

GENERAL PROCESS AND OPERATION SPECIFICATION

Evident LEXT Laser Confocal Microscope

I. SCOPE

This document provides the operation and measurement of samples with the Evident laser confocal microscope.

II. SAFETY

Materials should not touch the lenses. Moreover, avoid touching the lenses of the tool with hands. Inform Aggiefab staff for any issue instead fixing yourself.

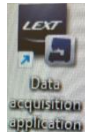
III. APPLICABLE DOCUMENTS, MATERIALS AND REQUIREMENTS

This is versatile tool so any material can be used. Ask Aggiefab staff for complete manual of the system.

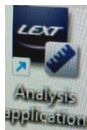
IV. OPERATION

1. Turn on interlock in iLab.

2. Launch data acquisition icon



3. Launch Analysis icon



4. Turn on the stage controller button



5. Move the stage up/down using the coarse movement gear.
If your sample is thick enough, move the stage down with movement gear and then place the sample. Move the stage up so that you can see the sample focused in the screen.



6. Click on the 5x (if it is not selected) on the data acquisition window.
7. After focus, click on 3D acquisition. Thereafter, click “save as” to save the file. It will give a **3D image** of the sample under observation.
Then click “Analyze”. You will see the whole saved file on the right hand side screen.
See Figure 1 below.
8. **Surface roughness** (See Figure 2 below in continuation of figure 1):
 - a. Click on **profile rough**.
 - b. Select corresponding measurement line
 - c. Place the line where you want to do measurement.
 - d. Click on “create report”.
 - e. You will see the whole report on the RHS computer screen.
 - f. Go to “File” tab on RHS window. Click “Save output as pdf” to save the data file to a .pdf and saving for taking with you.
9. **Dimensions Measurements:** Select the **in-plane**. Then select the type of measurement to be done. Then it will measure the respective dimensions of the area. See figure 2 below, step 9. Rest of the steps are same as given in step 8.
10. **Step Height:** (See Figure 2 below)
 - a. Go to **Profile** tab - Step 10a
 - b. select line type - Step 8 b
 - c. select the measuring function – Step 10c
 - d. After measurements, Press “**Create Report**”.
 - e. Follow Steps 8 e and f.



Figure 1.

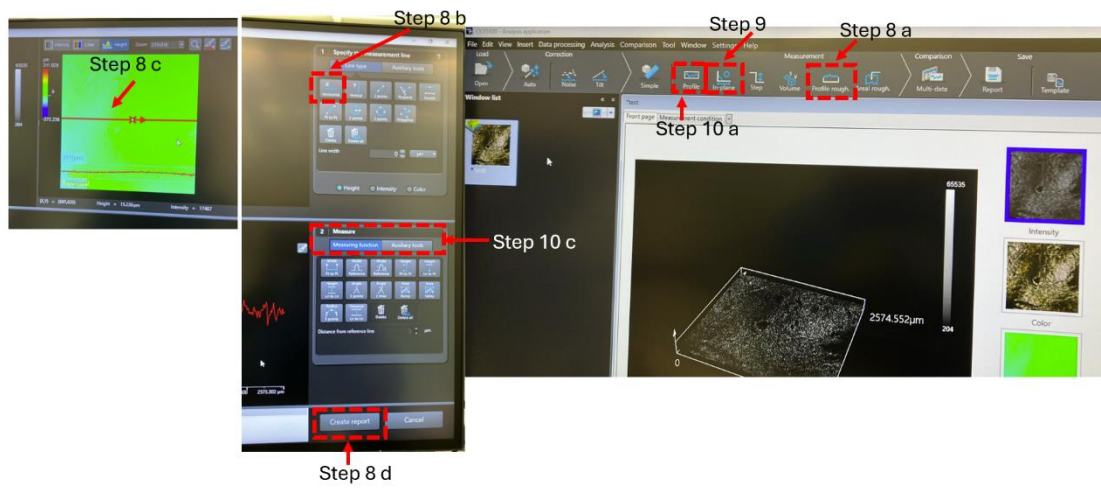


Figure 2.

I. SIGNATURES AND REVISION HISTORY

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Date: 2/18/2025

Revision	Author	Date	Revision Notes
A	Dr. Vibhor Kumar	01/21/2025	First version for new confocal microscope