Release Notes for Protein Thermal Shift^{TM} Software v1.1

1. ABOUT PROTEIN THERMAL SHIFT^{TM} SOFTWARE V1.1

1.1. SOFTWARE CAPABILITIES

Protein Thermal Shift^{TM} Software v1.1 is a standalone software application. You can use the software to analyze melt temperature data from melt experiments that were created on an Applied Biosystems® Real-Time PCR System.

IMPORTANT - To help prevent data loss, it is strongly recommended that user backs up all software data before installing Protein Thermal Shift™ Software v1.1.

Protein Thermal Shift^{TM} Software can enable you to:

- Create a Study: import multiple plates to be analyzed as a single Study.
- Set up each plate: Specify the location of assays, replicates, and controls. Specify condition information to facilitate grouping and labeling the results.
- Generate a Plate template and then use the Plate template to facilitate setting up plates for analysis.
- Use Boltzman or first derivative peaks to determine melt temperatures.
- Review melting profiles and specify ranges in the data determined to be used as analysis intervals for the Boltzman or first derivative approaches.
- Obtain multiple melting temperatures for data exhibiting multiple melting phases based on the first derivative approach.
- View melt temperature means and confidence intervals for this quantity.
- Hierarchically group melt temperature results using condition combinations you have defined.
- Export the following data:
    - Analysis results
    - Analysis settings
- Transfer studies from one Protein Thermal Shift^{TM} Software application to another.

1.2. COMPATIBLE REAL-TIME PCR SYSTEMS

Protein Thermal Shift^{TM} Software v1.1 can import data that have been created by any of the Applied Biosystems® Real-Time PCR Systems listed below.

Applied Biosystems® Real-Time PCR System	System software
ViiA™ 7 Real-Time PCR System	ViiA™ 7 Software v1.0, v1.1, and v1.2
7500 Fast Real-Time PCR System	7500 Software v2.0.4, v2.0.5, and v2.0.6
StepOne® and StepOnePlus® Real-Time PCR Systems	StepOne® Software v2.1 and v2.2
QuantStudio™ 12K Flex Real-Time PCR System	QuantStudio™ 12K Flex Software v1.0

1.3. NEW FEATURES IN PROTEIN THERMAL SHIFT V1.1:

- Added compatibility with the following Real-Time PCR System and the Software:
  - QuantStudio™ 12K Flex Real-Time PCR System with QuantStudio™ 12K Flex Software v1.0
- Added compatibility with the following Software:
  - ViiA™ 7 Software v1.2
  - StepOne® Software v2.2.2
  - 7500 Software v2.0.6
- Added "Hide Region of Analysis" on the "Show in Plot" dropdown for the melt curve plots.
- Allow the software to add New Conditions to the Conditions when it encounters them in an imported Plate Template (from Headers).
- Enable user to hide the Baseline on the fluorescence plot when the Edit Baseline button is selected. When user hides the baseline, the software will revert (undo) the edited baseline.
- Added "Activate License" and "Renew License" menu in the Tools menu bar.

2. KNOWN ISSUES IN PROTEIN THERMAL SHIFT™ SOFTWARE

1) **Apparent "missing" data:** Export files can exceed the limits of Microsoft® Excel® software. A possible consequence is that data may appear to be missing when the file is opened in Excel®. You can view all the data by opening the export file in a text editor that has sufficient capacity.

2) **Pasting data from Excel® will not work if column headers have the wrong capitalization:** the software looks for an exact match to its expectations. For example, the well column must be labeled "Well"; "well" will not be recognized.

3) **Restoring data to a new installation of the software:** Studies created in Protein Thermal Shift™ will be restored to a new installation of the software unless the new installation is placed on a different disk or partition (i.e., a different drive designation from that of the original installation). To restore the studies, move or copy "<Drive letter of original installation>:\Applied Biosystems\Protein Thermal Shift Software Backup" to "<Drive letter of new installation>:\Applied Biosystems\Protein Thermal Shift Software Backup" then launch the installer.

4) **Data exported to a .csv file is incorrect:** The likely cause is that a condition name has one or more quote marks in it. Correct this situation by eliminating the quotation mark(s) or export to a .txt file.

5) **The error message "Error in exporting the study":** one possible cause that would be relatively easy to overcome is insufficient disk space. Clear out some disk space before attempting to export the study.

6) **Display errors in the replicates group table:** A column in the table may be displayed twice. This has no effect on results nor is the duplication exported. To correct the display, restart the software.

7) **Demo for plate setup does not play:** The probable cause is that the Adobe Flash Player is not installed. This can be downloaded from here:

   http://www.adobe.com/support/flashplayer/downloads.html

   Please download and install the player.

3. SOFTWARE LICENSE

Your installation or use of this software is subject to the terms of the Protein Thermal Shift™ Software v1.1 End User License Agreement.

For Research Use Only. Not intended for use in any animal or human therapeutic or diagnostic use.