

# **BRANSON PLASMA ASHER INSTRUCTIONS**

**If you are unfamiliar with, untrained on or have problems with this system, contact Cleanroom Engineer or Manager**

Before operating this equipment, check the following:

- a) System AC is ON
  - b) RF power is OFF
  - c) Vacuum pump ON and running
  - d) Vacuum pump fluid level between H & L marks on pump.
  - e) Gas pressures (O<sub>2</sub>, N<sub>2</sub>, and Ar) pressure gauges at regulator set at 8-10 psi.
  - f) User has made a reservation in iLabs.
- Normally, in an idle state, this system is kept under vacuum (pressure meter reading 1-2 torr) with the following switches set as indicated:
    - a) Mode toggle switch to Manual
    - b) Vacuum toggle switch up (ON)
    - c) Purge toggle switch down (OFF)
  - To load the asher, toggle the VACUUM switch to OFF and PURGE switch to ON, purging the ashing chamber with N<sub>2</sub> and bringing the chamber to atmospheric pressure.
  - Rotate the latch handle clockwise 90 degrees releasing the door latch. The door will open on its own. **DO NOT FORCE THE CHAMBER DOOR OPEN -THAT WILL DAMAGE THE VACUUM CHAMBER ASSEMBLY!**
  - Toggle the PURGE switch to OFF.
  - Carefully remove the quartz carrier from the chamber.
  - Load the quartz carrier with the work to be ashed.
  - Carefully place the loaded carrier into the center of the chamber. Close and latch the door.

- Toggle the VACUUM switch to ON.
- Wait until the vacuum has reached its lowest value; about 1-2 torr.
- Toggle the desired gas switches to ON.
- Adjust flow of gases to achieve desired pressure.
- Toggle RF switch to ON to generate plasma. Adjust the RF power if desired by turning the RF #1 knob.
- When the work has been ashed for the desired time, Toggle the RF switch to OFF.
- Toggle the gas switches to OFF.
- Toggle the VACUUM switch to OFF and PURGE switch to ON, purging the ashing chamber with N<sub>2</sub> and bringing the chamber to atmospheric pressure.
- Rotate the latch handle clockwise 90 degrees releasing the door latch. The door will open on its own.
- Toggle PURGE switch to OFF
- Carefully remove the quartz carrier and work.
- If the process is complete, return the quartz boat to the ashing chamber.
- Close and latch the door.
- Toggle the VACUUM switch to the up (ON) position pumping the chamber down.
- The system is now in its normal idle state.