

MVD Operation

Restrictions & Precautions

- DO NOT change the settings for the "CLNFDTS" and "FDTS" recipes. You may edit a recipe and change it, but you must save under a different name. Use your initials first in any recipe you save. To edit, press the value you wish to change, enter new value, save under new name (or same name if editing your own recipe).

Operation

1. Log into system. The password is "2", this level allows recipe modifications.
2. Press "View System".
3. Verify heaters are on and temperatures are stable.
 - a. Supply 3 should be 70°C. This is below "Fill 3" near the lower right corner of the screen.
 - b. Line 1 and Line 3 should be 100°C.
 - c. Chamber should be at ambient, ~25°C. If not, contact Staff.
4. Run the program for chamber clean/coat if desired (See Note 1):
 - a. Press "Sequences", then "Single Layer Settings".
 - b. Load program "CLNFDTS" (See Note 2 for recipe info).
 - c. Press "Sequences".
 - d. Press "Run Single Layer" to execute program (You may have to press several times). The run has completed once the status changes to "Idle".
5. Press "Routines".
6. Press "Vent" to vent the process chamber to atmosphere, the screen will indicate when the chamber is vented.
7. Lift the process chamber lid, insert your sample(s), and close the lid. It is recommended to perform a plasma surface activation in PEII prior to running a sample (See Note 3).
8. Press "Routines".
9. Press "Pump" to evacuate and purge the process chamber. Push down on the lid during the first few seconds of the pump down sequence. The system is pumped down once the status changes to "Idle".
10. Load and run your program or the "FDTS" standard program (See Note 4 for recipe info) per Steps 4.a - 4.d.
11. Press "Routines"
12. Press "Vent".
13. Lift the lid, remove your sample(s), and close the lid.
14. Press "Routines".
15. Press "Pump".
16. Once the status changes to "Idle", press "Main" and "Log Out".
17. If desired, measure water drop contact angle with Goniometer located in Bay 5.

Notes

1. Chamber clean/coat recipe is not needed every time, run this at least once every 10 runs.
2. "CLNFDTS" recipe: 10 minutes of 200W O2 plasma followed by a 10 minute FDTS coat.
3. 3 minutes of PEII ashing at 300mT, 100W is sufficient for silicon or SiO2 surface activation.
4. "FDTS" recipe is a 10 minute FDTS coat and is a tested recipe for nano-imprinting with good results. Hotplate bake film for 2 minutes at 100°C to achieve >105° contact angles.