

Making Black Sylgard Dishes

Supplies Needed:

1 Kit of Sylgard 184 from Dow Corning (This can be obtained from World Precision Instruments, Cat #: SYLG184, Phone: (941) 371-1003)

Kimax glass petri dishes with covers (Fisher, Cat. #: 08746A)

Charcoal ("Norit A" Activated Charcoal Powder) or any very fine charcoal powder

Wooden Tongue Depressors for mixing

1 or 2 Wooden Applicator Sticks

Two 1 liter disposal plastic tri-pour beakers

Small butane torch

Surgical Gloves

Lab Coat

Procedure:

1. Weigh out 300 grams of Part A liquid from the Sylgard 184 can directly into one of the large tri-pour beakers on the top-loading balance after protecting the balance tray by putting a piece of paper towel over it. First, tare the balance with the tri-pour beaker and paper towel in place.
2. Add 30 grams of Part B liquid from the bottle in the Sylgard 184 kit by slowly and carefully pouring this into the tri-pour beaker on the balance while watching the balance reading.
3. Remove the tri-pour beaker from the balance and use the tongue depressor to thoroughly mix the 10:1 mixture of Part A and Part B from the Sylgard Kit.
4. Weigh out 2 grams of Norit A Charcoal Powder and add that to the Sylgard mixture in the beaker. Thoroughly mix that in using the tongue depressor.
5. After the Sylgard has been fully mixed it can be carefully poured into the bottoms of the Kimax glass petri dishes. It is best to decant the Sylgard mixture into the dishes slowly using the applicator stick touched against the bottom of the Sylgard dish and the tri-pour beaker, pouring from one corner of the beaker slowly. Fill each petri dish bottom only about one-third to half full. NOTE: It is important to make sure that you fill the dishes to the desired level, so check several existing

Sylgard dishes to determine what level of Sylgard is most effective for our microdissections. If in doubt please ask for help. It is also important that the dishes cure while on a flat, level, non-moving, and non-vibrating surface.

6. Bubbles will come up to the surface of the Sylgard after the initial pouring and it's important to get rid of them before the dishes cure. This is most easily done by using a small butane torch held about 10 to 12 inches above the dishes and aim it directly down to the surface of the Sylgard in each of the dishes that contain bubbles. It just takes a small amount of heat from the torch to cause all the bubbles to pop and disappear leaving a perfectly smooth surface. (Take care not to overheat the Sylgard).
7. After all of the dishes have been filled with the Sylgard, put their covers on to protect them from dust as they cure. Leave them on a level flat surface with a note saying "DO NOT DISTURB FOR AT LEAST 24 HOURS" so that they can cure.
8. The waste from this procedure and the remaining Sylgard in the beakers can be put in the fume hood where it will cure during the next 24 hours. Then it can be disposed of in the trash. Gloves and a lab coat should be worn throughout this work.

Good luck!