MS12 Stability Testing

MS12 Stability Testing

This document will outline the correct procedure to verify JGR's MS12 insertion loss stability.

The published specifications are as follows:

- Singlemode: ± 0.004 dB over 15 min after 30 min warm-up
- Multimode: ± 0.01 dB over 15 min after 30 min warm-up

It is recommended to use FC connectors.

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1. Configure a 30 min continuous acquisition test to initiate the warmup phase.
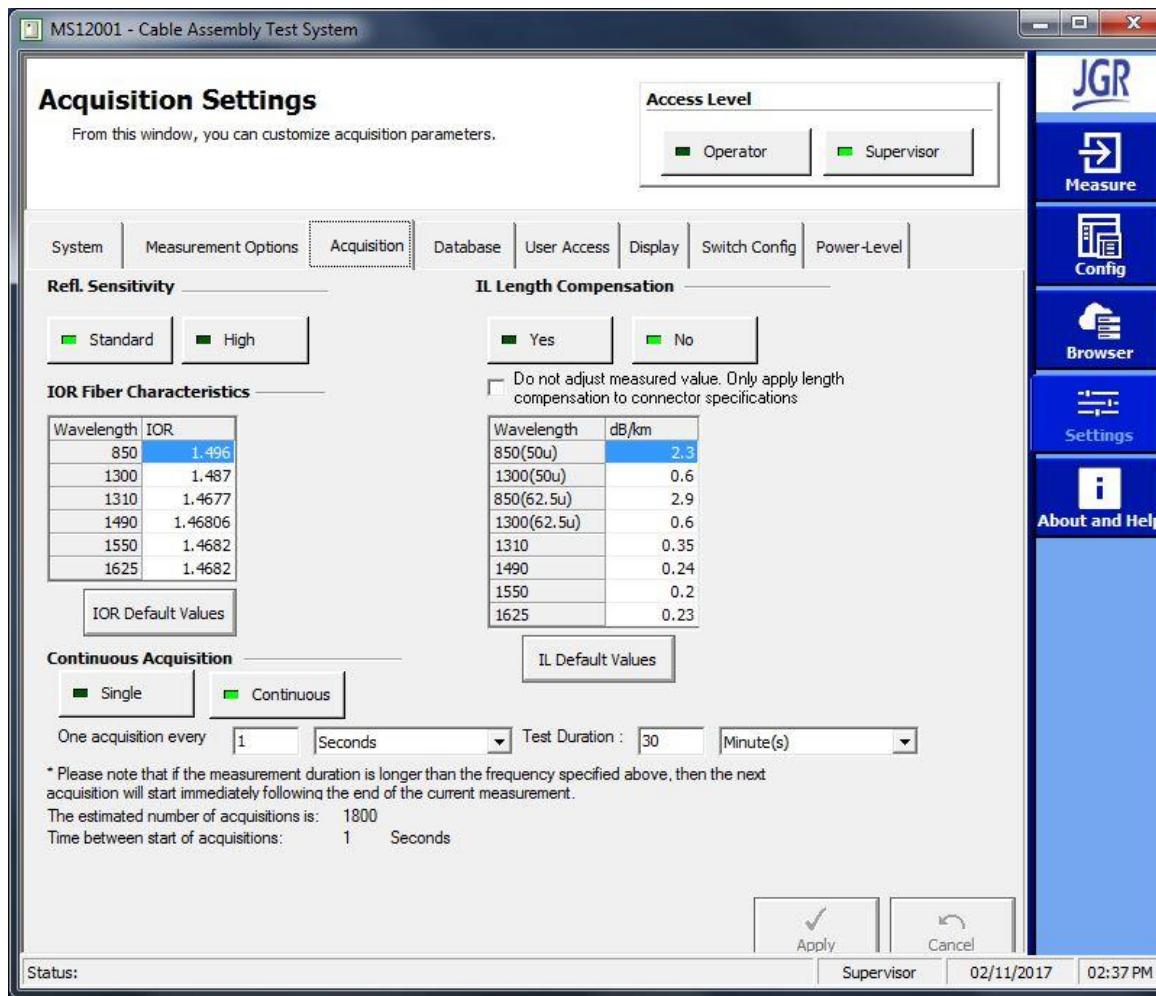
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2. Set the measurement display as follows:
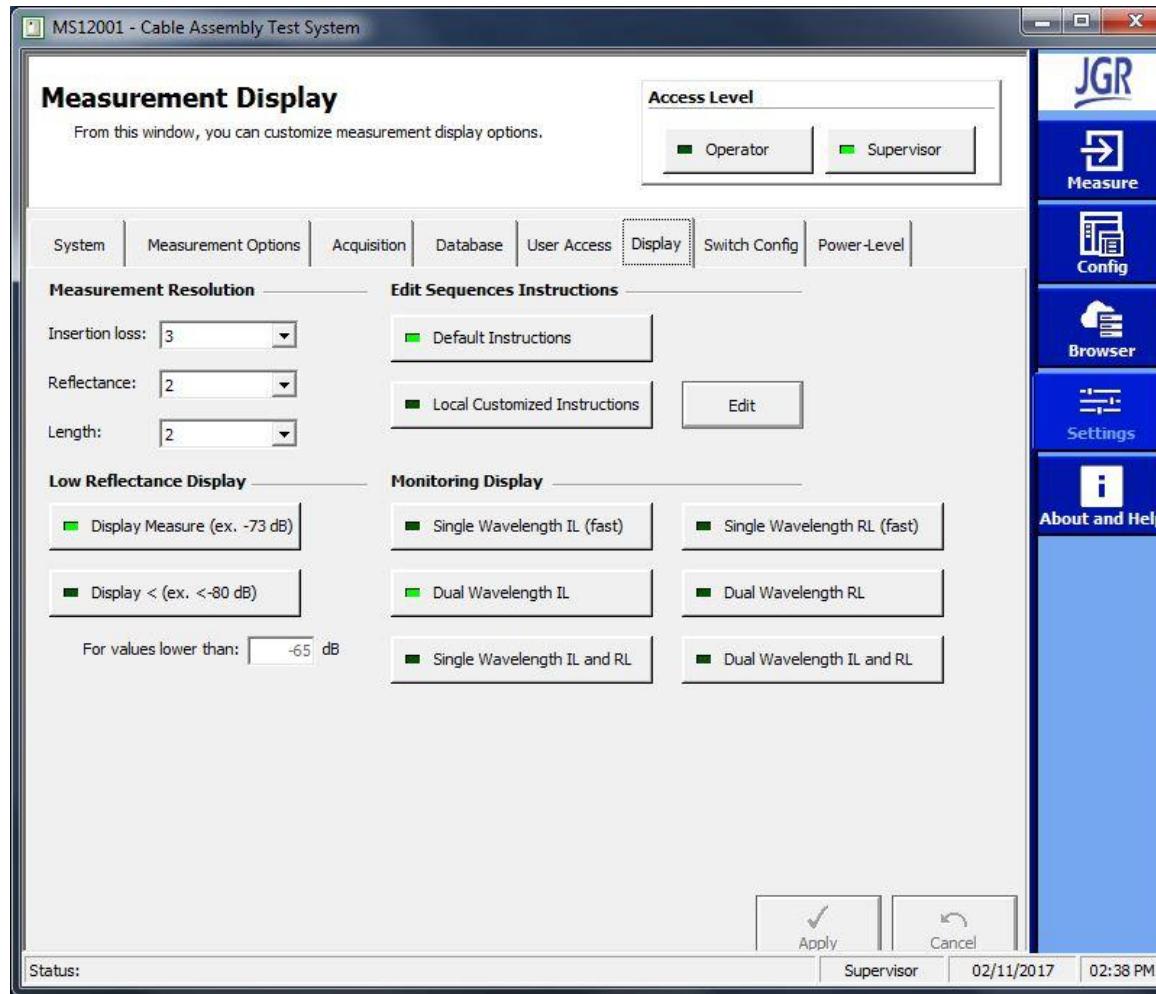
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3. Setup an IL test with the appropriate wavelengths and DUT (simplex SM or MM depending on the MS12)
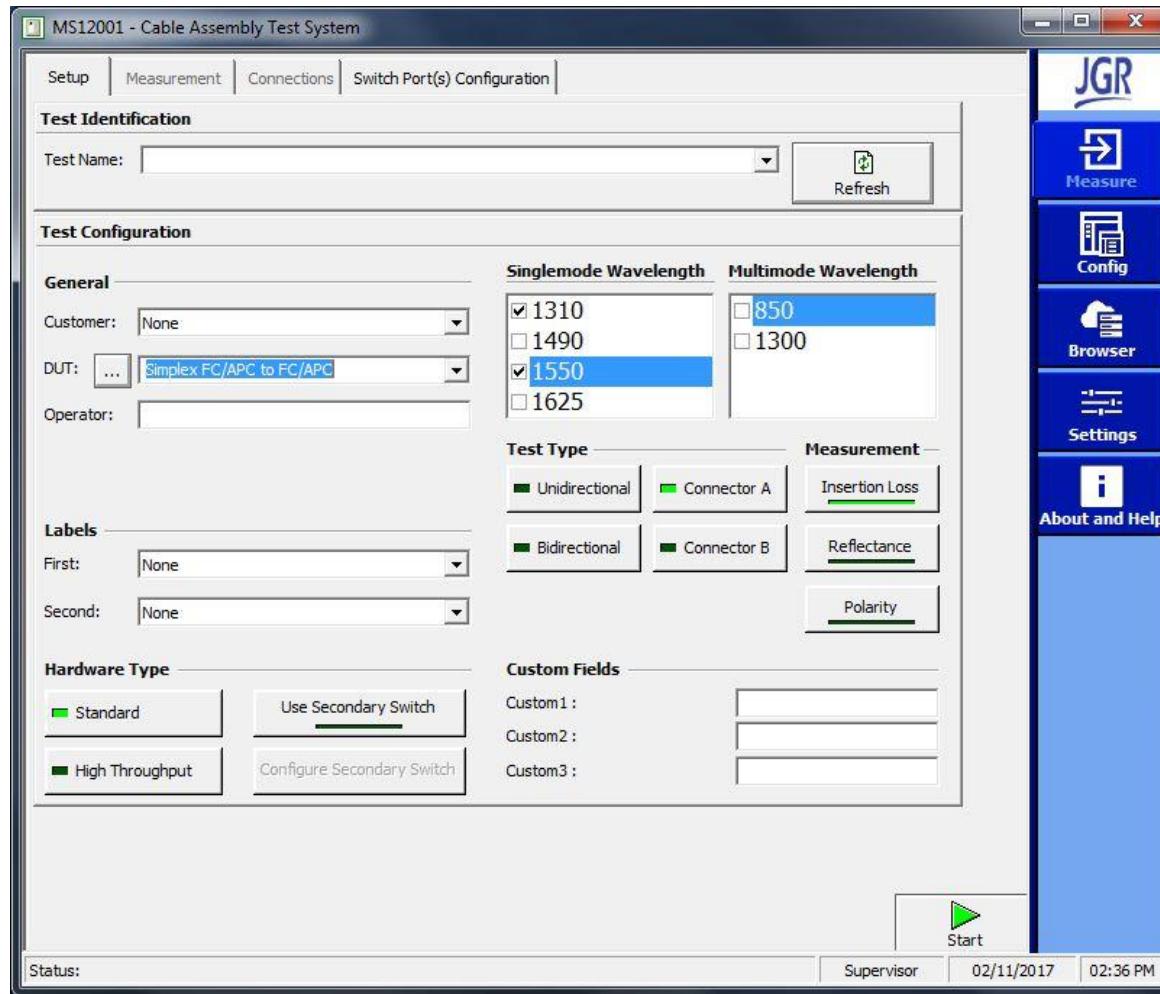
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4. Fiber management and connector cleanliness must be optimized. Inspect the MS12 output and clean/polish as necessary.

Inspect and connect a 3m jumper and arrange the fiber as below. Use a heat gun to smooth out the fiber. The fiber should be relaxed without any twists or sharp bends.

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5. Take a reference measurement.
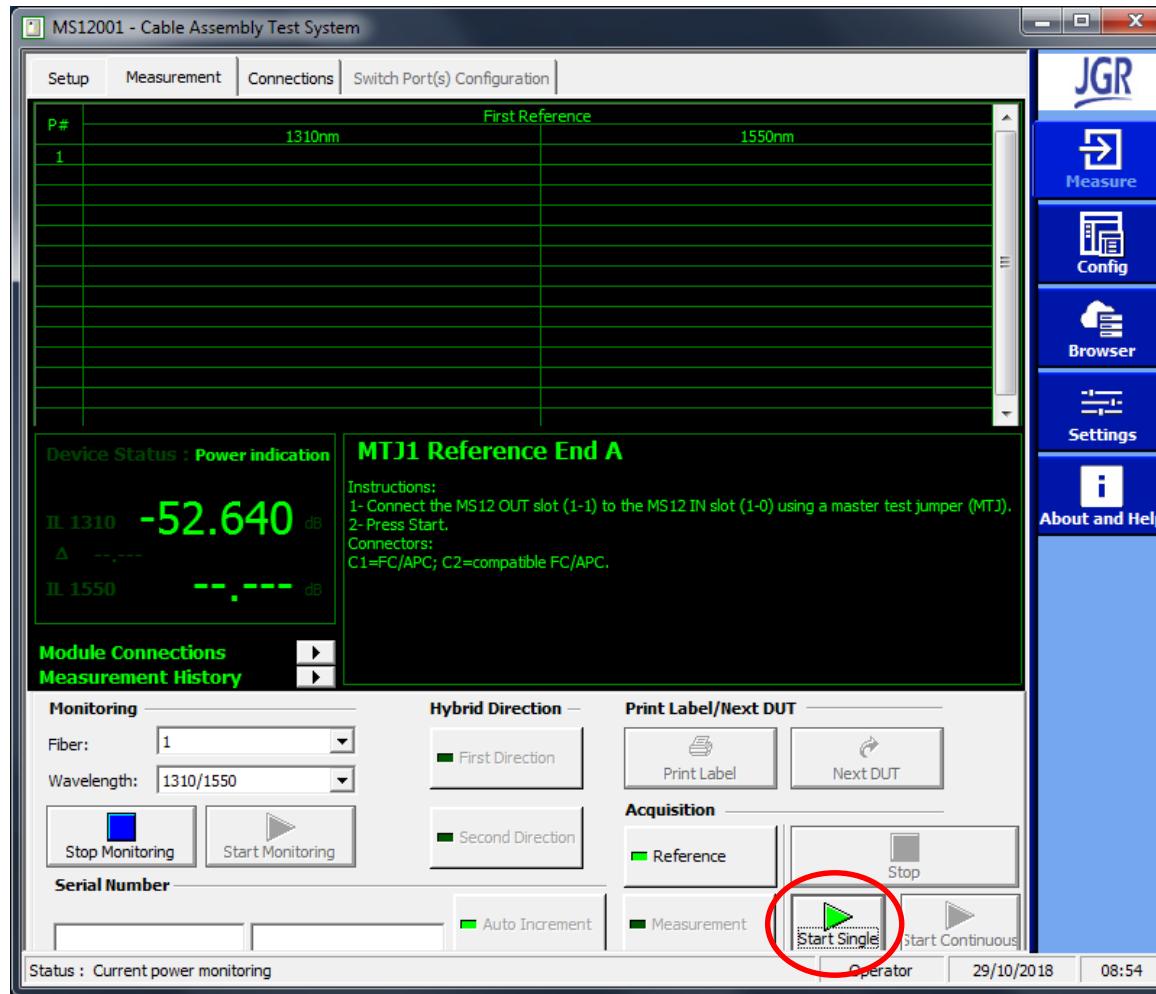
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6. Enter a serial number and click *Start Continuous*.
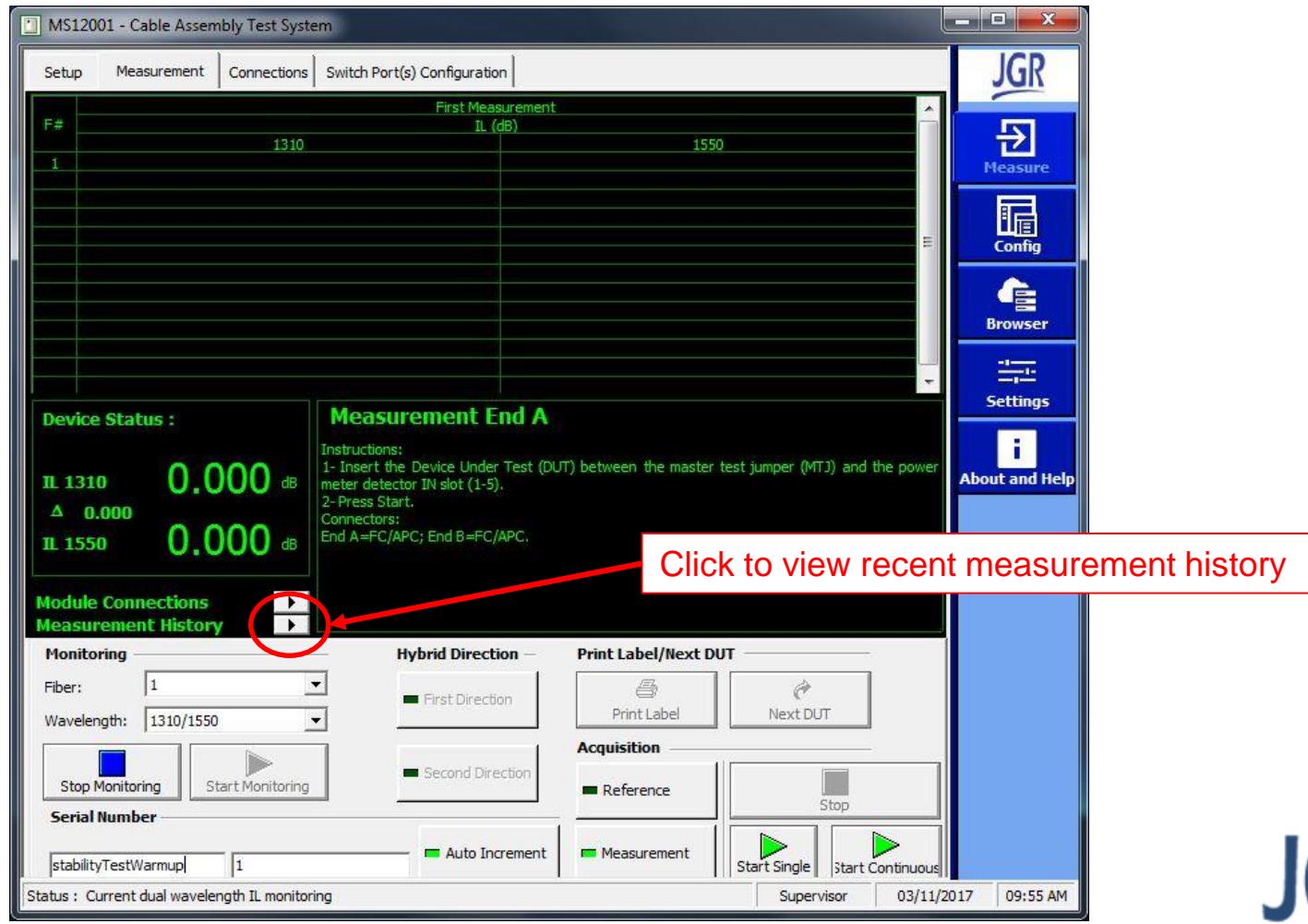
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7. After 30 min, return to *Acquisition Settings* and change the test duration to 15 min as in step 1.

Begin a new continuous test with the same settings. Enter a new fixed serial number (ex: *stabilityTest*).

To retrieve the data, go to *Browser* and click *Filter Builder*.

Click *Add* and enter the following criteria:
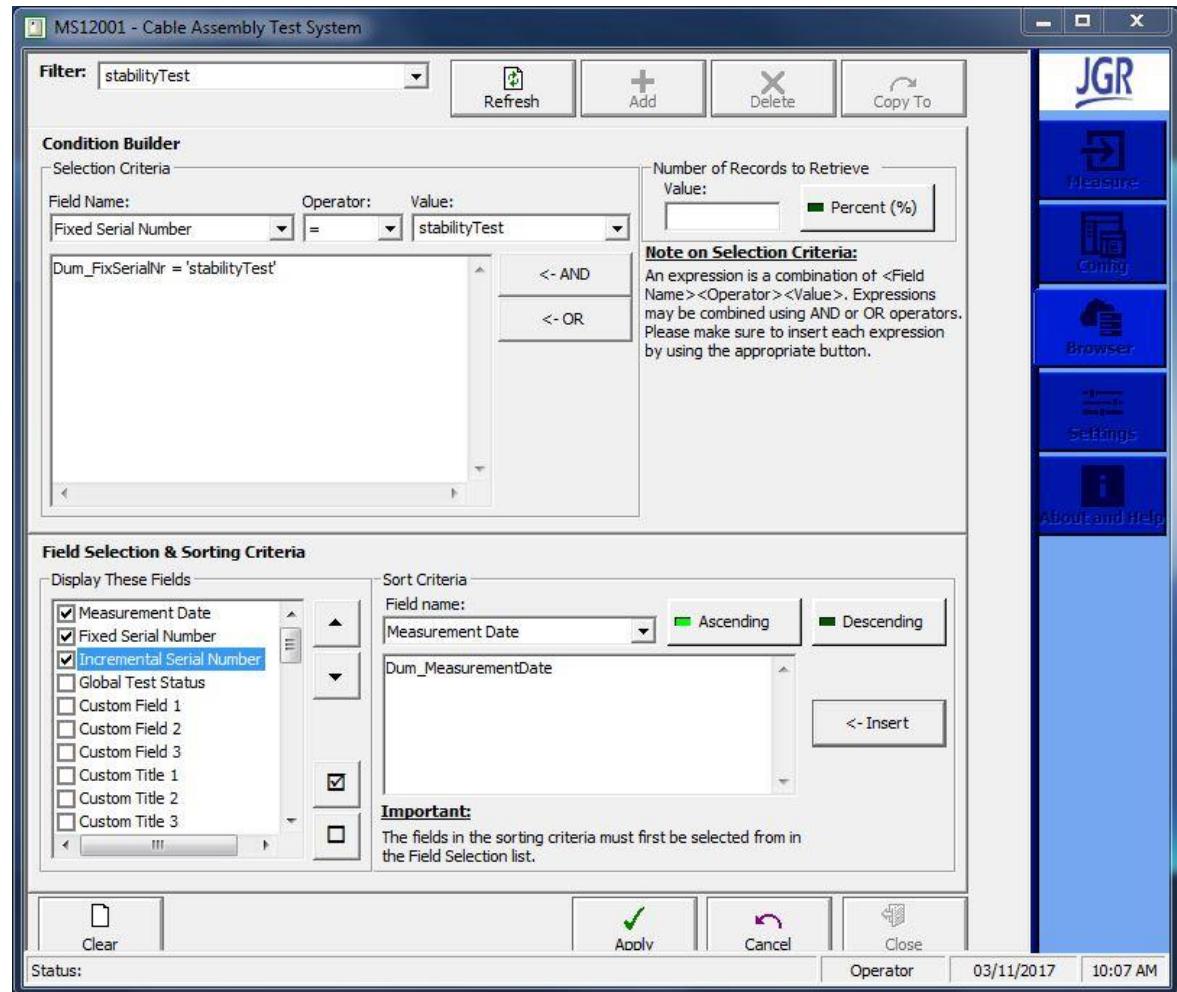
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8. Click *Apply* and in the *Browser* screen, select the appropriate *Filter Selection*.

Click *Export* and open the file with *Excel*. Select all by pressing *Ctrl + A*.

Click *Data > Sort* and select *Sort by: Wavelength*.

Click *Add Level* and select *Then by: Incremental Serial Number.*

Click *Insert > Scatter > Scatter with straight lines.*

Right-click on the graph and click *Select Data.*

Delete the *Chart data range* and any *Legend Entries.*

Click *Add* and enter the first wavelength information. The *Series X values* can be left blank. The *Series Y values* should select all the *IL End A* cells for the first wavelength.

Repeat for the second wavelength.

Add/modify *Chart Elements* as desired.

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Example final data:

Stability Test (15 min)
MS12-3050-09FA
1234567