

TeGal Plasmaline Model 421

Oxygen Plasma Asher Operations Manual



Operations Procedure

1. Enable system in iLab
2. Press the “AC-ON” button
 - a. Allow system to warm up for ~ 3-5 minutes



3. To Vent the system – the “Start Stop” button light Should be OFF
 - a. If light is ON – Press “Start Stop”
 - b. If light is OFF – Wait for door to pop open
4. Open Door and place sample inside
5. Close the door and hold door shut
6. Start the pump by selecting the “Start Button”
7. Press “Start Stop” button to pump down system – light should be ON
8. Switch the METER knob to “PRES” and allow system to base to < 0.150 Torr



9. Select the Channel you wish to use on the MODE knob
 - a. CH 1 or CH 2 may be selected
 - b. Channel will determine which row of lights is illuminated



- c. Channel will also determine which flow and power knobs are used



**MAKE SURE YOU KNOW WHICH CHANNEL YOU ARE USING
BEFORE YOU PROCEED**

10. Adjust the correct channel timer to the desired process time.



11. Press the “Gas On” button to start the flow of Oxygen
- a. Adjusting the “FLOW ADJ” will increase or decrease pressure
 - b. Switching the METER knob to “FLOW” will allow you to monitor flow rate
 - c. Adjust pressure to 0.500 (+/- 0.100) Torr
12. Change METER knob to “PWR”

READ Steps 12-17 before proceeding – High Reflected power can cause the RF Generator to Overheat

13. Select “RF ON”
14. Quickly adjust RF POWER using the PWR ADJ knob to ~100 Watts
15. Quickly switch METER knob to “REF” to monitor reflected power
16. Quickly adjust the “TUNING” knob to adjust the reflected power to < 10 Watts
- a. Users should Not have to adjust C1 or C2 – Contact Lab Staff
17. Change METER knob to “FWD” and increase power to ~200W
18. Quickly verify the Reflected power is less than 10W
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19. Press the “TIMER ON” button to start the timer
20. Once Completed – the “COMPLETE” Light will turn on
- a. RF, O2 Flow will stop
21. Press “START STOP” button to Vent system – light should be OFF
22. Open Door and remove sample
23. Close Door and hold shut
24. Press “START STOP” button to pump down chamber – light should be ON
- a. Switch METER knob to “PRES”
 - b. Allow system to pump down to base pressure (< 0.150 Torr)
25. Press “AC ON” button to power system off
26. Turn Pump OFF by pressing “STOP” button on pump control
27. Disable System In iLab