USING THE U-GAUGE TO MONITOR PRESSURE WHILE BOMBARDING

1. Attach the tubes to the manifold.

2. Open the U-gauge valve, then open the main valve. As the pressure falls in the tube, use this time to attach the bombarder leads, insert mica, and temperature meter. Let the tubes pump down approximately 2 minutes.

3. Close the main valve.

4. Close the U-gauge valve.

5. Using the "blow hose" valve, carefully admit approximately 2 mm of air into the manifold. (In most cases, holding your finger over the "inlet" for the blow hose valve and opening and closing the valve – then removing your finger, letting in only the trapped air between your finger and the stopcock body – will admit 1-3 mm of air on most systems.) The correct amount of air is stated on the electrode manufacturer's processing instructions.

6. Set the bombarder current and begin bombarding at the "starting" current and pressure for the electrodes being used. Maintain the manufacturer's recommended current and pressure until the tube reaches a temperature of 120°C (aka: temperature at which the thermo crayon will melt onto the tube or approximately 35 seconds for 15 mm tubes and approximately 15 seconds for 10 mm tubes).

7. At 120°C (or other indicator), stop bombarding, open the main valve, and open the U-gauge valve. Apply thermo crayon if using. Let the tube cool to 70-80°C.

8. Close the main valve, close the U-gauge valve, admit approximately 2 mm of air (starting pressure) into the manifold, and begin bombarding. Watching the U-gauge, you can now maintain the manufacturer's recommended "starting" and "finishing" pressures throughout the bombarding process by opening and closing the main valve.

9. When you are finished heating the tube (electrode shells fully red, tube temperature hot enough, no rise in pressure on U-gauge), let off the bombarder, open the main valve, and open the U-gauge valve.

10. When the tube is cooled to the filling temperature (approximately 50°C), close the main valve, close the U-gauge valve, and fill to the recommended pressure.

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