

Partial SOP for Tube Anneal Furnace, EML: 9/04

Instructions for temp controller for Anneal furnace:

1. Remove the exhaust draw and the thermocouple (T/C) from the ceramic insulator, and hook them over the “C” clamp. Take the ceramic and quartz end caps off.
2. Load your samples into a quartz boat. Load the boat into the center of the furnace and replace the quartz and ceramic end caps, carefully aligning the exhaust and T/C ports, then reinstall them, making sure the T/C is approximately in the same area as your samples
3. Select a combination of gasses, N₂, O₂, or Forming Gas, with the flow meters. Keep the N₂ flow low on the scale, as this is a high flow range unit. If necessary, install “baffle” pieces in your quartz boat to disrupt the air flow and add turbulence.
4. Flip the HV circuit breaker “ON”
5. Looking at the Temp controller unit for the next couple of steps, press and hold the RUN button until both the RUN and HOLD lights both go out
6. Press AUTO/MANUAL button until manual is lit
7. press COUNTER CLOCKWISE ARROW twice to display set point 
8. Use UP/DOWN ARROW to set desired temp
9. Press AUTO/MANUAL until AUTO is lit
10. Press RUN once
11. The tube will now heat up
12. Max temp is 600C. Make sure no papers or flammables are in close proximity, as there are large thermal losses.
13. Cool to less than 200 C before removing your samples.
14. ****You MUST turn off the circuit breaker before removing the T/C and samples!!****
15. Use the Gloves or Metal hook to remove your samples
16. Return End caps, T/C & exhaust, and turn off gases before disengaging

