Testable Question

How does varying the amount of corn syrup affect how long the frozen bubble takes to pop?

Research

I found most of the experiments I researched, by adding more corn syrup the bubbles last longer. I also found that a bubble is a water and dish soap "sandwich!"

Hypothesis

I think that, by adding more corn syrup to the mixture,the frozen bubble will last longer before popping. Corn syrup is sticky and thick and protects the “sandwich”

Variables

Controlled: All of the ingredients except corn syrup.

Independent: The amount of corn syrup(22 ml,35 ml and 100 ml.)

Depending: How long the frozen bubble lasts.

Materials

Water, old cups, spoon, dish soap, corn syrup, white sugar, a bubble blower and a stopwatch.

Procedure

First add 200ml of water to an old cup, next add 35ml of dish soap to the old cup and mix together,third add 22 ml of corn syrup to the mixture, then add 2 tbsp of white sugar and mix gently, lastly use a bubble wand in the cold and watch!(make sure to measure it!) Do this three times but add 42 ml or 100 ml of corn syrup instead of 22 ml.

Data

The first 22 ml frozen bubble lasted for 1 minute and 43 seconds. The second 22 ml bubble lasted for 2 minutes and 8 seconds. The third 22ml bubble lasted for 4 minutes and 42 seconds. The first 42 ml bubble lasted for 16 minutes and 28 seconds. The second 42 ml bubble lasted for 6 minutes and 54 seconds. The third 42 ml bubble lasted for 8 minutes and 20 seconds.The first 100 ml lasted for 12 minutes and 58 seconds. The second 100 ml bubble lasted for 69 minutes and 23 seconds. The third 100 ml bubble lasted for 7 minutes and 18 seconds.

Tables and Graphs

Conclusion

According to my tests the 100 ml of corn syrup lasted the longest, the second test 1 hour,9 minutes and 23 seconds proves that.

Recommendations

I recommend to add a smaller amount of corn syrup to the 100 ml, like 50 ml or 55 ml because 100 ml takes a longer time to pop then the others.