Density experiment essay sample

Science, Physics

Discussion and Conclusion

In this lab, a submarine Adventure: Density Saves The Day; I had made many of the calculation for the best result of the lab.

My calculations section contains: the volume of the unknown metals, where I figure out the volume of each metal so that I will be able to determine its density in order to find its identity; the density of unknown metals, where I figure out the density of each metal so that I will be able to determine its identity; percent error between known and unknown metal densities, where I figure out my error on the calculation for finding the identity of the unknown metals; mass of water, where calculate to find out the mass of water by subtracting the mass of graduated cylinder with water by the mass of the graduated cylinder itself in order to find the density of ocean water; the density of ocean water; where I figure out the density of the ocean water by divided its mass by its volume, this will help me to find the density of the submarine as well since it’s equal to each other; volume of balloon needed to match salt water density, where I figure out the volume of the balloon by using the volume formula for the sphere shape which is representing the shape of the balloon; final volume of the submarine, where I divided its mass by its density to get its final volume so that I can create the perfect submarine for the experiment; final density of the submarine, where I added up all of the mass of balloon, pellets, and rubber band and divided by the volume of sphere so that I get the final density of my submarine and test if my submarine flow appropriately.

The lab experiment on the identity of the unknown metals went well except that I have made a little bit of error on my calculation of the mass of water. I didn’t how to measure the mass of water with the graduated cylinder. I would improve my study by memorizing the procedure and make sure that I deeply understand the lab and its procedures before performing the experiment to avoid mistakes.

The lab experiment on the submarine was successfully done. The calculations were the hardest part because there could be an error at any point, which can mess up the entire experiment. The possible human error can be weighting measurement errors, for example, if the measurement were calculated incorrectly this could have an affect on a chemical mixture and create the wrong result or the outcome of the chemical. The environmental condition can be the temperature and the humidity of the laboratory, for example, each of the substance contain certain temperature that they need to be kept in order for them to stay normal and not expire.

Overall, my hypothesis for the lab was accepted. This means that I have found the identities of my unknown metals, which were terbium and erbium. I have understood and was able to find the density of my submarine. Also my submarine flowed in the appropriate position when I tested it in the ocean water. As my result, I have notice that the inquiry of the density lab was very simple. Everything is connected together. For example, I used the total mass of the submarine divided by its volume to find both density of the submarine and the ocean water.