

Candy Lens Demo How-To

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Small suggestions and edits by Jilian Nguyen

Materials

- Stainless Steel Saucepan



It should look like the above, a shallower and wider stainless steel pot/pan will work as well, as long as you can stick the entire thing in your sink (for a later step) and as long as it is stainless steel! Make sure it's super clean, I would suggest rinsing a bit with distilled water.

You may also want another saucepan that's larger (again talking about that later step) if you can't use your sink as a quencher.

-Isomalt sugar (buy in bulk)

-Distilled water

Candy will come out yellow if there are any contaminants anywhere, especially if tap water is used.

-Lollipop sticks

If your sticks are super long, cut them in half with a pair of sturdy scissors and make sure you don't put the cut end into the candy, in case it's sharper than the not-cut end.

-Candy thermometer

-Oven

-Stove

-Oven mitts

-Silicone molds

-vegetable oil/PAM

-metal spoon(s)

-Paper towels

-Glass Pyrex liquid measuring cup (for ease of pouring into molds, not strictly necessary)



IMPORTANT: Do not get water anywhere near the candy once you've started boiling it. Water will prevent the molten candy from hardening and cause hard candy to dissolve into a sticky mess. Make sure that everything that might come in contact with candy is extremely dry before starting.

1. Prepare tools

- a. Wash saucepan and dry with paper towels (air drying will allow the tap water to leave minerals behind).
- b. Set oven to 275°F. It can preheat during the next set of steps.
- c. Fill sink with cold water to act as a quencher or get a pot that is larger than the saucepan you're using to melt the isomalt in, fill it with cold water, and set it off to the side (so that the oven and stove won't heat it up).
- d. Make sure you have somewhere safe to let the thermometer cool – you can't put it in the oven and you can't submerge it in water while it's hot. I clipped mine to the side of a giant empty pot.

2. Prepare Isomalt

- a. Pour dry Isomalt and distilled water into saucepan – the exact ratio isn't important, you just need enough water to dampen the Isomalt. If you pour in a lot of water, it'll just take longer to do, but if you pour in too little, you either risk missing the exact point at which you need to quench because the temperature will rise too fast, or you'll burn it. I like to fill up about a third of the pan with isomalt or more, but not more than half of the pan since you don't want to be there for hours pouring candy.
- b. Insert candy thermometer - the tip of the thermometer should be immersed in the mixture without touching the bottom of the pan. Either add more isomalt and water or use a smaller saucepan if the thermometer is touching the bottom
- c. Heat mixture on stovetop until the temperature reaches exactly 333° F. **DO NOT STIR.** The boiling process will stir the mixture plenty, and any foreign object you might stir with could incorporate impurities that will cause the candy to become opaque
- d. As soon as the thermometer reads 333°F, take the saucepan off the burner and submerge **ONLY** the bottom of the saucepan in the sink quencher you set up earlier, or

in the pot quencher if you decided to go that route. Remember, don't let water get in the candy!

- e. Remove candy thermometer and leave it to cool
 - f. Place saucepan into oven for 15 minutes. This step allows the bubbles incorporated during boiling to escape.
3. Prepare molds (do all of this during the 15-minute oven step)
 - a. Rinse molds and pat dry with paper towels (soap is only necessary if something is really stuck on there – the candy is hot enough to kill pretty much any pathogens, and any residual candy will dissolve in water).
 - b. Coat molds with oil/PAM. You can either dip a paper towel in vegetable oil and rub it around, or spray PAM everywhere and dab away the excess. This prevents the molds from outgassing into the hot candy and leaving a ton of bubbles along the surface.
 - c. Put lollipop sticks in molds, you don't need much of the stick to be in the lollipop (and you don't want the stick occluding too much of the lens area).
 4. Pour candy into molds
 - a. Take saucepan out of oven using oven mitts (seriously, the handle gets pretty hot in there).
 - b. Pour some into the pyrex measuring cups to make pouring easier, though you can just pour straight from the saucepan if you want. If you're using the saucepan, use the spoon and hold it against the outer side of the saucepan slightly beneath where the candy will spill out.
 - c. Tip pyrex measuring cup or saucepan to pour candy into the molds.
 - d. The spoon is to prevent the candy from running down the side of the pan since it may not pour smoothly out, this isn't a problem with the pyrex measuring cups since they have a spout.
 5. Let candy cool for about 15 minutes (can be a quicker process with a fridge) and then remove the lollipops and either use them immediately or stick them into airtight containers with a silica gel packet inside. Done!
 - a. Remember, the molds are flexible. You can pop the lollipops out of the molds by pushing gently on the back of the mold.
 - b. A tip that I (Jilian) haven't tried yet. An issue we continue to have is the bubbles left on the surface of the lenses because of the silicone molds outgassing. Maybe once the sugar has hardened somewhat, you can try thumping the molds gently to release some of the bubbles, like making macarons (but much less intensely as the sugar is much more liquid than macaron batter).

Other notes: Isomalt crystallizes and burns much slower and at a higher temperature than normal sugar, but it still will brown if left in the oven for a very long time! A couple of hours is fine though in my experience. The mild amber color doesn't affect anything but the taste.

Clean up is pretty easy – warm to hot-ish water and stirring will dissolve any sugar left in the pyrex and saucepan. You can break off any excess sugar as well, but once you get to where you can't break it off anymore, just dissolve it away!

Want to add color or flavor?

DO NOT use water-based flavorings/colorings. DO NOT add oil-based flavorings/colorings too early. Water-based ingredients would need to be added at the start and get mostly ruined by the boiling step. Oil-based ingredients react violently with water, so if you add them before all of the water is boiled off, the candy will start to violently froth until the water finishes boiling away. It's a huge pain. Oh, and remember how you aren't supposed to stir? Well, once the water's gone, the mixture sort of stops stirring itself...

So there are two ways to add color to Isomalt. One way looks super-nice but takes a while. The other isn't as homogeneous, but is pretty fast.

Way #1: Prepare half the amount of Isomalt you actually want to use. Once you quench the saucepan, instead of putting it in the oven, leave it out on the stovetop to cool slightly and add all the coloring. Stir with the thermometer until the coloring is sort of mixed (you'll probably still have clumps of dye and regions with no dye). Once the thermometer reports that the mixture has cooled below boiling (try 200°F to be safe), add the other half of the Isomalt and water and repeat the preparation step. The boiling should fully mix the coloring in.

Way #2: Prepare the full amount of Isomalt at the start, stir longer. If the mixture starts to get too viscous, you can put the saucepan back on the burner to warm back up. Make sure you don't exceed 333°F.

Flavoring isn't as finicky as coloring. If you want clear, flavored candy, stir about as much as you did in Way #1. If you want colored, flavored candy, add the flavoring along with the coloring.

Coloring sugar-based hard candy is sort of a pain if you want to make any color that doesn't contain yellow (purple, red, and blue are hard, orange, yellow, and green are easy). I honestly just stuck to making amber sugar lenses. You can look up instructions for coloring sugar candy online if you want some other color. The reason the Isomalt methods don't work for sugar is that Isomalt takes hours to start to yellow, while sugar starts to yellow immediately.