



**CALIFORNIA STATE SCIENCE FAIR  
2014 PROJECT SUMMARY**

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| <b>Name(s)</b><br>Delayna C. Corts   | <b>Project Number</b><br><b>S0604</b> |
| <b>Project Title</b><br><b>Chemistry of Baking: Can You Make Your Own Baking Powder?</b>   |                                       |
| <b>Abstract</b><br><b>Objectives/Goals</b><br>My objective is to see if you can make your own baking powder using baking soda and cream of tartar.<br><b>Methods/Materials</b><br>Materials used are muffin pans, measuring cups, timer, kitchen scale, ruler, and muffin ingredients. This includes cornmeal, water, baking powder for control, baking soda and cream of tartar. I made a "control" batch of muffins using baking powder and four batches using different amounts of baking soda and cream of tartar. I want to see which amount of each comes closest to the control batch.<br><b>Results</b><br>The third recipe with 1.5 tsp. baking soda and .75 tsp. baking soda was the test batch most similar to the control batch.<br><b>Conclusions/Discussion</b><br>Baking powder is a blend of baking soda and cream of tartar. When water is added to the mixture, a reaction causes CO <sub>2</sub> to be trapped in the muffin forming air-pockets which causes the muffin to be less dense. This is an example of acid/base chemistry. |                                       |
| <b>Summary Statement</b><br>Baking powder can be made with baking soda and cream of tartar.  |                                       |
| <b>Help Received</b><br>My mother and science teacher helped me proofread.   |                                       |