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SP.287 / 5.S15 / ESG.SP287 Kitchen Chemistry
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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 whisk. Once dissolved, add 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 bag 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.