

Using the Excel Template for QV assessment of the SOLiD Run

In order to get an idea of how various parameters will affect preprocessing of the data, the QV_assessment script was written. It samples approximately 20% of the data and runs different QV filter parameters on it. In order to be able to visualize the QV scores for the reads being analyzed use the Excel assessment template provided. The assessment Perl script will output a file with whatever name was passed in the -o parameter. The graphs will be auto generated if the data is pasted in the proper worksheet. If they are not, there is a potential for the links to break and the template will not work at all. The Y axis is set to auto size for maximum viewing. Once the data is pasted into the proper worksheet, you may want to adjust the Y axis so it is consistent along all the graphs to facilitate comparisons. All the templates are found on <http://hts.rutgers.edu/filter>

The options:

- m – Remove all reads with miscalls for all analyses [y, n]
 - Default n – the default does not remove miscalls from analysis.
- t - Truncate data [an integer]
 - The default uses the full read.

The filters applied to sampled data

- a. full analysis
- b. removal of reads containing a miscall
- c. mean QV ≥ 20
- d. p=1 e=off
- e. p=3 e=off
- f. p=5 e=off
- g. p=1 e=5
- h. p=1 e=3
- i. p=5 e=0

Example 1:

```
$ ./QV_run_analysis.pl -i a_qv.qual -o a_qv_assessment.txt
```

Example 2:

```
$/QV_run_analysis.pl -i a_qv.qual -t 30 -m y -o a_qv_assessment.txt
```

Using the assessment template:

1. Download the appropriate Excel template for your data.
2. Download the file generated from the assessment script.
3. Open the desired Excel template. Go to the final worksheet. The final worksheet is where all the data is pasted. All the other worksheets are linked to this one to generate the graphs and tables.
4. Once Excel is open, File → Open → the file generated by the assessment filter. You will need to change files type you are searching for to all types (*.*) in order to see this file in the dialog box.
 - a. A new dialog box should open for importing text. In the first screen, select the delimited text option.
 - b. Then hit next.
 - c. In the next screen, check the box next to the “space” option. This will put every number and word into its own cell.
 - d. Then select Finish. The file should now be open in its own workbook.
5. Now to copy it into the appropriate worksheet with in the template.
 - a. Select all the cells in the *_QV_analysis.txt worksheet you just opened.
 - b. Copy the Selected cells
 - c. Go to the final worksheet in the Excel template.
 - d. Go to cell A1, and select Edit → Paste Special → Select the Values option → Hit OK. This will paste the values just copied into the appropriate locations. You can also access the Paste Special option by right clicking the mouse.

The graphs and tables should now contain your data. Make any modifications desired.