Name(s)	Project Number
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Project Title

Determining the Relationship between a Water Sample's Temperature and Its Turbidity Level

Abstract

Objectives/Goals

In my project I'm trying to figure out if the different temperatures of water have different turbidity levels. I'm concerned about how clear our drinking water is, and I want to find out if the temperature of the water is cleaner/clearer.

Methods/Materials

I will complete my testing by using a turbidimeter. This device is used by scientists to quickly, and easily find the turbidity level of a water sample.

Create 1 liter of 20NTU Standard tubidimeter test water solution by adding 5 ml of Formazin to 1 liter of deionized water in a sterilized stainless steel bowl. Both the Formazin and the water should be at room temperature (20 degrees C). This solution will be used for all of the (20 degree C) Control tests. Pour the test solution into a clean (triple cleaned, and rinsed) 100 ml beaker to create control sample. Place the test bottle into the turbidimeter, check the reading, and record the results. Repeat this for a total of 5tests. Create the remaining 4 test solutions using the formula from step 1. The two cooler temperatures can be cooled using a refrigerator/freezer, or an ice bath. The two warmer test solutions can be heated using a hot plate, or Bunsen burner. After completing the five 20 degree C (control) tests, complete 5 tests for the 1 degree C group, the 10 degree C group, the 30 degree C group, and the 40 degree C group.

Results

The results show that the 40 degree C had the lowest turbidity level. Tests 1 through 5 showed results with an average test reading of 21.34. In second place was the 10 degree C tests, with an average test reading of 21.65. The third place one was the 30 degree C tests with an average test reading of 21.72. In fourth place was the 20 degree C tests, also known as the Control tests with an average of 22.32. Finally in last place, the highest turbidity levels were the 1 degree C tests with an average test reading of 22.38.

Conclusions/Discussion

The results did not give conclusive evidence of any correlation between temperature of a water sample, and it#s turbidity level.

Summary Statement

Finding out if changing water temperature affects it's turbidity level

Help Received

Advisor and teacher helped me with the experiment