

BUBBLES EXPERIMENT

Objectives: The overall objective of the following three exercises is to produce the largest bubble possible on the lab bench. Each individual exercise will be designed to explore how different components affect the size of bubble blown. The components of bubble making that you will be exploring are how the amounts of soap, glycerin and water affect the size of a bubble.

Overall Procedure:

When designing the experiments, you cannot use more than 10 drops of soap or glycerin. You may use any amount of water you wish.

1. Measure all components carefully and thoroughly mix on the lab bench.
2. Use the straw to blow the biggest bubble possible. Blow it until it pops.
3. Measure and record the diameter across your bubble by looking at the pattern of the popped bubble on the bench top.
4. Repeat the procedure for the required number of trials.

Experiment #1

The Effect of the Amount of Soap on the Size of Bubble

In this experiment, only the amount of soap will be changed.

2 spoonfuls of water, 5 drops glycerin. (you choose how much soap & write in “treatment” row)

| | | |
|-------------------|--|--|
| IV: | | |
| Treatment: | | |
| Trials: #1 | | |
| #2 | | |
| #3 | | |
| DV: | | |
| Constants: | | |

In this experiment, only the amount of soap will be changed, everything else must remain constant.

Experiment #2

The Effect of the Amount of Glycerin on the Size of Bubble

In this experiment, only the amount of glycerin will be changed

2 spoonfuls of water, 5 drops glycerin. (you choose how much glycerin)

| | | |
|-------------------|--|--|
| IV: | | |
| Treatment: | | |
| Trials: #1 | | |
| #2 | | |
| #3 | | |
| DV: | | |
| Constants: | | |

Experiment #3

The Effect of the Amount of Water on the Size of Bubble

In this experiment, only the amount of water will be changed.
5 drops glycerin, 5 drops soap. (You choose how much water)

| | | |
|-------------------|-----------|--|
| IV: | | |
| Treatment: | | |
| Trials: | #1 | |
| | #2 | |
| | #3 | |
| DV: | | |
| Constants: | | |

Conclusion

1. How does the amount of soap affect the size of the bubble produced? Use the data collected to support this statement!

2. How does the amount of glycerin affect the size of the bubble produced? Use the data collected to support this statement!

3. How does the amount of water affect the size of the bubble produced? Use the data collected to support this statement!

4. What would you do to make the largest bubble possible?