## Using the Oxygen Plasma Machine

- 1. Turn on the  $O_2(g)$  valve on the wall.
- 2. Turn on the  $O_2$  inlet valve on the front of the machine just a tiny-bit  $O_2$  should now be leaking through the black, chamber door.
- 3. Turn on the pump. To help the pump get a seal, press the door of the chamber in for a few seconds when the pump is first started. Note: You only need to turn the Pump "On" using the switch on the Oxygen Plasma Machine you do NOT need to turn the Pump On/Off manually using the switches on the Pump itself.
- 4. Allow the system to equilibrate for at least 10 minutes
- 5. At the same time, turn the Power switch "On" to warm up the electronics. Do NOT turn on the Plasma (the black knob at the top-right of the machine), just the Red Power Switch.
- 6. Turn off the  $O_2$  value on the chamber door. At the same time, turn on the Plasma to the "High" setting.
- 7. The plasma will take anywhere from 5-30 seconds to actually appear it should be dim purple in color and will be somewhat hard to see. After the Plasma has run for 10 seconds, turn it off.
- 8. Open up the  $O_2$  value on the chamber, turn off the Pump. In less than a minute, the chamber door should open.
- 9. If finished using the machine, turn off the Power and turn off the  $O_2(g)$  value on the wall.

## **Trouble-shooting**

\*If the plasma appears bright pink, then air is in the system. Try letting the system sit at equilibrium (Steps 4 and 6) longer. If this does not work, there may be a leak in the tubing or the pump is too weak.

\*If you turn on the knob and there is no plasma at all, let the electronics warm up longer. \*If your sample does not seem affected by the plasma, you may not have placed it in the center of the chamber – the plasma cloud is most concentrated at the center of the chamber, and may not always reach the edges of it.