

Microfluidic/Microfabrication Facility, Harvard Medical School

PROCEDURE FOR PDMS MOLDING/DEMOLDING

Microfluidics Core Facility, Harvard Medical School

1. Mixture Curing agent/PDMS; 30g PDMS (or more depending on the final thickness, but no more than 1/3 of the beaker capacity 50g) and the corresponding amount of curing agent in the beaker (generally in a 1:10 ratio curing agent: base).



2. Weight the 3 components on the scale (beaker supporter, adaptor and beaker with the blend)



- 3. Balance the mixer with the weight obtained.
- 4. Set the mixer conditions:
 - a. Mixing time= 2 min
 - b. Mixing spin rate= 1500
 - c. Defoaming time= 2 min
 - d. Defoaming spin rate= 800
- 5. Use an aluminum foil cap to put in the wafer and pour the PDMS already mixed.



6. Degas for at least 1/2 hour. Make sure there are no bubbles on the surface.



- 7. Cure the PDMS mold in:
 - a. Hot plate 150 C (10 mins) or
 - b. 60 C (30 mins)
 - c. Room temperature (24 hours)



- 8. Allow cool at room temperature.
- 9. Gently peel or cut the aluminum foil from the master and cut away any excess PDMS.



10. Finally, peel the PDMS mold from the master



