Required Training

UC Lab Safety Fundamentals

Required PPE

Lab coat, safety glasses/goggles, nitrile gloves

Equipment

Chemicals

4 L beaker filled with DI water

1 can diet soda

1 can regular soda

Scale

Procedure:

1. Put the two sodas into the water tank, and note that the sugary soda sinks while the headspace in the diet soda is enough to keep it afloat.

2. The two cans can be put on a scale and the sugary drink will weigh more.

Discussion:

This demonstration shows the effects of dissolved solutes on a solution’s density. Because about 40 g of sucrose is dissolved in each can of coke, its density is much higher than in the diet soda with the much sweeter/gram aspartame. Even though aspartame is comparable in molar mass to sucrose, it is nearly 200 times sweeter per mole than sucrose. Recall that density is mass per unit volume.

Hazards:

N/A

SOP:

N/A

Disposal (by Storeroom)