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# SEM Critical Point Dryer JIAM Protocol

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Works for me

This protocol is published without a DOI.

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## ABSTRACT

SEM Critical Point Dryer Protocol at JIAM

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SEM, critical point dryer

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## ABSTRACT

SEM Critical Point Dryer Protocol at JIAM

### Protocol for using the critical point dryer at JIAM

- 1 Power on the machine at least 5 minutes before using (Suggest doing this during the last dehydration step).

- 2 Make sure the O-ring between the cover (with 3 screws) and the chamber is in good shape.
- 3 Close cover and tighten screws.
- 4 Open the small vent rate knob all the way – will take some time to close.
- 5 The system cools down. Fill with liquid CO<sub>2</sub> by opening the Vent knob, Fill knob, Drain Knob, and opening the CO<sub>2</sub> tank.
  - This lets liquid CO<sub>2</sub> enter the chamber, but evacuate.
- 6 After a minute or so of this, close the CO<sub>2</sub> valve and drain valve – make sure the pressure gauge is zero
- 7 Open chamber partway and shake lid to make sure pressure is gone. Then put samples onto the sled with the post side entering the chamber first – Be super quick.
- 8 Replace cover and tighten screws evenly.
- 9 Begin by opening the CO<sub>2</sub> tank (Vent and Fill should be open still).
- 10 After the chamber fills, closeVent the close Fill (leave the CO<sub>2</sub> tank open).
- 11 Let sit for 10 minutes.
- 12 To cycle the CO<sub>2</sub> in the chamber after 10 minutes, close the CO<sub>2</sub> tank, open the Fill, Vent, and Drain.
- 13 Once the liquid is evacuated, close the Drain.
- 14 Then open the CO<sub>2</sub> tank – let the chamber fill back up.
- 15 Once, full, close Vent, and Fill.

- 16 Let sit for 10 minutes.
- 17 To cycle the CO<sub>2</sub> in the chamber after the second 10 minutes, close the CO<sub>2</sub> tank, open the Fill, Vent, and Drain.
- 18 Once the liquid is evacuated, close Drain
- 19 Then open the CO<sub>2</sub> tank – let the chamber fill back up.
- 20 Once, full, close Vent and Fill.
- 21 At this point, you can begin Heating.
- 22 Close the Vent Rate valve. Small knob.
- 23 WATCH THE PRESSURE GAUGE – should never go above 1400 psi. You can modulate pressure by opening the VENT valve and then incrementally opening the small vent rate knob.
- 24 Heat turns off automatically once the chamber reaches 42°C, which takes about 12 minutes.
- 25 At this point, bleed off the pressure slowly until the gauge reads zero pressure.