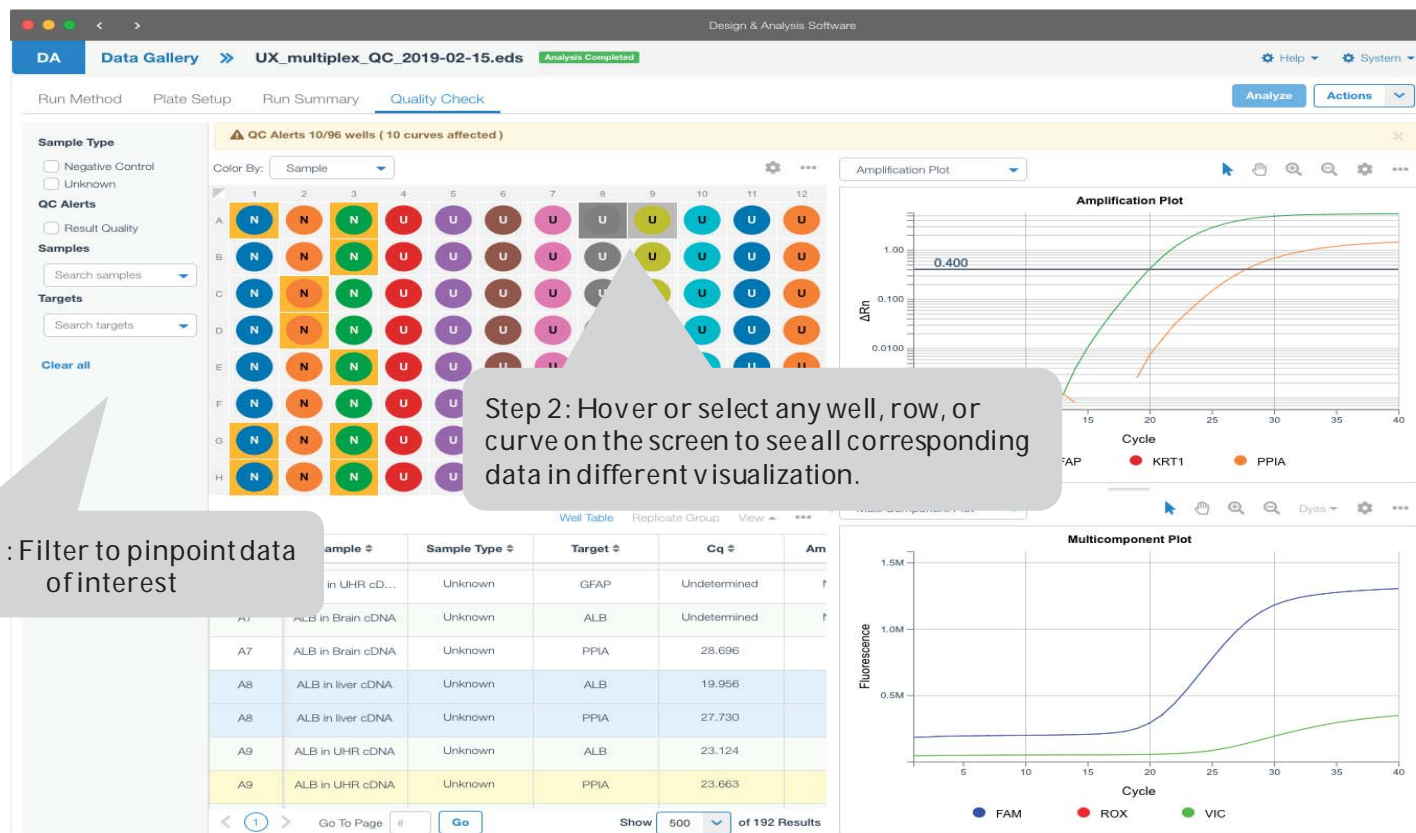
# Post-run View Data

- Data result view can be customized to include up to 4 sections in Quality Check window.





# Review Data Faster with New Navigation Tools

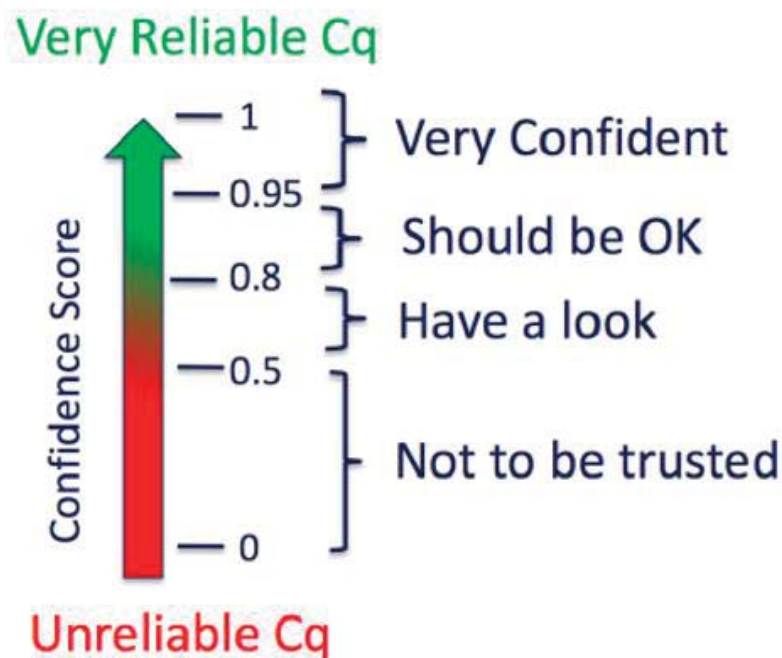


# Cq Confidence and Amp Score

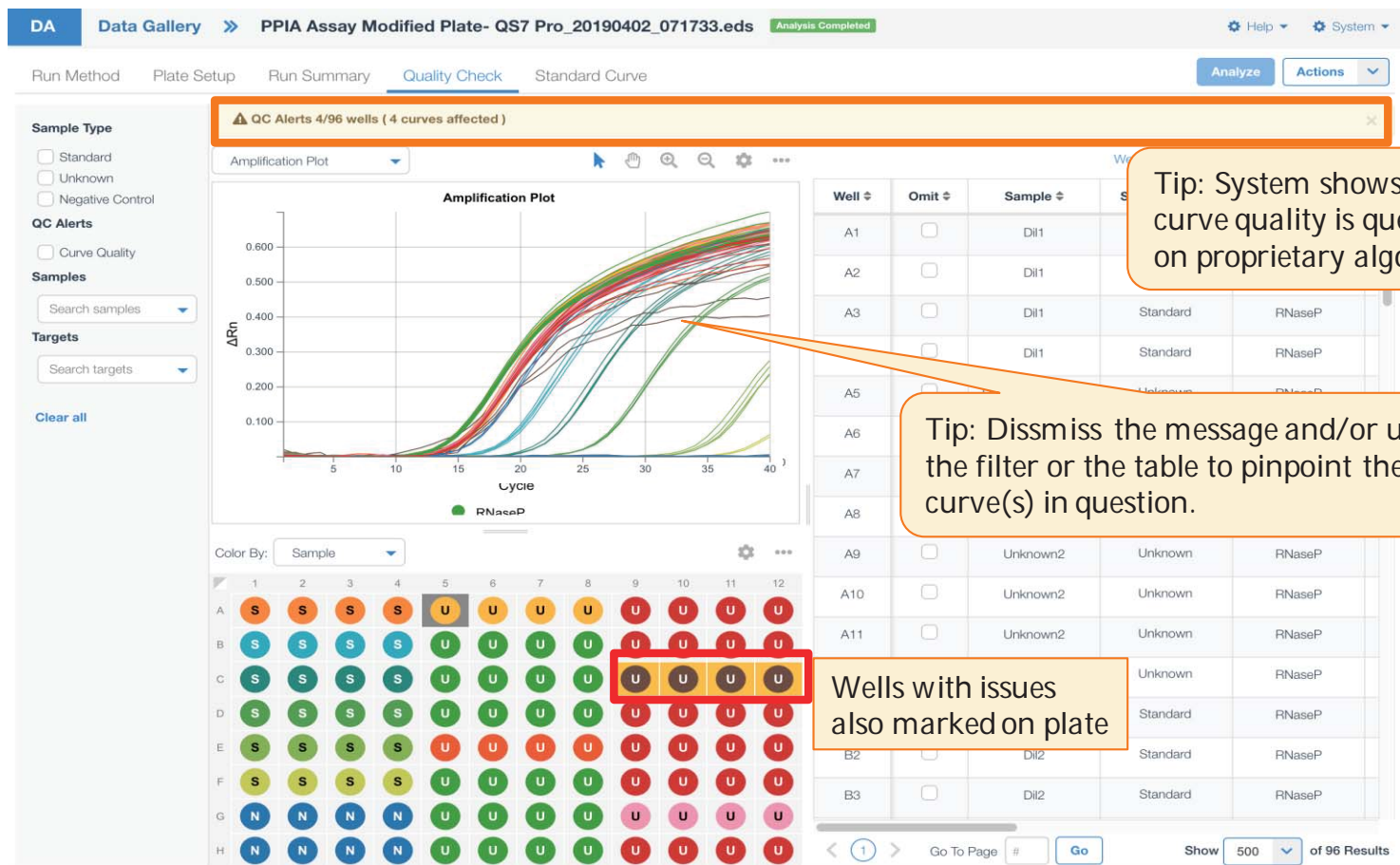
## Cq Confidence vs Amp Score?

**Amp Score:** Measure of amplification itself. Does the curve look like it *can* produce a Cq value?

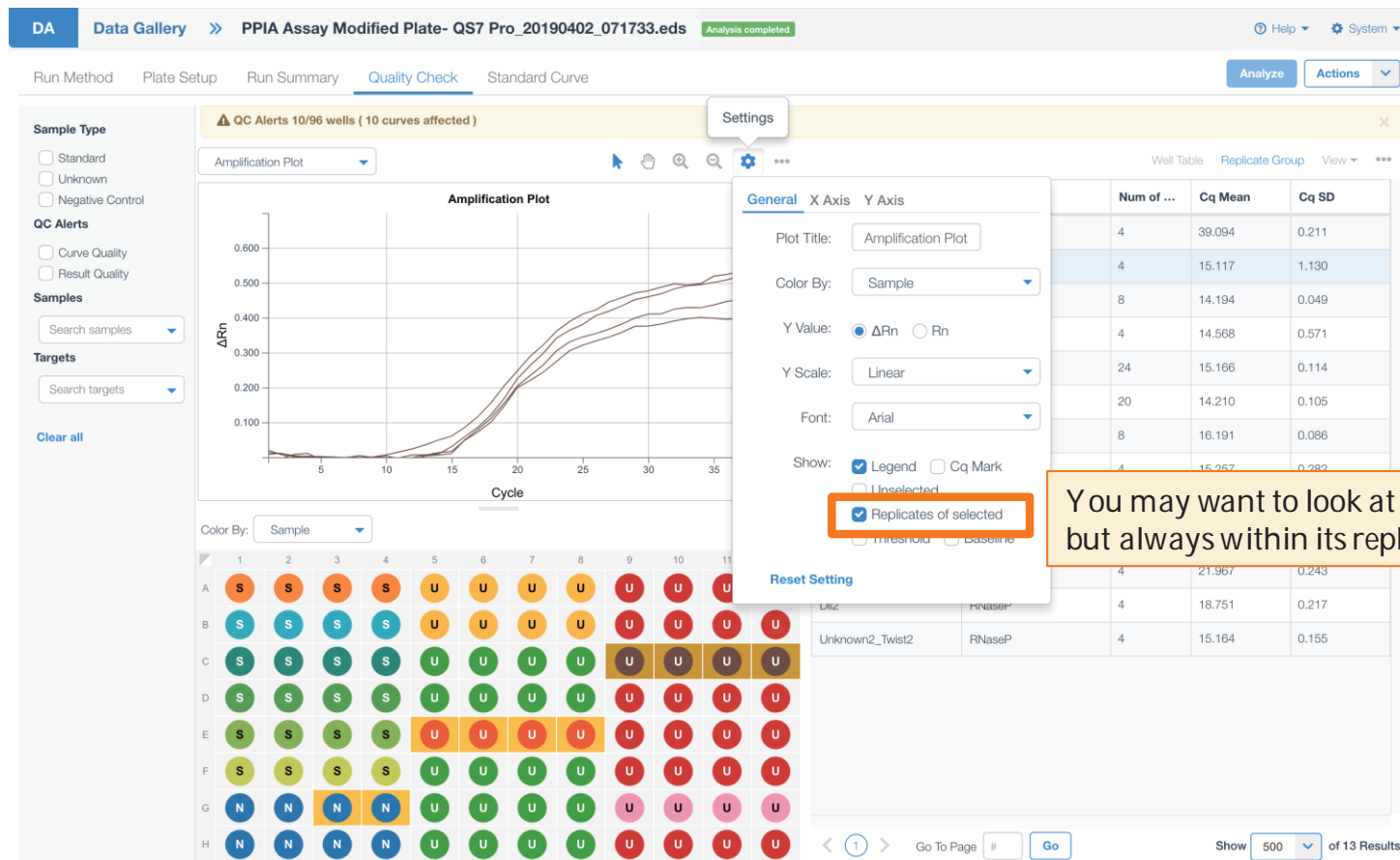
**Cq Confidence:** Answers the questions of “once you have amplification, how *reliable* is your Cq value? Measured in context of the amplification curve itself, not the relationship to other curves.



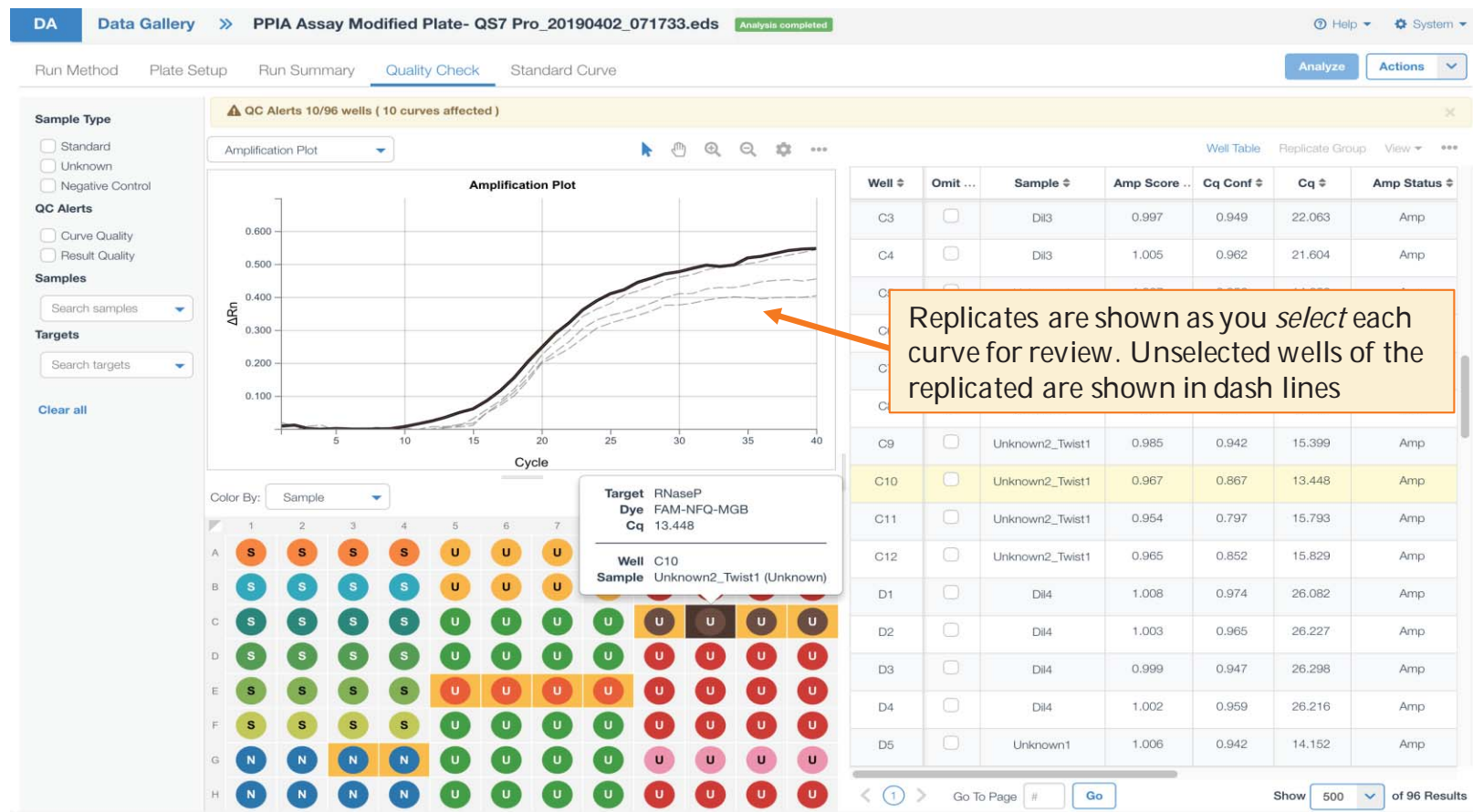
# Curve QC – Quick Method to Screen out Unreliable Data



# Curve QC – Quick Method to Screen out Unreliable Data

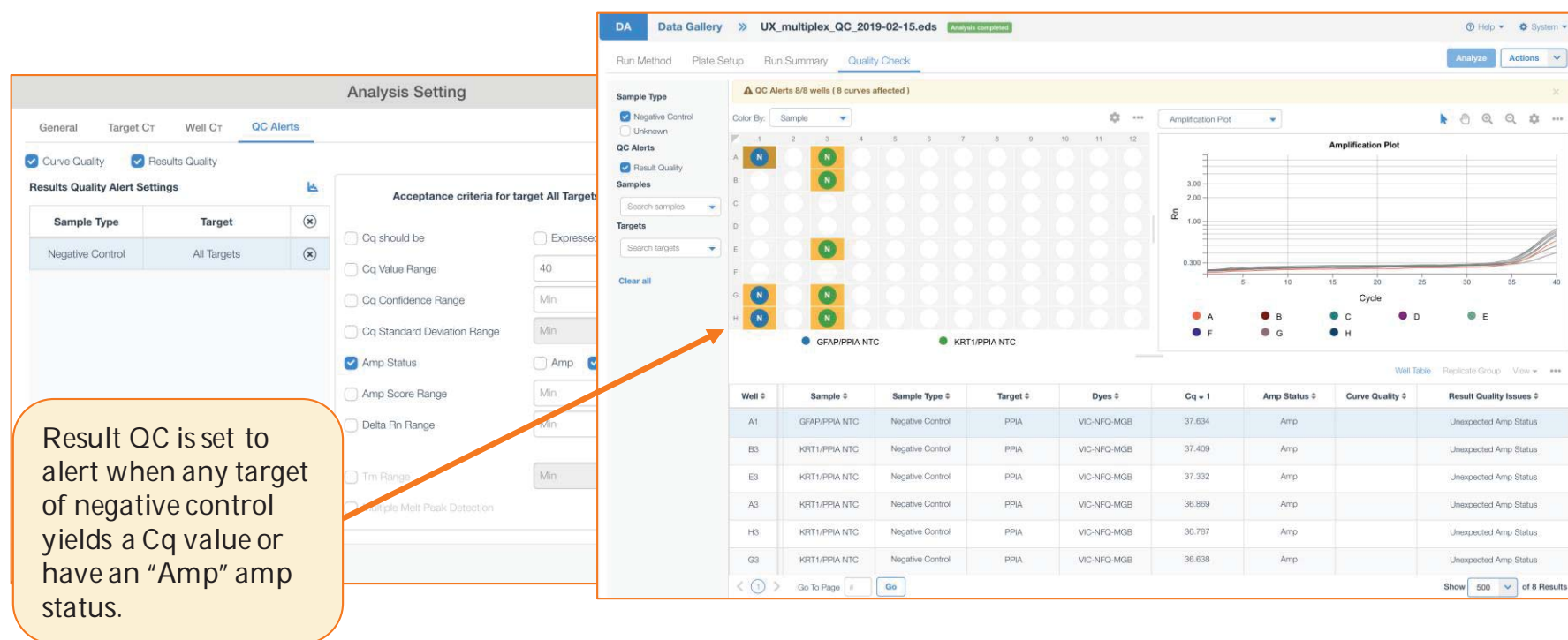


# Curve QC – Quick Method to Screen out Unreliable Data



# Result QC – Configurable Evaluation Based on Content

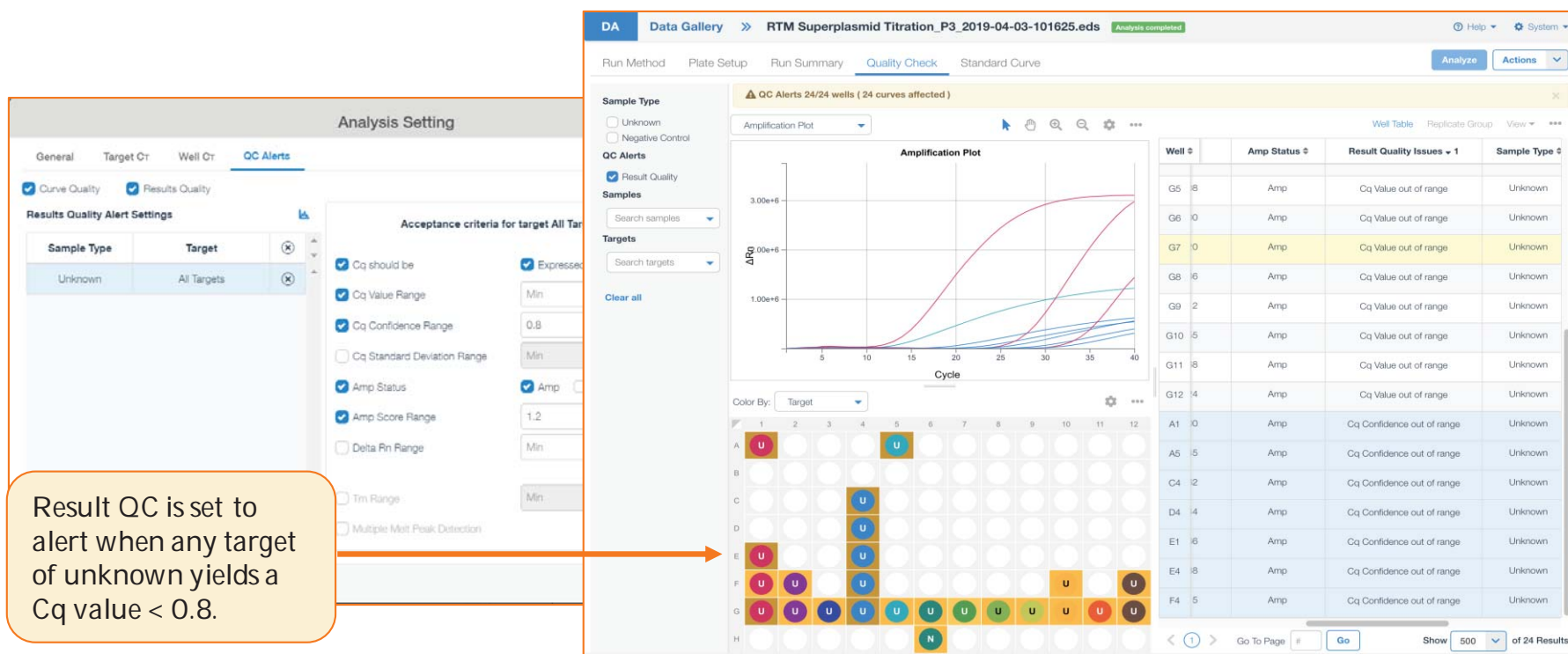
- Create a set of evaluation criteria for the data based on assay design or run objective
- System will apply criteria to the data automatically instead of visual inspection, reducing subjectivity and errors
- Result QC can be setup in pre-run.





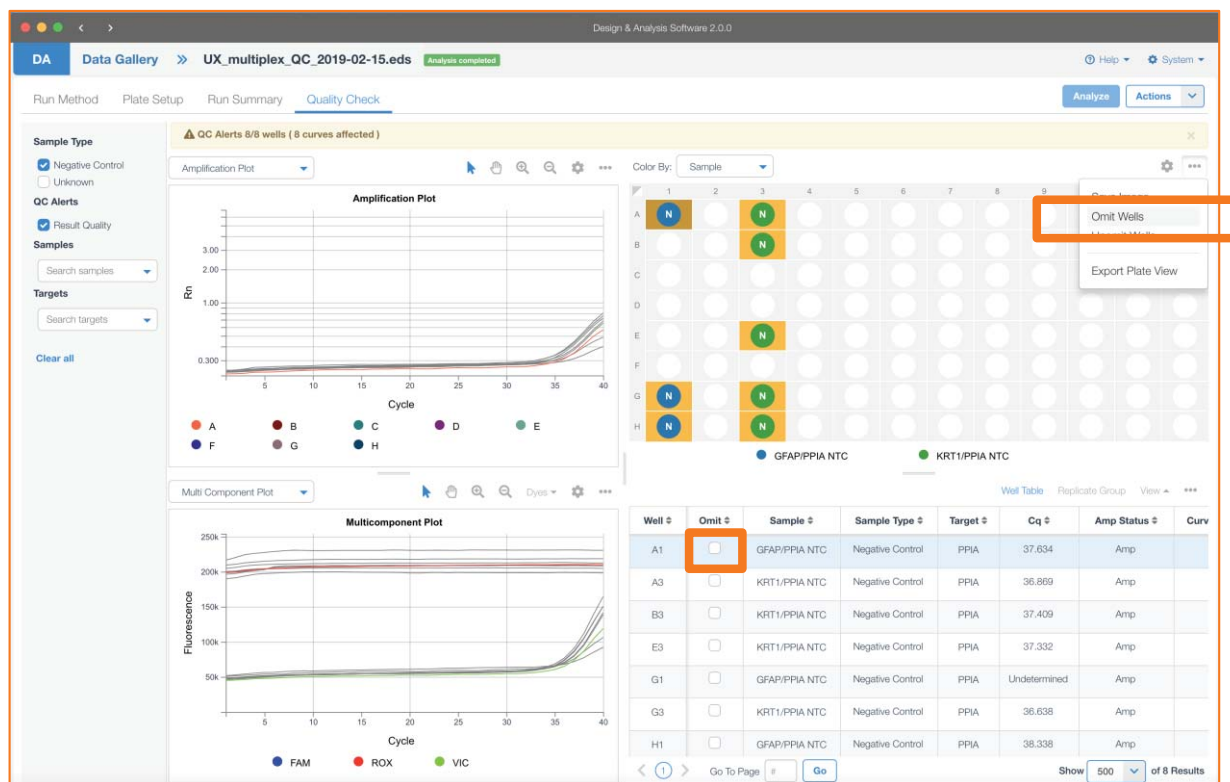
# Result QC – Configurable Evaluation Based on Content

- Create a set of evaluation criteria for the data based on assay design or run objective
- System will apply criteria to the data automatically instead of visual inspection, reducing subjectivity and errors
- Result QC can be setup in pre-run.



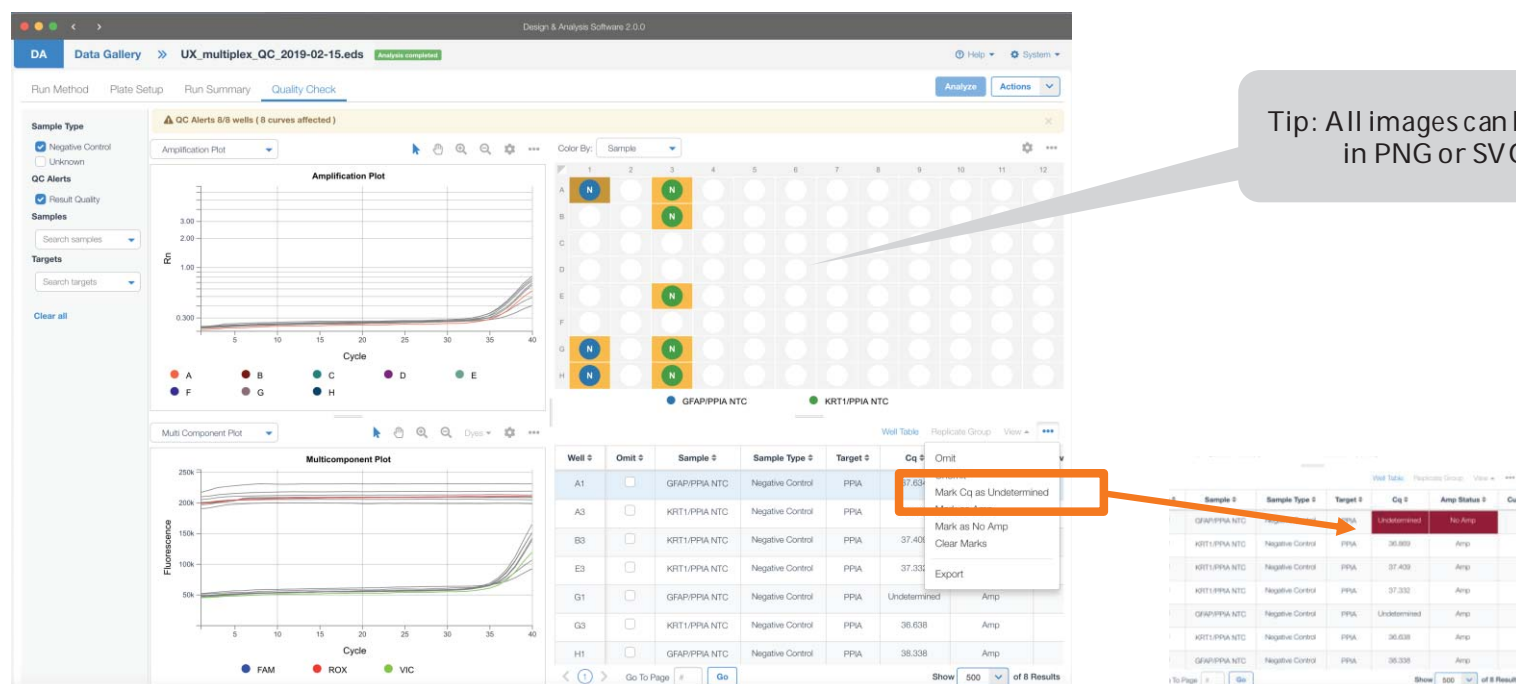
# Annotation Options – To keep or not to keep

- Omit specific curves in result table or entire well in plate grid.



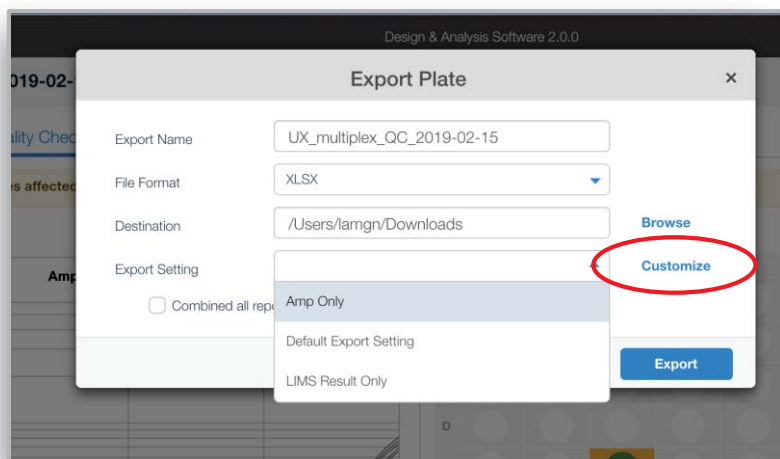
# Annotation Options – To keep or not to keep

- Annotate the Cq and the amp status. Annotated results are highlighted in the well table.



# Export Options

- Option 1: Export the result table from QC page WYISWYG in csv
- Option 2: Export plate data based on selected settings. Customize and store export settings in a library for re-use. Support CSV, XLS, XLSX, TXT
- Option 3: Export to standard RDML



**Export Plate**

Export Setting: Amp Only

Result: Amplification Data ✓ Melt Curve Raw Multicomponent Raw Data Melt Curve Result

**Select Columns**

- ☒ Well
- ☒ Well Position
- ☒ Sample
- ☒ Target
- ☒ Task
- ☒ Reporter
- ☒ Quencher
- ☒ Amp Status
- ☒ Cq
- ☒ Cq Mean
- ☒ Cq Confidence

Well #	Well Pos...	Sample #	Target #	Task #	Reporter #	Quencher ...	Amp Sta...	Cq #	Cq Mean #	Cq Conf...	C
1	A1	GFAP/PP...	PPA	NTC	VIC	NFQ-MGB	Amp	37.63396...	37.98591...	0.832137...	0
1	A1	GFAP/PP...	GFAP	NTC	FAM	NFQ-MGB	No Amp	Undeter...		0.0	L
2	A2	ALB/PP...	ALB	NTC	FAM	NFQ-MGB	No Amp	Undeter...		0.0	L
2	A2	ALB/PP...	PPA	NTC	VIC	NFQ-MGB	No Amp	Undeter...	30.19764...	0.0	0
3	A3	KRT1/PP...	KRT1	NTC	FAM	NFQ-MGB	No Amp	Undeter...		0.0	L
3	A3	KRT1/PP...	PPA	NTC	VIC	NFQ-MGB	Amp	36.86916...	37.45955...	0.876267...	0
4	A4	GFAP in ...	PPA	UNKNOWN	VIC	NFQ-MGB	Amp	26.28641...	26.24508...	0.950581...	0
4	A4	GFAP in ...	GFAP	UNKNOWN	FAM	NFQ-MGB	Amp	23.27342...	23.17806...	0.967530...	0
5	A5	GFAP in I...	PPA	UNKNOWN	VIC	NFQ-MGB	Amp	25.12324...	25.05554...	0.959004...	0
5	A5	GFAP in I...	GFAP	UNKNOWN	FAM	NFQ-MGB	No Amp	38.10594...	37.09833...	0.717974...	0

☐ Include Empty Wells ☐ Include Omitted Wells

Export Results: ☒ **OFF**

Save Current Setting As... Close Export