Table of Contents

1.0 Purpose/Scope 2
2.0 Equipment/Supplies/Material 2
3.0 Safety 2
4.0 Set Procedures 2
5.0 Procedures 2
6.0 Tables 3

1.0 Purpose/Scope

1.1 This document covers the procedure that should be followed for normal operation of Tegal #2 for the purpose of removing various organic or photo resist materials on the surface of silicon substrates, photo masks, glass and ceramic materials without harming the material to be cleaned. Note this tool has rather low etch rates, regardless of the power.

It is suggested that you review this document thoroughly before proceeding with the operation of this tool.

If an error condition occurs at anytime during your process immediately shut off the power supplies if they are on & place the tool in a safe mode. Place the sign for the tool to down, contact CSSER staff & submit a service request.

2.0 Equipment/Supplies/Material

2.1 Isopropyl Alcohol

2.2 Clean room wipes

2.3 Timer

3.0 Safety

3.1 Follow all safety procedures outlined in the CSSER Rules and Procedures Handbook. The handbook can be found at http://www.fulton.asu.edu/fulton/csser/safety.php

4.0 Set Procedure

4.1 Tool preparation, press the **AC ON** switch to turn the power on. This will also start the chamber vent which should take approximately 2 minutes, the chamber door latch should be turned to a horizontal position for it to release upon completion of venting.

4.2 Turn on the ENI RF power supply located on the back right side of the unit.

4.3 Open the Asher door and position the metal carrier or disc in the center of the chamber. Insure the rotary switch at the top is on channel B as all controls with the exception of RF power use this channel.

5.0 Procedure

5.1 Press Start/Stop to pump out the chamber, pressure can be read from the convectron gauge located on the right side of the tool. Once it is below 150 mtorr, press the gas flow button, and wait for the pressure to stabilize & adjust to a range of 280-500 mtorr.

5.2 Press the RF power button to turn on RF power to the ENI power supply which will be displayed on the front panel. Forward and reflected power can be adjusted using the tuning knob first then if needed with C1 & C2. Tune the RF supply to provide minimum reflected power of <10W by working sequentially from top to bottom on these 3 control knobs.

5.3 Using a timer & depending on your needs it is suggested you run for ~ 10 minutes at the power level you wish, typically 200W but this tool can achieve 300watts maximum.

5.4 When complete vent the chamber by pressing Start/Stop button which will turn off the RF, stop the O2 flow and vent the chamber in approximately 2 minutes.

5.5 When vented to atmosphere, remove your samples. Close the door & pump the chamber down to <200mtorr then press **AC ON** to turn the power off, also turn off the RF power supply.

Note: do not use a quartz carrier, as it will insulate your samples from the RF and prevent O2 Plasma removal of resists!

6.0 Tables

6.1 Etcher/Ashing Rates

AZ3312	200W	200A/min	
	50W	100A/min	

Hard Baked Resist @ 380 mtorr pressure

Effective Date	Originator	DESCRIPTION OF REVISION	Issue
2/5/08	Tim Eschrich	Initial Release	A
7/23/14	Jon Martin	Updates and Clarifications, Added uniformity	B