



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Michaela W. Levy	Project Number J1417
Project Title The Effects of Liquid Antacids on Stomach Acid	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective was to determine if extra strength antacids neutralize stomach acid faster than regular strength antacids. I think that the extra strength products will work better than the regular strength products.</p> <p>Methods/Materials Seven antacids were purchased from the store. Muriatic acid was purchased and titrated in water to obtain a pH of 2. Seven glass beakers were filled with 20ml of the acid solution. Using an eye-dropper, I placed five drops of one antacid in each separate beaker. I continued to add antacid one drop at a time until the pH reached 5. I recorded the number of drops required for each of the separate antacids. I repeated the experiment three times for each antacid.</p> <p>Results The extra strength products did work better than the regular strength products. The extra strength products required an average of 11 drops to bring the pH to 5. The regular strength products - which contain the same ingredients in smaller doses - required an average of 20 drops to bring the pH to 5. Some of the products - Alka Seltzer - worked well, requiring only 15 drops to reach the desired pH but they also contain aspirin which is not always necessary.</p> <p>Conclusions/Discussion Overall, less of the extra strength products were needed to bring the stomach pH to 5. Eleven drops verses 20 drops. The active ingredients in the products are usually the same, they are just present in higher amounts in the extra strength products. The extra strength products are also more expensive but you use less. Overall, the extra strength products did require less medicine, but they all did the job.</p>	
Summary Statement My project was to determine if there is a difference in regular strength antacid and extra strength antacids in controlling stomach pH.	
Help Received My mother helped me typed my project. She also helped me to handle the acid safely.	