Standard Operating Procedure for Technic Micro RIE system
Procedure to Startup/Setup

Start

Check & Top up Chiller

ON Chiller

Check Equipment:
- Power OFF
- Gas OFF
- Vent OFF
- Vacuum ON
- at Automode

Switch ON equipment
ON RF Power

Set Manual mode, make sure OFF Power & Gas
Pump Purge:
ON Vacuum - check
ON/OFF Vent switch, wait till chamber reach lowest vacuum
& ON/OFF vent again.
Repeat this a minimum of 5x times.

run O2 plasma if SiCl4 gas
was used prior to now.
- O2 - 10sccm, 250W &
20mins at least in Auto mode.
*Repeat before proceeding to vent & open chamber

ON Vent
OFF Vacuum
Set to Automode
Open Chamber
Off Vent

Complete

MICRO RIE SYSTEM

To check all switches are at off
position except Vacuum at on &
is at Auto mode

Base pressure: 46mtorr

To check that all switches are at off
position except Vacuum at on &
is at Auto mode
**Procedure to Run Process**

1. **Begin**
2. Close chamber after loading in wafers

   - Do a dummy run before running actual process.
   - Set MFC Selector to the respective mfc to be used
   - Set Mode Selector to cal & confirm gas calibration value.
   - Set Mode Selector to set & adjust mfc flow knob to desired flow rate.
   - Set MFC Selector to read.

3. **Manual Mode**

   - OFF Power
   - OFF Gas
   - Set to Manual Mode
   - OFF Vent
   - ON Vacuum

   - When chamber is at the lowest vacuum level, turn ON Gas.
   - Wait till gas mfc flow reading is stable, switch ON power & set power if needed.
   - Wait till power is stable & start timer.

4. **Auto Mode**

   - Set time
   - set to Automode
   - OFF Vent
   - ON Gas
   - ON Power

   - Toggle Auto-Run Button

5. **End**

- NB: If a different gas is used previously, do a run process with the gases you going to used for a minimum of 20 minutes before the actual run with wafers.
**Procedure to End Process Run**

Begin

- OFF Power
- OFF Gas
- Press AutoRun button
- Set to Manual

Do pump purge:
- Check Power at OFF
- Check Gas at OFF
- Set to Manual Mode
- Check Vacuum at ON
- ON/OFF vent switch till chamber reach lowest vacuum level and ON/OFF vent switch again.
*Repeat this 5x times.

- ON Vent
- OFF Vacuum
- Set to Auto Mode
- Open Chamber
- OFF Vent

Unload wafer/
Close Chamber

End

**Procedure to OFF System after end of usage**

Begin

- Close cover
- OFF Power
- OFF Gas
- OFF Gas
- Set to Manual Mode
- OFF Vent
- ON Vacuum

When Vacuum reaches lowest level
Set to Auto mode

OFF Equipment
OFF RF Power Supply
OFF Chiller

End