Molecular Gastronomy experiments:

Experiment #1 – cola caviar (based on a recipe off www.gastronomie.kalys.com) Caviar:

- 1 g sodium alginate
- 100 g cola or other soda drink

For the setting bath

- 8-10 g of calcium chloride
- 100 g of water

Method:

- 1. Measure out the soda on the scale. Add to small pot. Heat until boiling
- 2. Turn heat down to medium and mix in the sodium alginate with a whisk. Stir until all of the powder is dissolved. This will take some time
- 3. Turn off heat and allow solution to cool to room temperature
- 4. Meanwhile, mix up the calcium chloride and water in a 1 cup measuring cup
- 5. Once the cola solution is cool, put it in a small plastic bag, carefully cut off one corner and allow to drip into the setting solution
- 6. Once all of the solution has been dripped into the setting bath, pour out the setting solution and the caviar into a sieve over the sink and rinse very well under cold water
- 7. taste and enjoy!

Experiment #2: Spherical mango gnocchi

Gnocchi:

- 250 g water
- 2 g sodium citrate
- 2 g sodium alginate
- 250 g of mango puree

Setting bath:

- 1000 g of water
- 5 g calcium chloride

Method:

- 1. Mix together the sodium citrate and water with a whist. Once dissolved, ass the sodium alginate and mix well. To aid in the dissolution, let sit for 5 minutes, and mix again. If the majority of the powders have been dissolved, then go to step 2
- 2. Bring solution to a rolling boil. Remove from heat and allow to cool to room temperature
- 3. Meanwhile, puree the mango making sure that you have 250 g at the end
- 4. Once your solution has cooled, add the mango puree
- 5. Make up your setting bath in a pan so that there is at least 5 cm depth of the setting bath
- 6. Put your mango solution into a plastic bath and cut off one corner
- 7. Drop the mango solution into the setting bath, and let them sit for at least 2 minutes in the setting bath
- 8. Rinse in very cold water.

ES.287 / 5.S15 Kitchen Chemistry Spring 2009

For information about citing these materials or our Terms of Use, visit: http://ocw.mit.edu/terms.