Usage Policies Notebook for Technics 500 II Asher

Revision date
September 2014

Emergency Plan for Technics 500 II Asher
Standard Operating Procedures for Emergencies

Contact information

Person	Phone number
Lab Manager	Jake Hes, 949-824-8239 (day), 562-522-8328 (alternate)
Director	G.P. Li: 949-824-4194 (day), 949-824-2047 (alternate)
Staff	Mo Kebaili: 949-824-8239 (day), 949-494-5892 (alternate)
Super User	Carlos Ruiz (818) 527-6349 (Anytime, voicemail or text only)

Hazardous chemicals, gases, and conditions

Hazard name	Description of hazard
O_2 (oxygen) gas	Oxidizer gas

Emergency shutdown plan #1

In the event of an emergency, when there is very little time, *press the large red emergency shut-off button at the front of the machine*. This will shutdown the system and will stop the gas flow into the system. Leave the facility at once. Then contact the lab manager or the staff.

Emergency shutdown plan #2

In the event of an emergency, when there are a few minutes available, *press the large red emergency shut-off button at the front of the machine*. This will shutdown the system, and stop gas flow into the system. Next, check the gases in the utility room w2331. If there is no fire, and no smell of gases, enter the room and shut off all gas cylinders valves by turning them fully clockwise. Check the oxygen tank in room w2336, feel the door for possible fire, and if safe, close the oxygen tank by turning fully clockwise. Leave the facility at once, then, contact the staff and the lab manager.

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Usage Policies for Technics 500 II Asher
Standard policies for usage

The Technics 500 II Asher uses O_2 plasma to remove residual photoresists from silicon wafers.

Contact information

The INRF staff or the lab manager may be reached at 824-8239 or 824-9831.

Authorized users

Only INRF registered users who have completed the training and passed the certification may use this equipment. Users may only use the portion of the system for which they have been trained.

Training

Users must have received direct training from the staff in order to use this equipment. Users are expected to understand the nature of the system. Training varies slightly, depending on the process to be performed. Contact the staff for details and to arrange for a training session.

Usage logs

Users are required to log all activity in the log sheets provided. All users must log in when they used the Technics 500 II Asher (date and time), when they completed their process in the user log sheets. If users notice anything unusual, they should record it in the user log sheets, and add details in the maintenance log sheets. Any maintenance to the system must be logged in the maintenance log sheets (maintenance staff only).

Safety equipment

There is no specific safety equipment for use on this tool however cleanroom gloves and tweezers should be used when handling substrates in the asher chamber.

Standard equipment and materials

The laboratory provides the following gas: O_2 Other gases must be cleared with the lab manager.

User maintenance

Users are requested to clean the Technics 500 II Asher chamber after use, by wiping down with a lint-free cloth the inside of the chamber. Dispose of the cloth in a waste container marked for flammable solid waste.

Pollution Control

Dispose of the alcohol soaked wipes in a waste container marked for flammable solid waste.

Scheduling

Reservations can be done online, also, the system can be used on a first come, first served usage if no reservation was made.

Other issues

Users should remain physically present in the cleanroom facility during the entire use of the Technics 500 II Asher.

At no time should a user adjust a pressure regulator on a gas line. Gas control should be "on" or "off" only, using only the valves appropriate. For most gases, this is usually the valve at the cylinder head.

Non-standard use

Users may not modify any hardware on this equipment. For use of non-standard processes, gases or materials, contact the staff or the lab manager.

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Usage Notes for Technics 500 II Asher

Guide for using the Technics 500 II Asher correctly
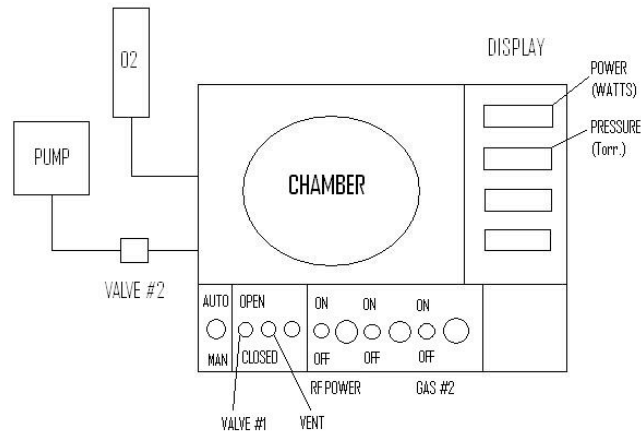
The Technics 500 II Asher uses O_2 plasma to remove residual photoresists from silicon wafers.

Operating Instructions:

1.   Make a visual inspection on and around the asher before using the system. Report anything unusual to the staff.

2.   Verify that the asher chamber is under vacuum and record the pressure on the log book.

3.   Log into the log-in computer.

4.   Switch the **MAN/AUTO** switch to MAN.

5.   Close **VALVE #1** and **VALVE #2** to isolate the chamber from the pump.

6.   Switch the **VENT** valve to the open position to vent the chamber.

7.   Open the chamber and load sample.

8.   Close the **VENT** valve.

9.   Open **VALVE #1** and **VALVE #2** to pump the chamber to base pressure (<30mtorr).

10. Turn on **GAS #2** (O_2) valve.

11. Adjust O_2 (~200 mTorr) flow if necessary.

12. Make sure **POWER ADJUST KNOB** is turned all the way counter-clock wise before turning on the RF power switch.

13. Turn on the **RF POWER** switch.

14. Adjust **RF POWER** (< 400 Watts) to desire setting.

15. Observe plasma glow in the chamber.

16. User monitor the process duration.

17. Record process-run data in the log book.

Shut down:

1. Adjust RF power to zero (CCW).

2. Turn off the **RF POWER** switch.

3. Turn off **GAS #2** (O_2).

4. Allow chamber to reach base pressure (< 30 mTorr) before opening the chamber.

5. Close **VALVE #1** and **VALVE #2** to isolate the chamber from the pump.

6. Open the **VENT** valve to vent the chamber.

7. Open the chamber and close the **VENT** valve.

8. Remove the sample and close the chamber.

9. Open **VALVE #1** and **VALVE #2** to pump down the chamber.

10. Clean up the area and log out.

Do's and Don'ts:

a. Do not make any equipment hardware changes with screwdriver or any other tools.

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b. Do not operate the asher if you are not qualified to use the system.

c. Do not share computer log-in and password with other users.

d. Do report anything unusual with the asher to the staff.