VACUUM BAKE USING YES OVEN SOP

July 2013

Purpose: To prepare the surface of a wafer for photoresist application. This operation promotes adhesion of the photoresist by evaporating any moisture present on the surface of the wafer.

WARNING: Be careful that no one enters photolithography room while turning on vacuum pump and NH3 as door may cause injury.

YES System Start-up:

1. Turn **ON** power to the oven using the breaker located on the back, left corner.
2. Press green **Power On** button
3. Turn **ON** vacuum pump located behind oven on the floor.
4. Open N₂ valve located on wall behind oven.
**Vacuum Bake:**

1. Turn HMDS/NH$_3$ valve to HMDS position (located behind glass cylinder, short end of knob indicates valve selection)
2. Select 4 on the Thumbwheel.
3. Set temperature for front/rear zones. Press and hold **SET BUTTON** (far left), set temperature to desired setting.

**NOTE:** Oven must be at set temperature before beginning processing.

- **Front Zone:** 20-160°C
- **Rear Zone:** 20-160°C

4. Press S.P. on the controller and check each set point

**Recommended Settings**

- **Set point 1** (Display Set Point) 600 Torr
- **Set point 2** (Set Point 2) 10 Torr
- **Set point 3** (Alarm 3 Low Limit) 1 Torr
- **Set point 4** no recommendation

Press S.P. to exit programming mode

5. Using the touch screen press:
   - GOTO Alarms Panel
   - GOTO Process Variables

6. Enter Process Variables
   To change, touch screen button for variable, enter number, press **Enter**, and then press **Done**.

**Recommended Process Variables**:

- Number of dehydration cycle purges: 3
- Number of exit cycle purges: 1
- IR Wafer Warm Up Delay: 0
- Process duration: Process dependent

7. Press GOTO OPERATOR PANEL

8. Load Samples

9. When oven has stabilized at set temperature, press **START**

10. When Process is complete Shutdown oven

**Shutdown:**

1. Turn **OFF** breaker on back of oven.
2. Turn **OFF** vacuum pump.
3. Turn off N$_2$. 