CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY

Name(s)
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Project Number
J1824

Project Title
Sweet Relief?

Abstract

Objectives/Goals
My objective was to determine whether or not certain candies could neutralize a strong acid. I hypothesized that candies with magnesium present as an ingredient would work towards neutralizing the acid.

Methods/Materials
Seven different brand-name candies (Mentos, Wrigley's Doublemint Mints, Tic Tacs Freshmints, Peppermint Life Savers, Strawberry Pop-Rocks, Bubble Gum Pop-Rocks, and one generic antacid as the control group) were crushed and dropped into 10 mL of cola, after which the mixture was tested with litmus paper (in Phase 1). The number of candies was increased by threes (1, 3, 6...). In Phase 2, the procedure was the same, but the mixtures were tested with a digital pH meter. The materials were: pencil, computer, SOLO plastic cups, paper towels, Diet Go2 Cola, notebook, the six aforementioned candies and the aforementioned antacid, and red and blue litmus paper.

Results
Tic Tacs (which contained a form of magnesium, magnesium stearate) and the antacids were the only candies that reached a neutral pH or higher, the Tic Tacs after 27, the antacids after 2. My hypothesis was therefore correct.

Conclusions/Discussion
My hypothesis was correct in that magnesium neutralizes acid. I discovered that Tic Tacs can act as an antacid, because they contain magnesium. However, the anti-health factors of eating 27 Tic Tacs overrules their benefits.

Summary Statement
My project is about whether candies can provide a useful function by acitng as an antacid.

Help Received
My mother drove me to the store to buy candies and other materials; she also helped with the typing.