Sample Loading/ Unloading
08/20/2021

Loading Samples

1. Check no stub in XPS.
2. Check Turbo on & back chamber at low pressure.
3. open gate 1.
4. turn off IG1.
5. close gate 0.
6. Turn Pfeiffer (Turbo) off.
7. close gate 2.
8. Wait for gate 2 to close.
9. open gate 3.
10. load stub using bottom notch.
11. wait for Pfieffer to stop.
12. hold door, close gate 3.
13. open gate 2.
14. Pfeiffer on.
15. wait for back chamber $< 1 \times 10^{-4}$ Torr.
16. turn on IG1.
17. open gate 0.
18. close gate 1.
19. wait >½ hour till IG1 $< 5 \times 10^{-8}$ Torr.

Moving sample to XPS Stage

1. IG1 $< 7 \times 10^{-8}$, and PG1=0 Torr.
2. Check that gate 1 is closed and gate 2 is open
3. Raise stage (switch 7).
4. Move stage to (0,0,0,0) to load stub.
5. Lower stage (switch 7).
6. Check to see that it is fully down.
7. Center stage is x and y
8. Make sure transfer Arm is fully retracted.
9. Open gate 5.
10. Move sample with transfer arm onto Stage.
11. Unlock sample from arm.
12. Fully retract transfer arm to LL.
13. Close gate 5.
14. Raise stage (switch 7).
15. Check that stage is fully up.

Note:
Gate 5 will not open unless:
1. Gate 1 is closed
2. Gate 2 is open
3. PG1 reads 0
4. IG for load lock is $< 1 \times 10^{-7}$ Torr.

Unloading Sample

1. check IG1 $< 5 \times 10^{-8}$ and PG1 =0 Torr.
2. Check gate 1 closed and gate 2 open
3. Move stage to (0,0,0,0) to unload stub.
4. Lower stage (switch 7).
5. Check stage is fully down.
6. Make sure transfer arm is Fully retracted.
7. open gate 5.
8. move stub from XPS stage to arm.
9. move stub to load lock.
10. Fully retract Transfer arm.
11. close gate 5.
12. open gate 1.
13. close gate 0.
14. turn off IG1.
15. turn off Pfeiffer.
16. close gate 2.
17. Wait for gate 2 to close
18. open gate 3.
19. remove sample.
20. wait for Pfeiffer to stop.
21. hold door, close gate 3.
22. open gate 2.
23. start Pfeiffer.
24. wait for P $< 1 \times 10^{-4}$ Torr.
25. open gate 0.
26. close gate 1, turn on IG1.