Using Excel to Set Up a Real-Time PCR Plate Document

1. Open the Sequence Detection System Software, SDS.
2. Select File>New or click on the blank document symbol at the upper left corner of the toolbar.
3. Select the plate format appropriate for your run and click OK.
4. Click the Add Detector button.
5. Select the appropriate detectors. Click Copy to Plate Document. When all detectors have been copied, click Done.
6. Map the detectors to your plate by selecting the wells on the plate diagram on the left side of the window for a gene and then checking the box next to the correct detector for those wells.
7. Select the wells that will be used for the standard for each gene. Change the task for the detector to standard and enter 1 for the quantity.
8. Select the wells that are no template controls and change the task for the detector to NTC.
9. Go to File>Export. Export the Setup table from all wells in tab-delimited text format.
10. Open Excel.
11. Open your exported Setup Table.
12. Under Sample Name, enter your sample names for the first gene. Remember that identical names with the same detector are recognized as replicate samples. You may use copy and paste to enter the sample names for additional genes.
13. Under Quantity, enter the correct quantity for each standard. Copy and paste to additional standards on your plate.
14. Save the document as a tab-delimited text file.
15. Open SDS. Create a new plate document or select the one designed previously.
16. Select File>Import. Import the tab-delimited text Setup table.
17. Check the plate setup to make sure that there are no mistakes.

Note: A real-time plate does not need to be setup completely in order to run the plate. You may select one detector and label the entire plate as unknown samples. While the plate is running, use the SDS on a workstation to setup the plate document. When the run has completed, import the new plate layout and analyze your plate. The Setup Table document is also very useful as a template when multiple plates are run in the same format.

When 384 well plates are pipetted by robot, the samples are in vertical well order. To ease data entry for these plates:
1. Create the setup table for the plate.
2. After importing into Excel, click at the top of column A.
3. Select Insert>Column to add a new column to the left of column A.
4. Open the document O:\GCF\PINE Documents\Real-Time QPCR\Setup Tables\384 Setup Template_vert plate.xls.
5. Insert or delete lines in the document under "Detectors" so that the number of lines equals the number of detectors on your plate.

6. Copy column A.
7. Paste to column A of your new setup table document.
8. Check to make sure that the wells are aligned correctly.
9. Select the area from the cell that contains "Well" at the upper left to the bottom right side of the set up table.
10. Select Tools>Sort.
11. Sort in ascending order based on Column A ("Delete this column").
12. Delete column A.
13. Your samples should now be arranged in column order (A1, B1, C1, ….P1, A2, B2, …).
14. Enter the samples names and quantities as the directions above indicate.
15. Save the plate as a tab-delimited test file.

This file may be imported into your SDS document.