Experiment 2: Spherification

In this experiment, you'll be employing a chemical reaction to form bubbles of liquid that you can eat. A gelification reaction between two substances, sodium alginate and calcium chloride, will create a thin membrane surrounding droplets of flavored liquid, kind of like homemade Gushers.

What we're shooting for

Make sure you have:

- Sodium alginate solution
- Calcium chloride powder
- Water
- A syringe
- A shallow dish
- A slotted spoon
- A mixing bowl
- A measuring cup
- A tasty filling

The Procedure:

1. Pour the calcium chloride powder into the shallow dish and add 1000 mL of water. Stir until powder is completely dissolved, then allow to sit without agitating.

2. Pour the sodium alginate solution and filling into the mixing bowl and stir to combine. Stir gently and try not to introduce air bubbles if possible.

3. Suck the sodium alginate/filling mixture up into your syringe. Now comes the tricky bit. Holding the syringe 6 inches above the shallow dish, slowly empty the syringe drop by drop in the calcium chloride solution. The droplets should retain their shape. If they have 'tails', hold the syringe a bit higher above the dish. *If you're having any trouble, please ask for help!*

4. Allow the spheres to rest in the calcium chloride solution for 1 minutes (from the time your last drop went in), then spoon them out GENTLY using the slotted spoon. The membrane you created is very thin and fragile.

5. Rinse your spheres with water and enjoy!

Images and recipe adapted from Jennifer Che's "Spherification," http://www.tinyurbankitchen.com/2012/05/spherification-making-caviar.html