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Is the Doctor Always Right? Evaluating the Effect of Food on Stomach Acid

The purpose of this project was to test and analyze the effects of jalapeños, onions, chocolate, and peanuts on the pH of stomach acid (hydrochloric acid). The reason for this experiment was to analyze whether the foods that doctors tell patients with digestion problems to avoid should really be avoided or if it is just a myth. In order to conduct this there are ten steps that need to be followed. First dilute the HCL to a pH of 2.5 by adding 20 nanoliters of HCL to 100 mL of water. Second dice the food with the slap-chop. Third measure $\frac{1}{4}$ of a cup of each food to pour into the diluted HCL. Fourth obtain 5 beakers for each trail. Fifth pour in 50 mL of diluted HCL into each beaker. Sixth take pH level with the pH probe. Seventh pour in a $\frac{1}{4}$ of a cup of food each beaker with a distinct food. Eighth take the pH for two hours while the food is being digested, the food will not broken down completely. Tenth repeat steps for more trials. The hypothesis for this experiment was that the jalapeños will cause the most decrease in pH, followed by onions, then peanuts, and lastly chocolate. The conclusion for this experiment was that the onions caused the most decrease in the pH, followed by the jalapeños, then the peanuts, and lastly the chocolate.