Name(s)

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Project Number

J2117

Project Title

Antacid vs. Antacid: Comparing the Neutralization Levels of Different Antacids

Abstract

Objectives/Goals

By testing the effectiveness of different antacids in the same acid, I was able to determine which antacid had the highest acid neutralizing capacity, and I was also able to prove whether name brand products are truly superior to cheaper, store brand products.

Methods/Materials

A solution was made consisting of two tablets of each crushed antacid tablet and 20 mL of water, along with another mixture containing 40 mL hydrochloric acid and 500 mL of water. Using an eyedropper and pH meter, the amount of the antacid solution needed to raise the pH of 50 mL of the HCL mixture from two to four was recorded.

Results

Equate Tums proved to be the best performing antacid at an average of 5 drops. It also had the cheapest unit price of 3.3 cents. Equate Pepto-Bismol was the least effective antacid at an average acid neutralizing capacity of 161 drops. On average, name brand antacids neutralized the acid more thoroughly than store brand antacids.

Conclusions/Discussion

My hypothesis was proven to be partially correct with the Equate brand of Tums being the best performing and cheapest antacid. However rather than my prediction of Alka-Seltzer, the Equate brand of Pepto-Bismol proved to be the least effective antacid.

Summary Statement

I compared the acid neutralizing capacities of different antacids and proved whether name brand medications are truly superior to store brands.

Help Received

None. I designed and performed the experiment myself.