

XeF2 Etch Operating Instructions

Do not exceed 30 minutes in total process time without prior staff approval.

Do not exceed more than 4 torr on the expansion tank pressure.

- 1) Log in- if you don't have log in information, contact the tool supervisor.
- 2) Choose "Load/Unload Sample".
- 3) Choose "Yes" after being asked if you wish to load/change the sample and then wait for the chamber to purge and vent.
- 4) Load sample and close lid. Choose "Done" after your sample has been loaded and wait for system to pump down and purge.
- 5) Select "Ok" once the pump down is complete.
- 6) Back at the main menu, choose " Etch Menu".
- 7) Enter lot number, which is your wafer or sample number and then press " Done".
- 8) If you were given a predetermined recipe to use, Choose that now from the drop down menu under current recipe and skip steps 8-9.
- 9) Otherwise, choose an etch mode – normal is a good place to start if you aren't sure.
- 10) Choose your process values by moving the slider or clicking the "N" to type it in directly.
 - a. Choose the number of cycles to run – for example 5.
 - b. Choose the etch time in seconds – for example 5.
 - c. Choose XeF2 pressure in Torr – for example 3T.
 - d. Choose N2 pressure in Torr – for example 0T
- 11) Press the green " Start Etch" button – Note: pre-cycles run first, the etch has not yet started.
- 12) After the pre-cycles have finished and the etch has started, you may check with the ETA at the bottom of the screen to see how much time is left on the etch.
- 13) When the etch is finished the system will return you to the main menu.
- 14) You may slide the fume hood back and use the microscope to inspect your part at this time. Ensure that the fume hood is fully returned forward when done.
- 15) Press "Load/Unload Sample" to remove your sample. Choose "Yes". After the system has finished with the purge/vent, remove the sample.
- 16) Return the sample to the chamber if you are going to continue etching, load a new sample or leave the chamber empty if your are finished and then close the lid. Choose "Done" to return to the main menu.
- 17) To continue etching, repeat steps 5-12. If you are finished, choose "Log Out"
- 18) Ensure to fill out the logbook when finished.