

# Anatech Hummer VI sputter coater instructions

## Notes:

- Do not over tighten the nitrogen supply needle valve, or it will be damaged. When closing this valve, once you feel resistance, STOP IMMEDIATELY.
- Do not touch anything inside the chamber without first wearing gloves.

## Operating instructions:

1. Ensure power switches are off.
2. Put on gloves.
3. Lift open chamber lid, do not shake or move top suddenly to prevent target from detaching.
4. Lift off glass cylinder, place on it's side on the stand provided on top of the sputter coater.
5. Place sample stub(s) inside chamber. Sample stub should be 1.5 inches from the target. If sample height needs adjusting, please consult staff.
6. Replace glass cylinder, and lower chamber lid into place.
7. Gently apply pressure to the chamber lid, and turn on the power switch. Once the vacuum pump starts and vacuum gauge shows vacuum, you can release pressure on the chamber lid.
8. Adjust needle valve to closed position (DO NOT OVERTIGHTEN), and allow chamber to pump down to approximately 30 mTorr.
9. Turn on the Argon gas valve at the top of the tank.
10. Open needle valve wide to flush chamber with Argon, allow vacuum gauge to read 500 mTorr or higher. Close needle valve, and wait for chamber to pump down to approximately 30 mTorr.
11. Repeat flushing of chamber once more.
12. Adjust needle valve so there is between 55 mTorr to 70 mTorr of Argon in the chamber.
13. Turn on high voltage control switch, and adjust voltage control knob until plasma discharge current reads 10 mA.
14. It may be necessary to make slight adjustments to needle valve and voltage dial to maintain a plasma discharge current of 10 mA.
15. Start your timer as soon as you see the plasma glow.
16. Once your desired timer has expired, turn off the high voltage control switch, and open the needle valve wide open to flood the chamber back to atmospheric pressure.
17. Lift the lid, extract your sample(s). Return lid to closed position.
18. Turn off Argon gas supply valve at the top of the tank, unplug sputter coater.