



# PVA TePla – Ion Wave 10

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## Safety

- To avoid electrical shocks, do not use the system if it is missing panels or electrical equipment is exposed.
- The samples and trays may be very hot after long runs. Use caution.
- In case of immediate electrical, chemical, or physical danger, utilize the red EMO button situated on the front of the equipment.

## Important Equipment Notes

The etch rate in this tool is very non-linear because there is no substrate temperature control. For example, the average removal rate over a one minute etch will be significantly less than over a five minute etch.

## Allowed Materials and Processes

Substrates must be clean and dry.

## Restricted Materials and Processes

Do not place wet/dirty substrates in the PVA TePla.

Do not edit any MMF recipes without prior approval.

## Operating Procedures

1. Turn on the computer screen by clicking on the left mouse button to wake up the screen.
2. If system is not logged in, login to the system using “Admin” for the username and “Admin001” for the password.
3. You should be on the main operating screen. If not, click the “Operation” button on the lower left side of the screen. Then make the “System” tab is selected on the top of the screen.
4. In the “Operation” box in the upper right-hand corner of the screen, “Idle Vac” should be selected. To vent the chamber to open the door, press the “Vent” option, then “Run”. The tool should vent in 30 s to 1 minute.
5. Open the door. Load your samples into a quartz wafer holder and place it inside the tool. The quartz wafer holders are located on top of the tool. You may use the Faraday cage in the tool but remove it after use. Wipe the sealing surfaces, then close the chamber door.
6. Click the “Load Recipe” button on the lower right-hand side of the screen. A new window will pop up with all the saved recipes in our database. Select the recipe you want to use and



then press the “Open” button on the bottom right corner of the screen. If the recipe loaded properly, the name should appear in the recipe section in the Location/Name box on the bottom of the screen.

7. In the “Operation” box, select “Recipe”, then press the “Run” button. A window will pop up asking for Lot/Batch ID, enter whatever you would like, then press “OK”. You will hear the vacuum make a loud noise and the clock starts on the left-hand side of the screen. Each step of the process will be displayed. Monitor the process.
8. When the process is finished, the “Final Result” box will say “Passed” with a green background and all steps will be complete.
9. Remove the quartz tray with samples from the tool. The samples and tray might be hot. Use caution.
10. When you are done, close the chamber door, select “Idle Vac” in the “Operation” box, and press “Run”. You should hear the tool pump down.

## Troubleshooting

Main chamber will not vent.

- Contact MMF Staff

Error message pops up: "LTD too low for Plasma On!!"

- Acknowledge the error message. After acknowledging, another window should pop up asking if you want to purge. Click “No”. Try to run your recipe again. It should run successfully, but if it does not, contact MMF Staff.

## Version History

2021.1 – Original document written by Geneva Feist, Andrew Lingley, and Davis Ridgeway.

2024.1 – Added Important Equipment Notes section and Tips for Success section. Also included links for process information.

2025.1 – Minor edits.

2025.2 – Updated accessibility for website.