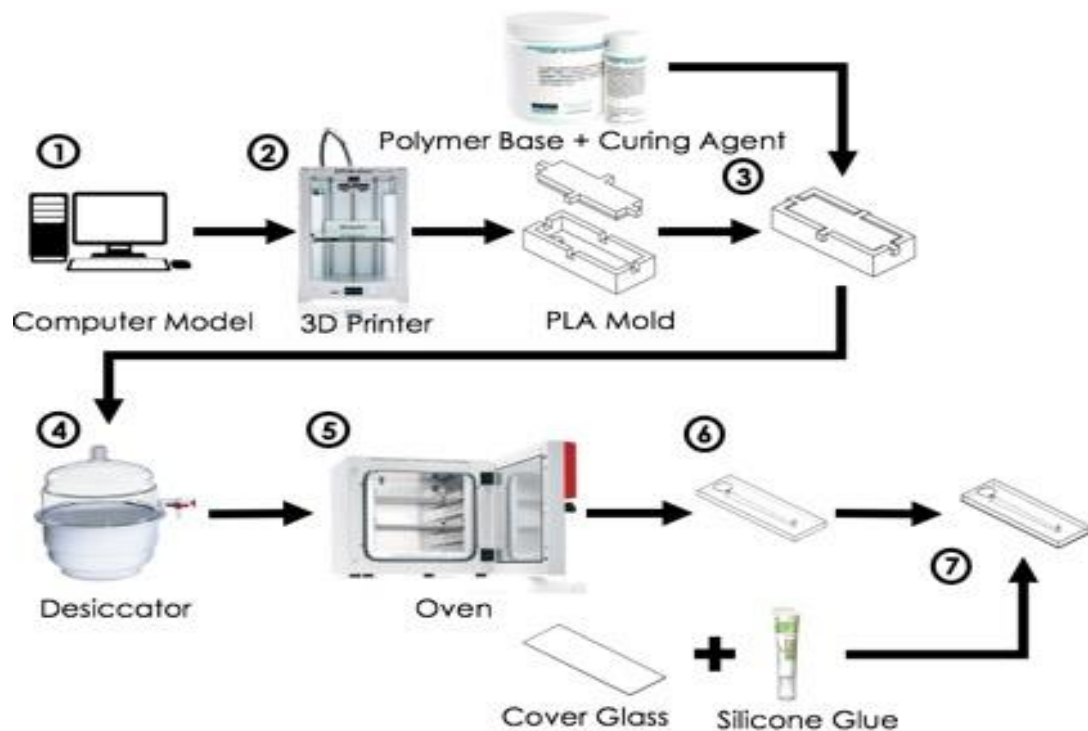


Fabrication of a PDMS chip - Protocol

PDMS is considered the standard for microfluidic fabrication in labs. It is optically clear, and in general, inert, non-toxic, and non-flammable.

The PDMS was then fabricated according to the following steps:

1. Design a two part mold using SolidWorks software- cover and base.
2. Print the mold using Ultimaker 2 Etentended+ 3D printer(link:[T--Technion Israel-HardwarespecsPrinter.pdf](#)).
3. Mix the polymer base and curing agent at 10:1 weight ratio, respectively. Then, fill the mold with the mix.
4. Place the mold inside a desiccator to degas for 2 hours.
5. Bake the mold at 70 C for 3 hours.
6. Carefully take off the mold's cover and then cut out the PDMS chip.
7. Attach the PDMS chip to a thin cover glass (0.3 mm) using silicon glue*.



*Traditionally, bonding PDMS to glass is done by plasma treatment. Our 3D printed mold resulted in PDMS chips with relatively rough surface finish, forcing us to use other methods.