

COPAS Instrument Control Protocol C-02 Custom Well Filling Templates

Scope

When installed, the Custom Well Filling Template option included with the COPAS Software add-on, Sflex, permits the selection, on a well-by-well basis, of the number of objects to be dispensed and the upper and lower limits for object Time of Flight (size) and Extinction (optical density). These parameters can be selected by editing a template file using a word processing program, or by creating a template via a spreadsheet program. The following discussion references files edited using the Windows® Notepad program and files created using Microsoft® Excel®.

Procedure

Sample Templates:

A sample template named “x384Wells.csv” is created during the installation of the COPAS software. In the example, wells are filled in a serpentine fashion with each row receiving one more object per well than the previous row. When the Custom Template option is not installed, customized template files will appear to be blank when opened by the COPAS program. Two Microsoft Excel spreadsheet files, 394Wells.xls and 96Wells.xls, are also included.

Creating and Modifying Templates Using a Word Processing Program:

Program versions 2.04 and above read and store templates in a Comma Separated Value format with a .CSV file extension. Without using Excel, templates can be created by selecting an appropriate plate size from the “Plate Sizes” pull down menu in the COPAS program. When using the 384-well plate option, one of four pre-programmed filling orders can be selected.

The leftmost value on each line of a template file specifies a well position. This position is a row ordered number, i.e., wells A1 through A12 on a 96-well plate are numbered 1 through 12, wells B1 through B12 are numbered 13 through 24, and so on. A zero in the left most position indicates that the plate is complete and no more wells will be filled.

The second and third values on each line of a template file specify the lower and upper Time of Flight (TOF) limits and the fourth and fifth values specify the lower and upper Extinction (EXT) limits, respectively.

When a template is created using the “Plate Sizes” pull-down menu, the current number of objects to be sorted, and the current TOF and EXT limits are written on each line. After saving the template, a Word Processing program can be used to modify values for any well.

NOTE: In order to reload a modified template, it is necessary to Click the “File” and “New” menu items, or to simultaneously press the “Ctrl” and “n” keys, before reopening the selected file.



Using Microsoft Excel To Create Custom Templates:

The sample spread sheet files with the .XLS file extension generate well position numbers in the first column using row and column letters and numbers, for example B2, entered in column G. Data is also placed in right justified columns and is therefore somewhat easier to read than in the Comma Separated Value format.

Both example files, 96Well.xls and x384Wells.xls, specify a serpentine pattern. If the information in the first five columns is identical for all wells, the template will be displayed in graphical mode for 96-well templates, or in abbreviated list mode (well positions only) for 384-well templates.

NOTE: It is important to specify plate size in column H and to use capital letters in order to insure proper well position calculations.

Instructions are included in the two example spreadsheets for saving values in the .CSV format. Be sure to save results to the default program directory. Also, the values at the end of the template files reflect settings made from within the COPAS program. In order to assure consistent and valid entries, the values at the end of the template (or spreadsheet) should not be modified with a word processing or spreadsheet program.

Questions?

For further information, please contact Union Biometrica, Inc. directly at 617.591.1211 or email your questions to appsupport@unionbio.com