QwikLite 200
BIOSENSOR SYSTEM

Data Management Manual

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QwikLite 200 Data Management – General Information

The QwikLite 200 Biosensor System incorporates a simple, flexible data infrastructure based on industry standards, which allows for ease of use and compatibility across a wide variety of external data management software. Bioluminescent light output, Biological Index Numbers (BIN), and Inhibition Coefficient 50 (IC50's) are the primary data outputs provided by QwikLite 200. Other outputs include average light per cuvette, standard deviation, and coefficient of variation (CV). The QwikLite History can store more than 500 Tests.

File Numbering Format

The instrument saves a unique file number along with the Test Series Name for each test series. The numbered series for the files are based on date, and test sequence for that date.   A typical file number such as 10617001 would break down as follows:
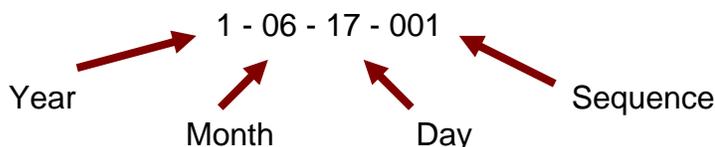
The following example shows a set of tests and breaks down their file number.

| File number	Date	Sequence
10617001	June 17, 2011	1st test of day
10617002	June 17, 2011	2nd test of day
10617003	June 17, 2011	3rd test of day
11006001	October 6, 2011	1st test of day

The time of day is also recorded within the file for each test.

Viewing Data Within the Instrument -- Reviewing History Files of Prior Tests

1. To review test History files within the QwikLite instrument, select "History" from the Home menu.
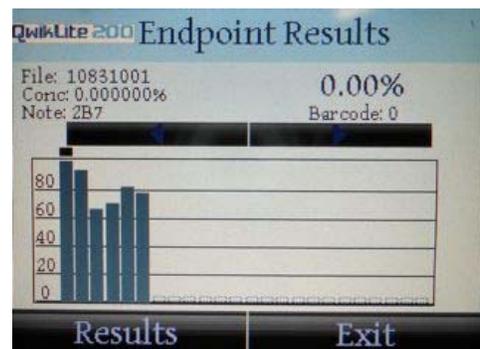

2. Scroll through the "Select Test" menu using the up and down arrows, and select the test.
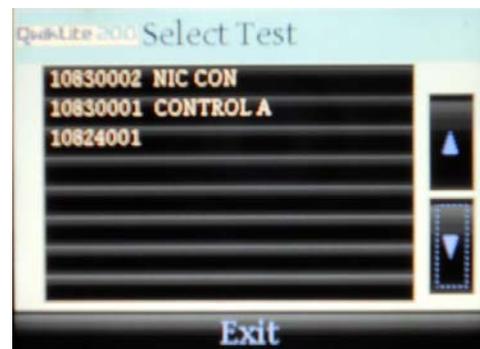
3. View results.

Note: The individual results of each test can be viewed by selecting the bar on the graph, or use the left and right arrow keys to step through the values.

Cuvette Output Mode – Option for Viewing Cuvette by Cuvette Light Readings in Real Time

QwikLite 200 has a Cuvette Output mode that allows the user to view bioluminescent light output readings for each cuvette as the test proceeds in real time. From the Home screen, select Options. On the Options screen, tap the QwikLite 200 logo in the upper left hand corner until a small black dot appears. (If a blue or clear dot appears, continue tapping until the black dot appears.) Once the black dot appears, you can select "Exit" and the instrument will remain in Cuvette Output mode until the instrument is turned off, or until a User returns to the Options screen. Upon returning to the Options screen for any reason, the black dot will be gone, indicating that the instrument has returned to non-Cuvette Output mode.

NOTE: Individual cuvette readings are always stored in the History, and can be accessed through the .TXT File Export (see Page 4).

Reformatting Files

Note: This command will reformat all memory on the instrument, therefore erasing ALL test data. The screens will warn you of this situation. If unsure, do NOT proceed unless you have exported all files from the History.

From the Home screen, select Options. On the Options screen, select "Reformat Files." Confirm by clicking "Proceed" to reformat and erase all data, or "Abort" in order to cancel and maintain all data.
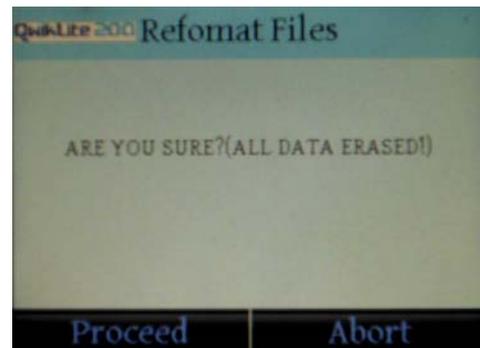
Exporting History Files to Another Computer

To transfer prior tests that have been saved in the History file of the instrument to another computer; you must first finish all ongoing tests and return to the Home Screen. Then insert a USB cable or USB storage drive in to either USB slot.

The USB Cable Export process allows you to select individual files from the History for transfer. The USB Storage Drive Export copies or moves all files from the History at once.

USB Cable Export: Connect the USB cord into the USB port on the left side of the QwikLite Biosensor and then to a USB port on your Microsoft Windows based computer system. The QwikLite instrument will appear as an external drive on your computing system. Copy or move the file(s) you wish to import into your application to your computer's hard drive (they are saved and presented as .csv files). While the instrument is plugged into your computer, you may delete any .csv files you would like to eliminate from your History file saved on the instrument.

CAUTION: DO NOT MOVE, DELETE OR CHANGE THE .TXT FILES FROM THE QWIKLITE 200 BIOSENSOR. CHANGES IN THESE FILES COULD HINDER AND PREVENT THE OPERATION OF THE EQUIPMENT.

USB Storage Drive Export: Insert the drive and the File Transfer screen will automatically appear. Select either "Copy Files To USB Drive" or "Move Files To USB Drive."

The "Copy Files To USB Drive" command will maintain a copy of all files on the QwikLite instrument.

The "Move Files To USB Drive" command will delete all files from the QwikLite instrument and move them on to the USB device. The instrument will notify you when all file transfer is complete. You can then remove the USB device.

The "Copy Files From USB Drive" allows you to transfer files on the instrument. This is used rarely.

Processing Data in External Data Management Software

There are two types of files which can be downloaded from the QwikLite 200 History:

1. Comma separated value (.CSV format) files. Each .CSV format file represents one discreet, individual Test Series (a single CONTROL Test plus 1-5 Sample Tests).
2. Text file (.TXT files). All Test Series currently saved in the instrument History are saved in a single .TXT file.

Opening individual Test Series .CSV files in Microsoft Excel:

1. Open Microsoft Excel.

2. Select "File>Open" in Excel.

3. Navigate to the desired Test Series file and select "Open."

The .CSV file is organized as follows:

Date	Time	Control Barcode	Cartridge Barcode	Concentration	Units (%, ppt, ppm, ppb)	Total Light Output Measurement (6 cuvettes)	Note

Opening all downloaded data from the file transfer .TXT file in Microsoft Excel:

1. Open Microsoft Excel.

2. Select "File>Open" in Excel. At the "Files of type" dropdown, select "All Files."
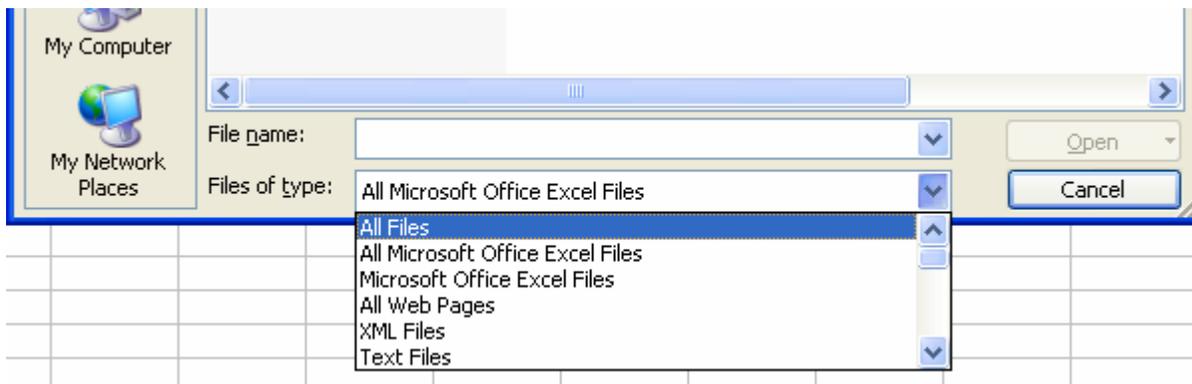
3. Navigate to the text file and select "Open."
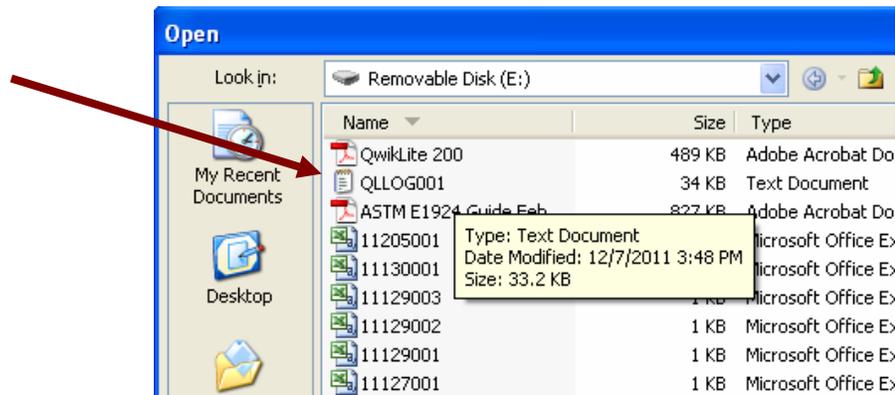
4. The Text Import Wizard will open. At Step 1 of 3, select "Delimited" for "Original Data Type," and then click "Next."
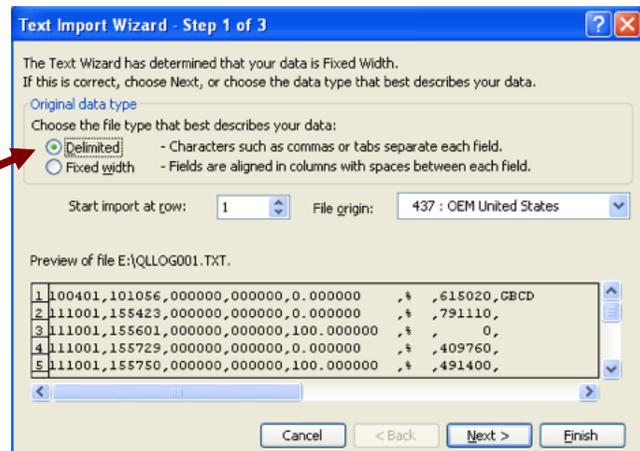
5. At Step 2 of 3, select "Tab" and "Comma" within the "Delimiters" box, and then click "Next."
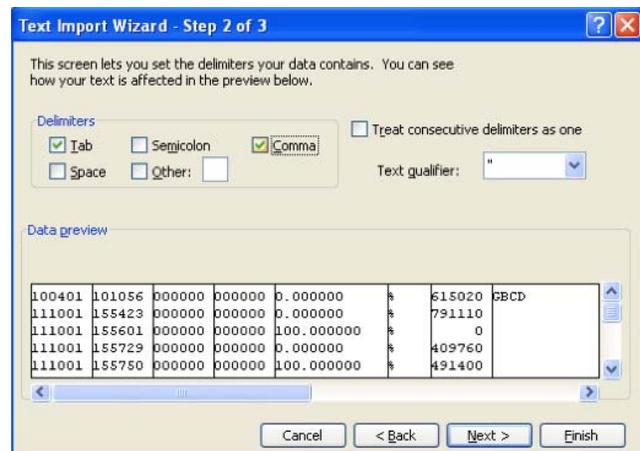
5. At Step 3 of 3, select "General" within the "Column Data format" box, and then click "Finish."
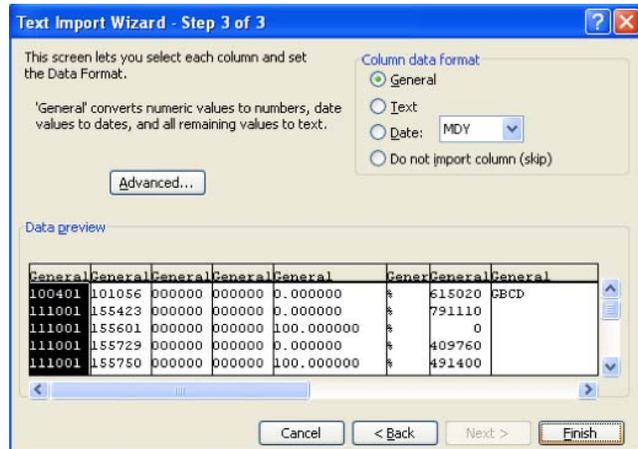
7. Select "Save as" and change the File Name to add "…Excel Version." Change the "Save as type" to "Microsoft Excel Workbook." Changing the name and saving in this manner will preserve the .TXT file as a backup

8. Your Excel spreadsheet should now appear as the picture below. You can now process this raw data by your own methods, or continue to Step 9 to load this data in to the QL200 Standard Data Template.
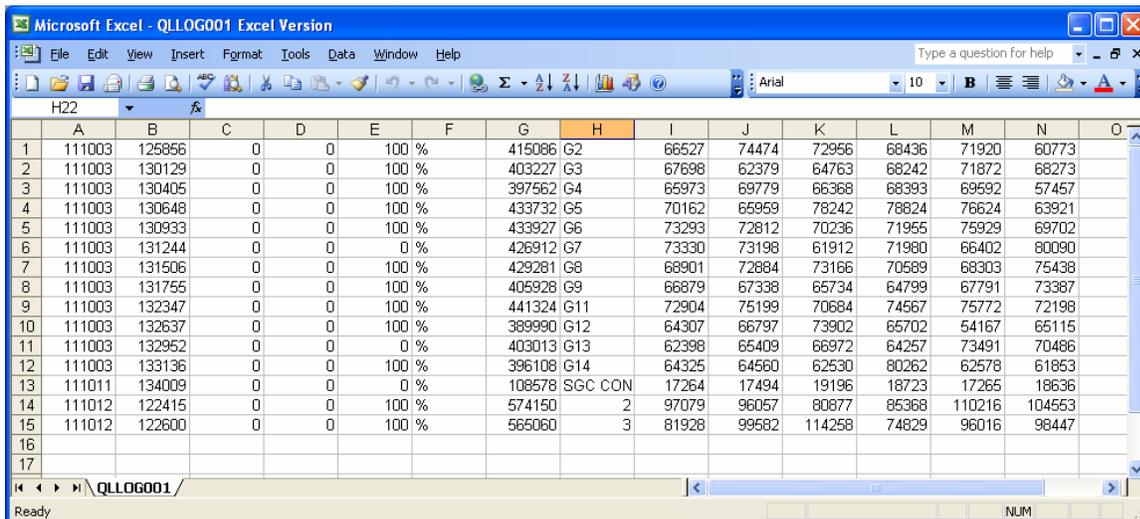
9. While this Excel file is still open, open the QL200 Standard Date Template. This should be empty of data, and contain only column labels and formulas on the right 3 columns.
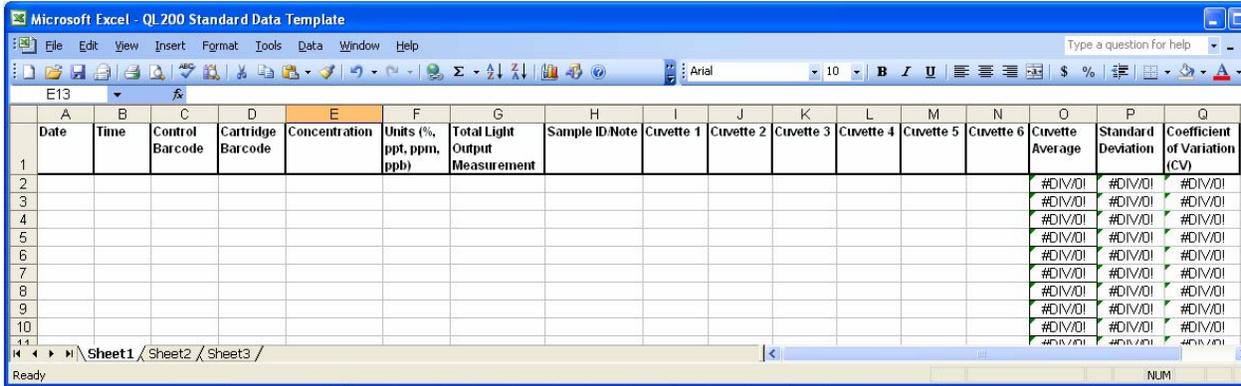
10. Select "Save as" and change the name to a distinct name for that download. Do this step immediately after opening the QL200 Standard Date Template, so that the Template is not accidentally altered.
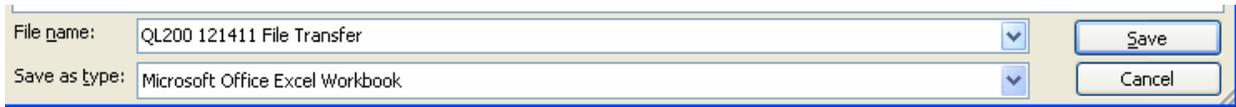
11. Return to the first Excel file (the one saved in Step 7), and select all data fields. Then select Edit>Copy (or Control+C).
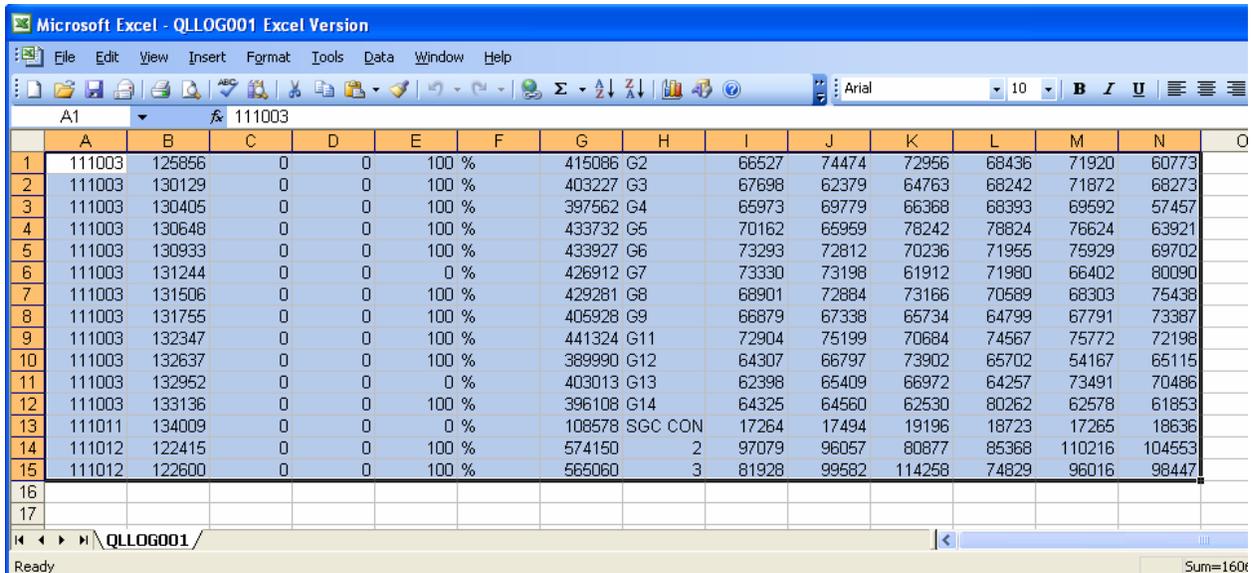
12. Return to the QL200 Standard Data Template file that you saved in Step 10. Place your cursor in Box A2 and select "Paste." At this time all your data should load in to the Template and readings should be calculated for Cuvette Average, Standard Deviation, and Coefficient of Variation. Save again.

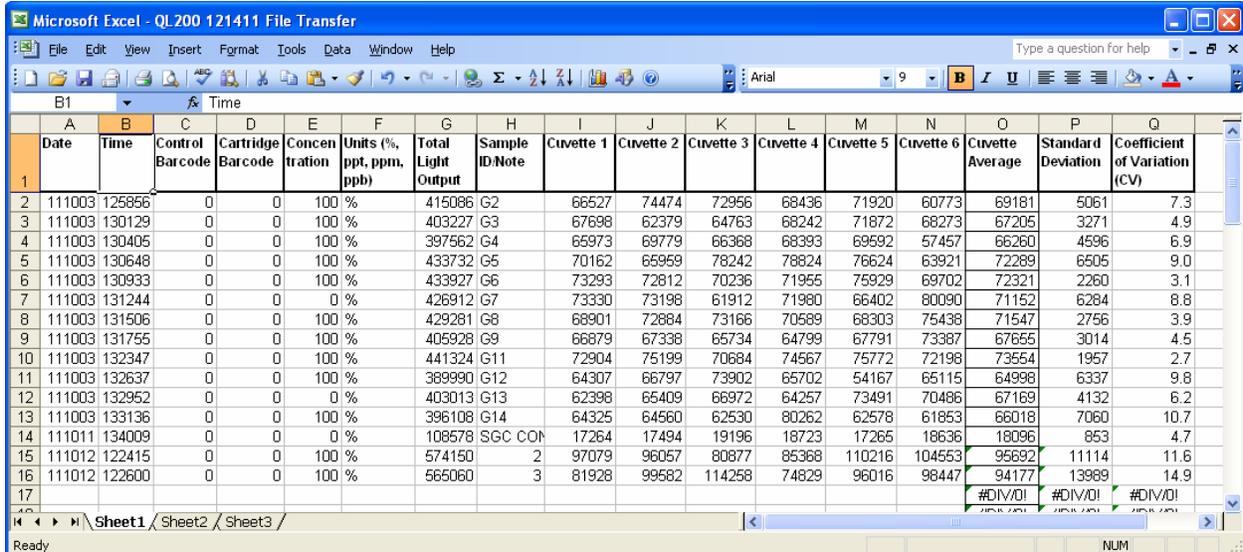|	Date	Time	Control Barcode	Cartridge Barcode	Concentration	Units (%, ppt, ppm, ppb)	Total Light Output	Sample ID/Note	Cuvette 1	Cuvette 2	Cuvette 3	Cuvette 4	Cuvette 5	Cuvette 6	Cuvette Average	Standard Deviation	Coefficient of Variation (CV)
2	111003	125856	0	0	100	%	415086	G2	66527	74474	72956	68436	71920	60773	69181	5061	7.3
3	111003	130129	0	0	100	%	403227	G3	67698	62379	64763	68242	71872	68273	67205	3271	4.9
4	111003	130405	0	0	100	%	397562	G4	65973	69779	66368	68393	69592	57457	66260	4596	6.9
5	111003	130648	0	0	100	%	433732	G5	70162	65959	78242	78824	76624	63921	72289	6505	9.0
6	111003	130933	0	0	100	%	433927	G6	73293	72812	70236	71955	75929	69702	72321	2260	3.1
7	111003	131244	0	0	0	%	426912	G7	73330	73198	61912	71980	66402	80090	71152	6284	8.8
8	111003	131506	0	0	100	%	429281	G8	68901	72884	73166	70589	68303	75438	71547	2756	3.9
9	111003	131755	0	0	100	%	405928	G9	66879	67338	65734	64799	67791	73387	67655	3014	4.5
10	111003	132347	0	0	100	%	441324	G11	72904	75199	70684	74567	75772	72198	73554	1957	2.7
11	111003	132637	0	0	100	%	389990	G12	64307	66797	73902	65702	54167	65115	64998	6337	9.8
12	111003	132952	0	0	0	%	403013	G13	62398	65409	66972	64257	73491	70486	67169	4132	6.2
13	111003	133136	0	0	100	%	396108	G14	64325	64560	62530	80262	62578	61853	66018	7060	10.7
14	111011	134009	0	0	0	%	108578	SGC CON	17264	17494	19196	18723	17265	18636	18096	853	4.7
15	111012	122415	0	0	100	%	574150	2	97079	96057	80877	85368	110216	104553	95692	11114	11.6
16	111012	122600	0	0	100	%	565060	3	81928	99582	114258	74829	96016	98447	94177	13989	14.9
17															#DIV/0!	#DIV/0!	#DIV/0!

Transferring Screening data results to the Screening spreadsheet in the QL200 Standard Data Template

In the last section you created an Excel file using the QL200 Standard Data Template. The second sheet of the QL200 Standard Data Template includes formulas for calculating Biological Index Numbers (BINs) for your test results. To populate your screening data in to this spreadsheet, open the file you created in the last section, and proceed below.

1. The first spreadsheet is titled "All Data." On this spreadsheet, select the Screening Test Series data that you wish to analyze. This will generally be a sequence of 1-5 samples referenced to a single CONTROL. Only select the raw data, do not select to the right of the "Cuvette 6" column. Select Edit>Copy (or Control+C).

Microsoft Excel - QL200 121411 File Transfer — A2 = 111003

	Date	Time	Control Barcode	Cartridge Barcode	Concentration	Units (%, ppt, ppm, ppb)	Total Light Output	Sample ID/Note	Cuvette 1	Cuvette 2	Cuvette 3	Cuvette 4	Cuvette 5	Cuvette 6	Cuvette Average	Standard Deviation	Coefficient of Variation (CV)
2	111003	125856	0	0	100	%	415086	SDCONTROLA	66527	74474	72956	68436	71920	60773	69181	5061	7.3
3	111003	130129	0	0	100	%	403227	Sample A1	56783	56378	60879	54675	59678	55678	57345	2412	4.2
4	111003	130405	0	0	100	%	397562	Sample A2	55678	58734	59734	57645	60987	57457	58373	1868	3.2
5	111003	130648	0	0	100	%	433732	Sample A3	70162	60879	54675	59678	76624	63921	64323	7901	12.3
6	111003	130933	0	0	100	%	433927	Sample A4	36985	33657	39076	3306			6	2349	6.7
7	111003	131244	0	0	0	%	426912	Sample A5	49768	53612	47856	4987			8	2897	5.8
8	111003	131506	0	0	100	%	429281	SDCONTROLB	68901	72884	73166	7058			7	2756	3.9
9	111003	131755	0	0	100	%	405928	Sample B1	66879	67338	65734	6479			5	3014	4.5
10	111003	132347	0	0	100	%	441324	Sample B2	72904	75199	70684	7458			4	1957	2.7
11	111003	132637	0	0	100	%	389990	Sample B3	64307	66797	73902	6570			8	6337	9.8
12	111003	132952	0	0	0	%	403013	Sample B4	62398	65409	66972	6425			9	4132	6.2
13	111003	133136	0	0	100	%	396108	Sample B5	64325	64560	62530	8026			8	7060	10.7
14																#DIV/0!	#DIV/0!

Context menu: Cut, Copy, Paste, Paste Special..., Insert..., Delete..., Clear Contents

2. Place your cursor in Box B2 and select "Paste." All data should now be populated with BIN values calculated at far right. Repeat as necessary for all Screening Test Series using the available tables on the Screening Data Sheet.

Microsoft Excel - QL200 121411 File Transfer — R3 = =100*(Q3/P3)

	Date	Time	Control Barcode	Cartridge Barcode	Concentration	Units (%, ppt, ppm, ppb)	Total Light Output	Sample ID/Note	Cuvette 1	Cuvette 2	Cuvette 3	Cuvette 4	Cuvette 5	Cuvette 6	Cuvette Average	Standard Deviation	Coefficient of Variation (CV)	BIN
2	111003	125856	0	0	100	%	415086	SDCONTRO	66527	74474	72956	68436	71920	60773	69181	5061	7.3	CONTROL
3	111003	130129	0	0	100	%	403227	Sample A1	56783	56378	60879	54675	59678	55678	57345	2412	4.2	2
4 Test	111003	130405	0	0	100	%	397562	Sample A2	55678	58734	59734	57645	60987	57457	58373	1868	3.2	2
5 Series:	111003	130648	0	0	100	%	433732	Sample A3	70162	60879	54675	59678	76624	63921	64323	7901	12.3	1
6	111003	130933	0	0	100	%	433927	Sample A4	36985	33657	39076	33065	34980	33651	35236	2349	6.7	5
7	111003	131244	0	0	0	%	426912	Sample A5	49768	53612	47856	49875	51236	45123	49578	2897	5.8	3
8																		
9																		
10																		
11	Date	Time	Control Barcode	Cartridge Barcode	Concentration	Units (%, ppt, ppm, ppb)	Total Light Output	Sample ID/Note	Cuvette 1	Cuvette 2	Cuvette 3	Cuvette 4	Cuvette 5	Cuvette 6	Cuvette Average	Standard Deviation	Coefficient of Variation (CV)	BIN
12															#DIV/0!	#DIV/0!	#DIV/0!	CONTROL
13															#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
14 Test															#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
15 Series:															#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
16															#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
17															#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!