



**CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY**

Name(s) Jona Victoria G. Cruz	Project Number 36146
Project Title Dissolving Alka-Seltzer Tablets in Different Liquids	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The goal of this project is to determine which liquid is the most efficient in dissolving Alka-Seltzer tablets by measuring how fast the tablets will be dissolved, with the most effective solvent determined by the shortest time.</p> <p>Methods/Materials One Alka-Seltzer tablet in four same-sized beakers, each containing a different liquid (water, Sprite, apple juice, and Lemon-Lime Gatorade). A thermometer was used to make sure that temperature was constant in the liquids across all trials and a stopwatch measured the dissolving times. The procedure was repeated five times per liquid for a total of twenty trials.</p> <p>Results Water had the fastest average dissolving time (63 seconds) while Sprite had the slowest dissolving time (86 seconds). Sprite, Tree Top Apple Juice, and Gatorade had standard deviations that indicated they had similar dissolving times. By contrast, water had a standard deviation that did not overlap those other three liquids and it produced significantly lower dissolving times.</p> <p>Conclusions/Discussion Based on the results, water was concluded to be the most efficient solvent. This is most likely due to the absence of acid within the water that is present in the other liquids. Since water is commonly used to dissolve Alka-Seltzer tablets for consumption, its efficacy was further supported through this study.</p>	
Summary Statement By comparing the times it took different types of beverages to fully dissolve a solid Alka-Seltzer tablet, I determined that water dissolved the tablets faster than the rest of the liquids in this experiment.	
Help Received Pamela Durkee (Ph.D, York School Biology Teacher) helped me revise my papers and provided me with beakers, a graduated cylinder, and a thermometer for my experiment.	