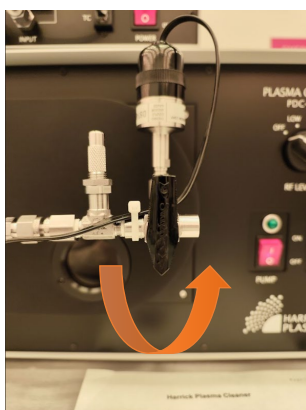


Harrick Plasma Cleaner



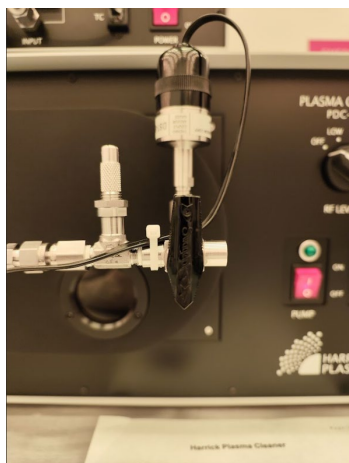
Sample Loading & Pumpdown

Vent the chamber if needed (see instructions below). Load your sample(s). Close the front door.



To vent the chamber, turn the black handle of the 3-way valve so that its arrow end points to the right.

Ensure that the 3-way valve is closed (the arrow on the black handle points down).

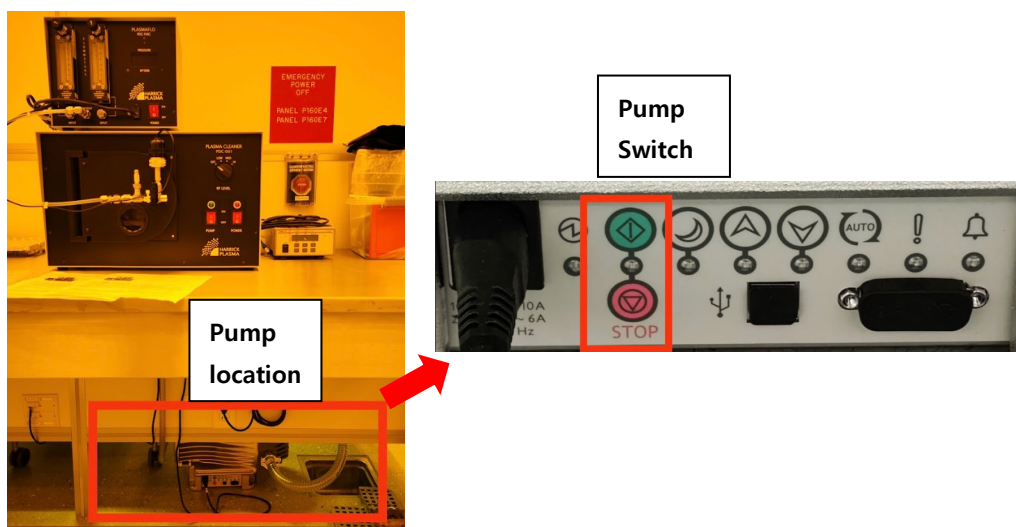


Turn on the system using the **POWER** switch on the front panel.

Turn on the **PUMP** switch on the front panel.



Go under the table and push the **Green** switch on the pump to start it.



Hold the chamber door closed until the vacuum holds it in place.

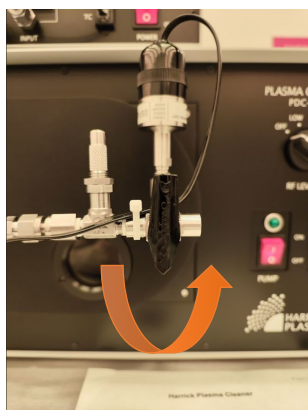
Turn on pressure gauge **POWER**.



Wait until the pressure is < 200 mTorr (after pumping for a few minutes).

1. Processing with Air Plasma

Turn the 3-way valve handle slightly CCW in order to control and stabilize the pressure at 600-1000 mTorr.



Turn on plasma by selecting the appropriate **RF LEVEL**.



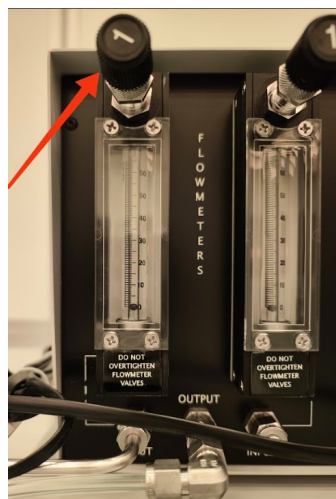
Look through the window of the Plasma Cleaner and wait until a **purple glow** is observed. This indicates that plasma has been generated.

2. Processing with Oxygen Plasma

Ask staff to enable the O₂ flow to the tool.

Open the 3-way valve to process gas (arrow on the **black lever** points to your left).

Adjust the flow meter so that oxygen flows at 20 sccm.



Slightly adjust the **metering valve** (1/8 of a turn or less) and allow the pressure to stabilize at 600 mTorr.



Turn on plasma by selecting the appropriate **RF LEVEL**.



Adjust the **metering valve** slightly until the plasma intensity is visibly maximized. This broadly corresponds to optimal plasma generation conditions.

Note: For optimal plasma uniformity, the RF power level should be set to MED or HI. Process pressures of 800-1000 mTorr and process times of 1-3 minutes are good initial process parameter values.

Plasma Off & Vent Chamber

Turn the **RF LEVEL** knob to **OFF**.

Close the 3-way valve (the arrow on the black handle points down).

Move the **PUMP** switch on the front panel to the OFF position.

Vent the chamber (slowly turn the black handle of the 3-way valve until its arrow end points to the right).

Once atmospheric pressure is reached, open the front door.

Turn off pressure gauge **POWER** switch.

Close the 3-way valve (the arrow on the black handle points down).

Move the **POWER** switch on the front panel to the OFF position.

Remove your sample(s).

If you used O₂, ask the staff to disable it at the tool.