



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

Name(s) Vatsal Jain	Project Number J1798
Project Title Acid Blasted	
Abstract Objectives/Goals My projects objective was to find out which antacid has the highest potency to cure heartburn. Hypothesis: I believe that Equate will cure heartburn the fastest, because when we compared active ingredients Equate would always have the most variety. Methods/Materials In this project I determined which antacid neutralizes an acid in the fastest amount of time. The materials I used were red cabbage, measuring cup, blender, strainer, 4 small glass jars, lemon juice, marking pen, two eye droppers, and three different types of antacids tablets with the same active ingredients. In this experiment, I used red cabbage as an indicator, since it is neutral, to see when the lemon juice, which is an acid, had lost all its color. An equal amount of each brand of the antacids were crushed and added to the each mixture of lemon and cabbage juice. I started the stopwatch and recorded the time when the each mixture turned transparent. Results The antacid that took the longest duration of time to make the mixture transparent has the lowest potency, or ability to neutralize an acid. The antacid that took the shortest duration of time to make the mixture transparent has the highest potency. Tums took the shortest amount of time to neutralize the lemon juice, which means it has the highest potency to cure heartburn. Equate took the longest time, which means it has the lowest potency to neutralize stomach acid. Conclusions/Discussion The results showed that Tums was the best antacid when heartburn strikes. My hypothesis was incorrect and took the longest duration of time. Since I experimented in my kitchen there could be some environmental factors that could have influenced my results air pressure, moisture, and temperature. Obviously biological factors are different in the stomach. My experiment can help people in the world because many people get confused about which antacid to buy because of the variety, but now we know Tums is the one of the best antacids for heartburns.	
Summary Statement I tested which antacid has the highest potency to cure heartburn.	
Help Received My mother supervised me during my experiment and also took me shopping for antacids.	