

Name: Melissa Chang

Class: Physics II

Period: 7th

Group #: 6

Lab # and Title: 1. Density Lab

Laboratory Report

Purpose

Determine the relation between mass and volume by comparing the changes in volume as mass is manipulated.

Equipment Used

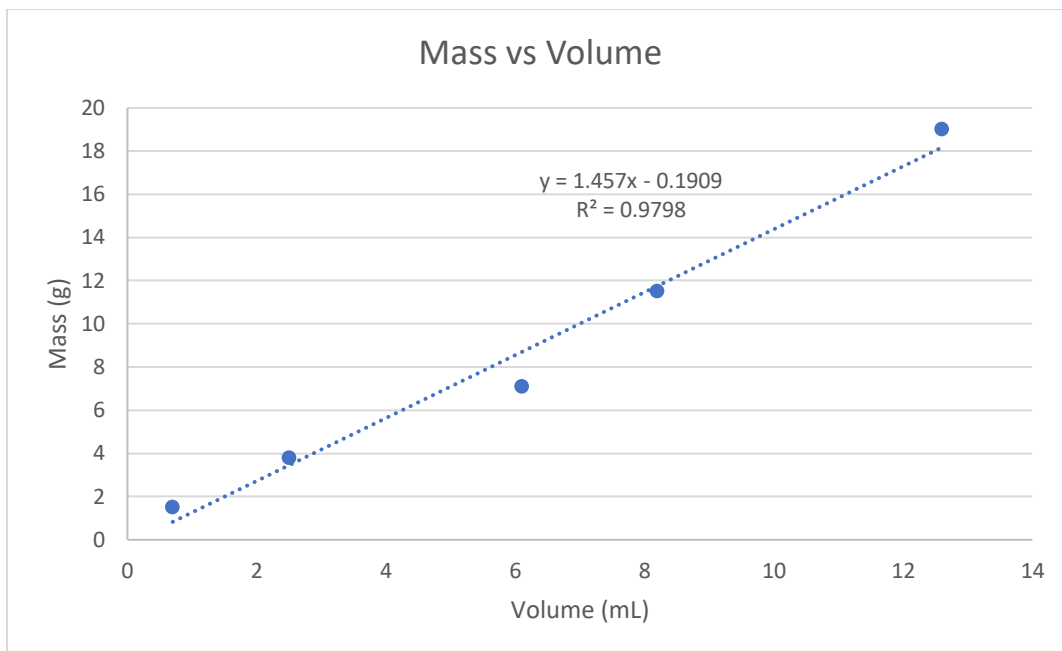
Play-doh, triple beam balance, graduated cylinder, water

Procedure

1. Break up a piece of the play-doh and roll it into a ball.
2. Use the triple beam balance to measure the mass of the sample and record it.
3. Fill up the graduated cylinder with water up until the 50 mL mark.
4. Drop the previously massed sample of play-doh into the graduated cylinder.
5. Record how much water was displaced by the play-doh.
6. Repeat steps 1-5 4 more times with varying masses of play-doh.

Data

Volume (mL)	Mass (g)
2.5	3.8
8.2	11.5
6.1	7.1
12.6	19
0.7	1.5



Conclusion

Based on the data we collected, mass seems to have a direct relation with volume as seen by the near linear graph we produced. As mass increases, volume increases as well at a 1.457:1 ratio. Although we are fairly confident in this correlation, there are possible sources of error in our experiment. Since the graduated cylinder's most specific measurement was to 1 mL, we tried to be as accurate as possible and recorded to one decimal point based on where the water appeared to be. Similarly, the triple beam balance we used to measure the mass of the play-doh was also only accurate up to .1 grams, so the mass is rounded to the nearest tenth of a gram in our data. As a result of these uncertainties, there could possibly be a small percent error in our results, however, these factors should not have a significant impact on our overall result.