

Monica Gaitonde

*The Effect of Sodium Bicarbonate and Hydrogen Peroxide on the Growth of Streptococcus Mutans*

Sodium bicarbonate and hydrogen peroxide were tested to see how many Streptococcus mutans were killed. I hypothesized that sodium bicarbonate would kill about fifty percent of the streptococcus mutans. I also hypothesized that hydrogen peroxide would kill forty percent of the streptococcus mutans. Twelve plates, each divided into two halves, had streptococcus mutans growing on them for two days. On the third day, one 25 mL of hydrogen peroxide was dropped onto each of the six plates. Then, one 25 mL drop of sodium bicarbonate was dropped onto each of the remaining six plates. Growth was monitored for three days. I found that sodium bicarbonate had a mean zone of inhibition of 13.23 square millimeters, and hydrogen peroxide had a mean zone of inhibition of 0.07 square millimeters. Sodium bicarbonate has standard deviation of 2.1 millimeters and hydrogen peroxide had a standard deviation of 0.8 millimeters. My data did support my hypothesis because I thought sodium bicarbonate would kill more streptococcus mutans than hydrogen peroxide.