CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY

Name(s)
Alaina R. Petlewski

Project Number
J1827

Project Title
"And the Reading Is...." The Effects of Antacids on Lemonade and Orange Juice

Abstract

Objectives/Goals
My project was to determine which antacid, of six tested, would reduce the acidity of lemonade and orange juice the most. I believed that Tums would be the most effective.

Methods/Materials
Initial pH readings of six beakers of 250 ml of room temperature lemonade were taken with a pH meter. The minimum recommended dose of six different antacids, in tablet form, were crushed and added to the beakers. The pH of the juice/antacid solution was measured at timed intervals up to one hour. An additional dose, if allowed and needed, was added at 30 minutes. The process was repeated with orange juice.

Results
In both the lemonade and the orange juice, Alka Seltzer Gold worked the most quickly to reduce the acid, but stabilized at a lower pH. The Mylanta Ultra worked a little more slowly, but continued to reduce the acidity the most over the hour period and came closer to reaching neutral than the other antacids. Tums came in second over the hour period.

Conclusions/Discussion
My conclusion is that Alka-Seltzer Gold works the most quickly to reduce the acidity of lemonade and orange juice, but Mylanta Ultra reduces the acidity the most over the hour long period. My hypothesis was disproved as Tums was the second most effective antacid over the hour long period.

Summary Statement
My project determined which, of six antacids tested, would reduce the acidity of lemonade and orange juice the most over an hour long period.

Help Received
Mom helped with testing, typing Procedure and Bibliography, dictation. Teacher- format questions.