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# PDMS TWO LAYER DEVICE FABRICATION

## MATERIALS:

- Flow and control layer molds
- Sylgard 184 silicone elastomer kit: Base part and a Curing agent
- TMCS

## PROCEDURE:

- Place molds into a TMCS vapor chamber
- Control layer mixture: 20g Base + 4g Curing agent
- Mix for 1 minute, degas for 2 minutes
- Pour onto control layer mold and place mold in vacuum chamber for at least 20 minutes
- Flow layer mixture: 20g Base + 1g Curing agent
- Mix for 1 minute and degas for 2 minutes
- Spin coat onto flow layer at 2200-2400rpm for 35 seconds
- Remove control layer mold from vacuum chamber, making sure no bubbles are left on the surface
- Place the control and flow layer in a 80C convection oven and incubate for 30 minutes
- Cut out control layer
- Punch holes
- Align to flow layer
- Put aligned device back into 80C oven and incubate for at least 90 minutes
- Remove devices from oven
- Cut them out

To clean the wafers use:

- Air-gun
- Isopropanol
- PDMS