X-Etch Standard Operating Procedure

PLEASE DO NOT USE METAL TWEEZERS WHEN LOAD AND UNLOADING SAMPLES FROM THE XETCH MACHINE

Loading the Sample

1.) Prepare the X-etch to load a sample by selecting **"Load/Unload Sample"** from the Main Menu.
2.) The X-etch will ask if you wish to load/change the sample. Select **"Yes"**.
3.) After the X-etch has pumped down (This will take several minutes), a dialog box will appear, do **NOT** select anything in this box yet. First open the X-etch by lifting the metal handle on the platform and load your sample. (Note you may need to press up hard to open the platform)
4.) After you have loaded your sample and closed the platform, select **"Done"** in the dialog box and wait for the X-etch to re-establish a vacuum and return you to the Main Menu.

Etching the Sample
5.) From the Main Menu select **"Etch Menu"**.
6.) Enter the lot number you wish to use to identify your sample in the logs.
7.) Ensure that the current recipe in the top left is set to **"Standard"**.
8.) There are many adjustable parameters in the Etch Menu, and each parameter has a slider associated with it. You want to ensure here that your **"XeF$_2$ Pressure"** is set to **3.0T** and that the **"N$_2$ Pressure"** is set to **0.0T**.
9.) Adjust the **"# of Cycles"** slider to **22** cycles.
10.) Adjust the **"Etch Time"** slider to **30** seconds.
11.) Click **"Start Etch"** to begin the etch process. The number of cycles in the bottom left corner may read zero for a few seconds but will eventually correct.

Unloading the Sample
12.) Once the etch has completed you will be returned to the main menu, from here select **"Load/Unload Sample"**.
13.) In the next window select **"Yes"** when the software asks if you would like to load or change the sample.
14.) Once the next dialogue box appears do **NOT** select anything. First open the platform and remove your wafer using the plastic tweezers.
15.) Once you have removed your sample and closed the platform, select **"Done"**.