

## French Press Protocol

- Klevit lab cell (K464) holds up to 40ml volume
  - Manoil lab cell (in our fridge K307) holds up to 4ml volume
  - French Press is located in J432 and is owned by the Biochemistry Dept.
- 1) If using the Klevit lab cell, sign out the cell in notebook on top of fridge.
  - 2) Make sure to clean the cell with soap and water prior to use just to be safe.
  - 3) With samples in an ice bucket, bring all equipment to the French Press in J432 (part of the Young lab).
  - 4) Apply vasoline to the black o-rings on both the piston and plug. Make sure not to get vasoline on the top portion of the plug because this could potentially contaminate your sample.
  - 5) Attach piston to cell and flip upside down to put on tripod for the Klevit lab cell. For the Manoil lab cell there is no tripod so just lay the cell on it's side.
  - 6) Screw in sample outlet for the Klevit lab cell. The Manoil lab cell is already attached.
  - 7) Replace nylon bead on the flow valve by using a paper clip to remove.
  - 8) Screw in flow valve with new bead.
  - 9) Pour or pipet sample into cell with piston attached and facing the ground.
  - 10) Move piston up until your sample is just below the inner flow valve hole.
  - 11) Put the plug on the cell making sure there is no or little air inside cell.
  - 12) Make sure flow valve is turned tight but not very tight.
  - 13) Put cell onto the Press. For the Manoil lab cell you need to put the spacer down first since the cell is too small.
  - 14) Make sure there is plenty of room between the cell and the upper platen and that the cell is in the center of the bottom platen.
  - 15) Turn on the French Press.
  - 16) Move lift lever from Down to Medium.
  - 17) Increase the pressure until the cell and bottom platen begin to rise. For the Klevit lab cell you can increase the pressure to 500psi. For the Manoil lab just let it reach the top and then increase the pressure to 1000psi (this is the maximum pressure for this cell).
  - 18) For Klevit lab cell ONLY, increase lift lever from Medium to High and increase pressure to 1000psi.
  - 19) Collect samples with an eppie or Falcon from the sample outlet tube while VERY carefully opening up the flow valve, making sure not to let the piston pass the green tape or hit the bottom of the cell. For the Klevit lab cell, you want the flow to be in droplet amounts. With the Manoil lab cell, be careful because you are dealing with very small volumes and you can lose your entire sample if you open the flow valve too much.
  - 20) When you have collected the sample, turn the lift lever to Down and wait for the platen to reach the bottom of the press.
  - 21) Decrease the pressure completely and turn the machine off.
  - 22) Run your sample through the Press 2-3 more times.
  - 23) When finished lysing sample, clean all parts with soap and water and put back in respective fridge.
  - 24) For the Klevit lab cell make sure you sign the cell back in.