



Curiosity Guide #308

Candy Science

Accompanies Curious Crew, Season 3, Episode 8 (#308)

Lifesaver Geyser

Investigation #5

Description

What happens when candy and cola meet?

Materials

- 12 Wintergreen Lifesavers
- 20-ounce bottle of cola
- 20-ounce bottle of diet cola
- Meter stick

Procedure

- 1) Take the materials outside to a grassy area.
- 2) Stand each bottle up, a couple of feet away from each other.
- 3) Press the Zero end of the meter stick into the grass, several inches behind the cola bottle. Note the height of the bottle top.
- 4) Unscrew the cap off the cola bottle.
- 5) Unwrap the Wintergreen Lifesavers.
- 6) Stack up 6 Lifesavers in your hand.
- 7) Drop the entire stack of Lifesavers into the cola at once, and quickly get back.
- 8) What happened?
- 9) Move the meter stick behind the diet cola bottle. Repeat the process, dropping 6 Lifesavers into the diet cola.
- 10) How did the results compare?

My Results

Explanation

Wintergreen Lifesavers are made with a number of pockets all over the candy. These open spots are perfect for carbon dioxide molecules in the soda to stick and collect. Normally, when a soda bottle is opened, you can see all those dissolving carbon-dioxide bubbles moving up in the liquid. With so many candies in the soda, all those small pockets quickly catch more and more carbon dioxide. The bubbles get huge; so big that they burst right out through the top of the bottle!

Investigate further: Candy Chemists design different hard candies by starting with a selected flavor and developing formulas that must be taste-tested. That sounds like a fun job! Those selected flavors are added to clear caramel, along with sugar, and mixed together as a hot liquid. Candy manufacturers add different food colorings that match the selected flavors. As each colored mixture cools, it is spread out. The mixture is quickly cut into the desired shape, and is eventually packaged for shipment to the customer. The best part is that the candy's flavor lasts a long time! Yum, yum!

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