**Gold (Au) Sputter Coater - Hummer V**

Do not attempt to use this instrument until you have been ***trained by FMIC staff***

Insure samples are dry before placing them in sputter coater.

1. Sign in online, remove lid (do not remove glass bell jar) **place sample in chamber** and carefully put lid on top.

2. Close ATM/CLOSED valve.

3. Close INCREASE /DECREASE valve.

4. Turn on MAIN POWER.

5. Wait until VACUUM GAUGE reads below 100 millitorr.

6. Turn the Argon tank on, tank gauge should read between 10 - 15 lbs pressure.

7. Open INCREASE/DECREASE valve allowing the VACUUM GAUGE to rise above 200 millitorr for about 1 minute.

8. Close INCREASE/DECREASE valve and allow the VACUUM GAUGE to fall below 60 - 70 millitorr (if it goes below 60 that is even better).

9. Turn on the HI VOLTAGE CONTROL.

10. Turn VOLTS slowly up to 5. Check that the switch marked MANUAL/AUTO is set to AUTO. Three minutes at 10 milliamps will coat samples with a thickness approximately 7 – 10 nm.

11. Set process control timer for desired amount of time.

12. Use the INCREASE/DECREASE valve to regulate AC MILLIAMPERES to 10 milliamps. Keep the gauge between 8 and 12 milliamps during coating using the INCREASE/DECREASE valve.

13. Turn off the HI VOLTAGE CONTROL.

14. Turn VOLTS to 0.

15. Close INCREASE/DECREASE valve.

16. Turn off MAIN POWER.

17. Close Argon tank valve.

18. Bleed to atmosphere by slowly turning the ATM/CLOSED knob to ATM.

19. Remove sample from chamber and place lid back on sputter coater.