

# AMPLIFICATION CFX Manager™ Software Data Analysis Quick Guide

## Quantification Tab

### Data Viewing

The amplification chart displays traces of the relative fluorescence collected from each well at every cycle of the run.

Choose the fluorophore data you want to display by clicking the fluorophore checkboxes located under the amplification chart (Figure 1).

Click wells, rows, or columns in the well selector (Figure 1) to display fluorescence traces and data for selected wells. Selected wells are blue; unselected wells are light gray.

Position the cursor over a fluorescence trace, over a well in the well selector (Figure 1, well A4), over a cell in the data spreadsheet, or over a point on the standard curve to highlight corresponding information in all four locations.

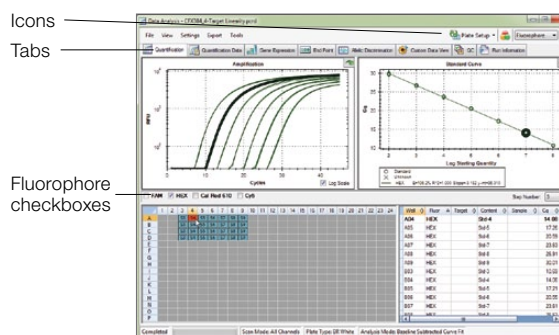
### Data Analysis Options

The software uses two modes for quantification cycle ( $C_q$ ) determination: regression and single threshold. Select **Settings** from the menu bar, and then select  **$C_q$  Determination Mode** to change the determination method. In the Single Threshold mode, click and drag the threshold line to manually position the line.

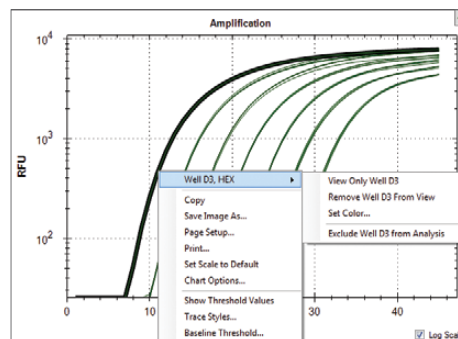
CFX Manager software automatically subtracts the baseline from well data. Select **Settings** from the menu bar, and then select **Baseline Threshold** to change the baseline range for any well.

Click the **Plate Setup** button to choose:

- **View/Edit Plate** — edit well contents, create well groups, and add, remove, or exclude wells from analysis
- **Replace Plate File** — change plate layout to that of a previously saved plate file (.pltd)
- **Apply PrimePCR File** — change plate layout to that of a PrimePCR™ run file (.csv)



**Fig. 1. Quantification tab in the Data Analysis window shows HEX data for all wells; information for well A4 is highlighted.** Tab includes (counterclockwise from top left) the amplification chart, well selector, data spreadsheet, and standard curve.



**Fig. 2. Pop-up menu revealed by right clicking the amplification chart.**

### Chart Options

Right click any chart to copy or save the image, or to select **Chart Options** to modify the chart (Figure 2).

Select **Trace Styles** from the Settings menu or right click any chart to customize the trace colors for specific wells.

Left click any chart, then hold down and drag the cursor to zoom in.

## Well Group Data Viewing

Use the Select Well Group dropdown menu on the toolbar to view data for a specific well group (Figure 3). The software treats well groups as independent runs, and each can be analyzed with its own settings and, if applicable, with its own standard curve.

Click the **Manage Well Groups** icon on the toolbar to add or modify well groups.

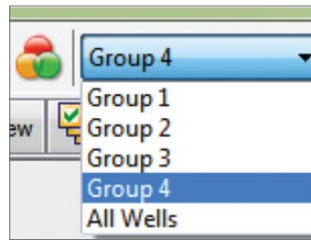


Fig. 3. Well group selection.

## Quantification Data Tab

### Display Options

Click the **Quantification Data** tab in the Data Analysis window to view numerical data calculations and statistics, including C<sub>q</sub>, for each well and the mean and standard deviation for replicates (Figure 4).

Click any column header to sort rows based on that column.

Right click the spreadsheet and select **Sort** to sort rows based on multiple columns. Choose **Select Columns** to specify which columns will be displayed.

Left click any column header and drag the column to the left or to the right to rearrange the order of the columns in the spreadsheet.

Right click the spreadsheet and select to export data as a text, XML, Microsoft Excel, or HTML file (Figure 4).

Select **Plate** from the dropdown menu under the Quantification Data tab to display well data for a selected fluorophore in a plate grid format.

## Creating a Report

### Display Options

Select **Tools > Reports** from the toolbar menu of the Data Analysis window (Figure 1) to open the Report window (Figure 5).

Click checkboxes in the report options list to include specific information in the report, which is displayed in the preview window (Figure 5).

The ordering of categories and items within a report can be changed by clicking and dragging these to the desired relative position.

Click **File** on the toolbar and select **Save** to save the report as a PDF or select **Print** to print the report.

Save the report template for use with other data files if desired.

Excel and Microsoft are trademarks of Microsoft Corporation.

Bio-Rad's real-time thermal cyclers are licensed real-time thermal cyclers under Applera's U.S. Patent Number 6,814,934 B1 for use in research, human in vitro diagnostics, and all other fields except veterinary diagnostics.

Bio-Rad's real-time thermal cyclers are covered by one or more of the following U.S. patents or their foreign counterparts owned by Eppendorf AG: U.S. Patent Numbers 6,767,512 and 7,074,367.

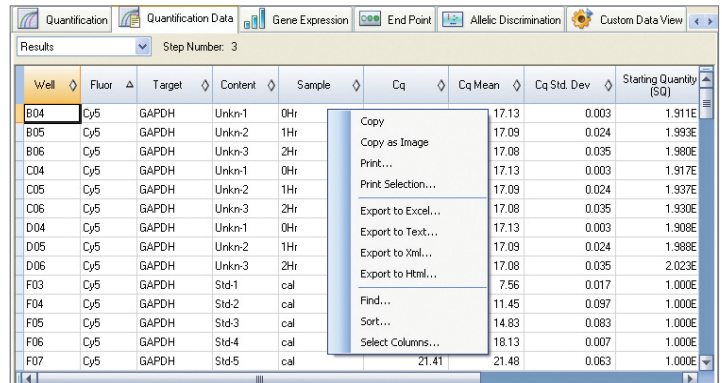


Fig. 4. Quantification data tab. Pop-up menu is revealed by right clicking the spreadsheet.

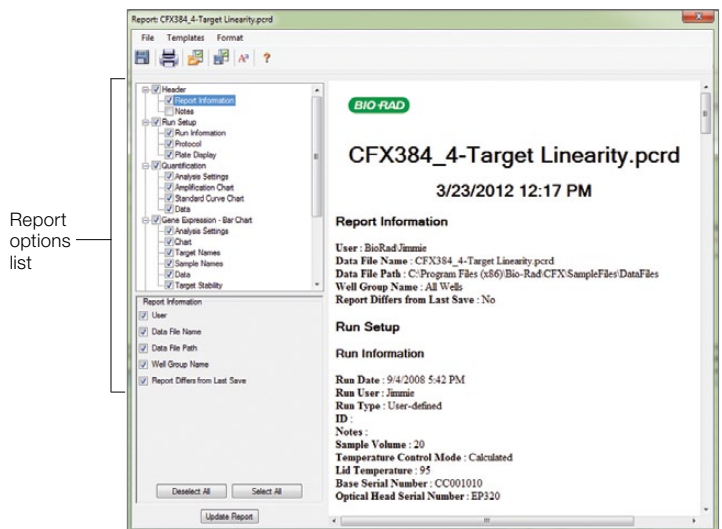


Fig. 5. Report window. Report options list includes checkboxes for choosing and ordering information to include in the report.



**Bio-Rad**  
Laboratories, Inc.

Life Science  
Group

Web site [www.bio-rad.com](http://www.bio-rad.com) USA 800 424 6723 Australia 61 2 9914 2800 Austria 01 877 89 01 Belgium 09 385 55 11 Brazil 55 11 5044 5699  
Canada 905 364 3435 China 86 21 6169 8500 Czech Republic 420 241 430 532 Denmark 44 52 10 00 Finland 09 804 22 00  
France 01 47 95 69 65 Germany 089 31 884 0 Greece 30 210 9532 220 Hong Kong 852 2789 3300 Hungary 36 1 459 6100 India 91 124 4029300  
Israel 03 963 6050 Italy 39 02 216091 Japan 03 6361 7000 Korea 82 2 3473 4460 Mexico 52 555 488 7670 The Netherlands 0318 540666  
New Zealand 64 9 415 2280 Norway 23 38 41 30 Poland 48 22 331 99 99 Portugal 351 21 472 7700 Russia 7 495 721 14 04  
Singapore 65 6415 3188 South Africa 27 861 246 723 Spain 34 91 590 5200 Sweden 08 555 12700 Switzerland 061 717 95 55  
Taiwan 886 2 2578 7189 Thailand 800 88 22 88 United Kingdom 020 8328 2000