

JEOL JEE 4C Evaporator

Operation Of Vacuum System

To Start Up

1. Turn on water.
2. Engage main circuit breaker (on wall).
3. Close R.P. leak valve (all valves should be closed).
4. Engage main switch on evaporator control panel. Turn on rotary pump.
5. Allow rotary pump to pump for approx. 2 minutes.
6. Open fore vacuum and turn on diffusion pump.
7. Wait approx. 30 minutes. Add liquid nitrogen.
8. Close fore vacuum valve.
9. Open bypass (make sure leak valve (v4) on bell jar is closed).
10. When geissler tube glows green (depress test button) bell jar is at 10-3 Torr.
11. Close bypass valve, open fore vacuum valve, open high vacuum valve.
12. Turn heater on and make sure heater switch is set on 1.
13. Adjust heater control until carbon rods start glowing & evaporating. Make sure you turn this off when you are done using the heat.

To change specimen

14. Close high vacuum valve. The fore vacuum valve should be the only valve open.
15. Leak chamber by turning 'L' valve upward.
16. Remove bell jar.
17. Replace bell jar, close 'L' valve.

To Shut Down

18. Clean and coat bell jar, rotation collar, and attachments.
19. Leave the bell jar under vacuum by pumping out with roughing pump for two minutes. That is, close fore vacuum valve and open bypass valve. The 'L' valve should be closed. Wait two minutes.
20. Close bypass valve, open fore vacuum valve.
21. Turn diffusion pump switch to off.
22. Allow to cool for 30 minutes.
23. Close fore vacuum valve.
24. Turn rotary pump switch to off.
25. Open R.P. Leak Valve (you hear a hiss and then close it again).
26. Shut off water, main switch.

Do Not's

- A. Do not ever forget to turn on the water.
- B. Do not ever have fore vacuum valve and bypass valve open at the same time.
- C. Do not forget to close the high vacuum valve before leaking bell jar.
- D. Do not forget to close the leak valve when pumping down the bell jar.