1 **SCOPE**

The purpose of this document is to detail the use of the Ultrasonic Bench. All users are expected to have read and understood this document. It is not a substitute for in-person training on the system and is not sufficient to qualify a user on the system. Failure to follow guidelines in this document may result in loss of privileges.

2 **REFERENCE DOCUMENTS**

n/a

3 **DEFINITIONS**

n/a

4 **TOOLS AND MATERIALS**

4.1 **General Description**

4.1.1 The Ultrasonic bench has an ultrasonic bath and a rinse tank. Various sized tanks may be suspended over the bath with holders. This bench is intended for metal lift off processes and light wafer cleaning.
5  SAFETY PRECAUTIONS
5.1  Hazards to the Operator
5.1.1  No acetone may be used on this bench due to flammability.
5.1.2  No solvents may be used directly in the ultrasonic bath.
5.1.3  The Ultrasonic Bench uses several hazardous chemicals. Users should be aware of the unique hazards of the materials with which they are working. If a chemical is spilled, remove clothing and rinse affected area in safety shower for 15 minutes and inform SMFL staff member or lab instructor.
5.1.4  When working at the Ultrasonic Bench, always use appropriate personal protective equipment (PPE)—apron, face shield and heavy rubber gloves.
5.1.5  The PPE should not be worn any place other than the immediate vicinity of the bench. Do not walk away from bench while wearing PPE. If assistance is needed (i.e. to grab a Kim Wipe or timer, etc.), ask for assistance—do not get it while wearing PPE. Do not work at computer or answer the phone while wearing PPE. When finished at the bench, rinse the PPE, fully dry it and return to hook.
5.1.6  It is imperative that all spills be cleaned up immediately because of the number and variety of materials used at this bench. Please see a staff member for assistance in cleaning up spills.

5.2  Hazards to the Tool
5.2.1  No solvents or lift off agents may go down the drain. These must be bottled up, labeled and properly disposed of.
5.2.2  No chemicals may be used directly in the ultrasonic bath. Only water and soap may be used directly in the tank.
5.2.3  Never leave the ultrasonics or the heater running unattended.
5.2.4  Never operate the ultrasonics without water in the tank.
5.2.5  No copper or gold may be processed in this bench.

6  INSTRUCTIONS
6.1  Initial State Check
6.1.1  Make sure that the ultrasonic bath is full of water.

6.2  Resetting the System
6.2.1  The system may be reset by cycling the power on and off.

6.3  Operating the system
6.3.1  On the lower front panel, turn on the Main Bench Power.
6.3.2  If needed, turn on the heater. It is located under the bench. The temperature readout is located on the front of the bench.
6.3.3  After the tank has reached the proper temperature, install one of the holders and place a dish or tank in it to hold the chemicals.
6.3.4  Fill out a chemical in use sign.
6.3.5 The ultrasonics may be started with the switch under the bench. Do not leave the bench unattended when in use.
6.3.6 When finished, turn off the heater, ultrasonics and bench power.
6.3.7 Lift-off chemicals must be bottled, labeled and properly disposed of. In some cases they may be re-used.
6.3.8 Dishes should be rinsed, dried and put on the cart.

7 APPROPRIATE USES OF THE TOOL

7.1 This bench is intended for metal lift off processes and light wafer cleaning.
7.2 No chemicals may be used directly in the ultrasonic bath. Only water and soap may be used directly in the tank.
7.3 No acetone may be used in this bench.
7.4 No copper or gold may be processed in this bench.

REVISION RECORD

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<th>Originator</th>
<th>Rev/Date</th>
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<td>Modified 5.1.6, added 6.3.8</td>
<td>Sean O’Brien</td>
<td>B-08/05/2008</td>
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