

## Typical Operating Procedure

1. Sign name and date in logbook.
2. Switch on main power. [Fig 1a]
3. Switch on process control module power. [Fig 1b]
4. Press RESET button. [Fig 2]
5. Unlatch and open chamber door. [Fig 3]
6. Place samples on glass slides on center shelf. [Fig 4]
7. Close and latch chamber door.
8. Open gas valve(s) at tank(s).
  - Note:** Not much gas flow required. Open valve 1-turn.
9. Turn on gas flow switch(es). [Fig 5a]
10. Wait ~4 min for orange ready indicator to light. [Fig 5b]
11. Switch on RF POWER [Fig 6a] and RF POWER to REFL. [Fig 6b]
12. Set process time to 3.0 min (typical). [Fig 7]
13. Push START to begin process cycle. [Fig 2]
  - Note:** System will pump to ~0.35 Torr (20 on scale).
  - Note:** Slight improvement will be seen beyond 2min.
14. Record base pressure in logbook.
15. Push CYCLE button [Fig 2]. Gas will begin to flow.
  - Note:** Flow rate is low; gauge will be near bottom (~5sccm).
  - Note:** RF plasma ignites within 6-7 sec (note glow in chamber). System may initially show REFL power but should auto-tune in ~2-3 sec bringing REFL power to or near zero.
  - Note:** IF REFLECTED POWER STAYS HIGH PRESS ABORT BUTTON. GAS FLOW MAY BE TOO HIGH. IF SO DECREASE FLOW AND BEGIN PROCESS AGAIN. CONTACT LAB MANAGER FOR OTHER PROBLEMS.
16. Switch to FWD power (200 typical). [Fig 6b]
17. Record FWD power in logbook.
18. Switch to REFL power. [Fig 6b] Make sure it is ok.
19. Record gas(es) used and operating pressure in logbook.
20. When process time expires, an alarm will sound.
21. Push RESET button [Fig 2] to silence alarm.
  - Note:** System will automatically vent.
22. Unlatch chamber door (OPEN [Fig 3]) then open when chamber is fully vented and remove samples with gloved hands and clean tweezers.
  - Note:** AT END OF RUN clean chamber shelves, swab inside with methanol and soaked cleanroom wipe.

## Shutdown Procedure

1. Close chamber door and latch securely.
2. Press START button. [Fig 2]
3. Turn off gas flow switch(es). [Fig 5a]
4. Close gas valve(s) at source.
5. After 2 min switch off main power [Fig 1a] and process control power [Fig 1b].

**Note:** It is good practice to always leave a vacuum system under vacuum when not in use for extended periods of time.

