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*Coliform Bacteria in Front Range Water*

The purpose of the experiment was to find out which major city in the Front Range had more coliform and water-based bacteria in its public water supply: Colorado Springs or Denver. To test the experiment, samples were taken in plastic sample bottles and filtered twice to reduce sediment and floc inside the sample. 5 mL of the water was evaporated in 100 mL glass beakers in order to let bacteria settle at the bottom that could be swabbed directly onto the Petri dishes. Each of the ten samples was swabbed onto Petri dishes for replication and was grown in an incubator at 32° Celsius for 48 hours in order to give the bacteria enough time to form visible colonies. Using a graph paper method, the average number of colony-forming units for each Petri dish was able to be counted, so that the average for both cities could be taken to test the hypothesis. After the colonies were counted and averaged, the sites of water in Denver had drastically more colonies on average than those of Colorado Springs, and the range of colonies per source ranged from the upper three thousands to the lowest count of three. The experiment concluded that Colorado Springs had cleaner public water than that of Denver, which may have been caused by the snow that had recently fallen when samples were being taken. The number of average bacterial colonies in Denver in all samples averaged higher than samples located in Colorado Springs.