



**CALIFORNIA STATE SCIENCE FAIR  
2010 PROJECT SUMMARY**

<b>Name(s)</b> <b>Rhajaa R. Wright</b>	<b>Project Number</b> <b>J2134</b>
<b>Project Title</b> <b>Not Your Average Gelatin</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> To determine which additive makes the strongest gelatin. I predicted that citric acid was the additive that would make the strongest gelatin, due to fact it is a natural preservative that prevents decomposition in many goods.</p> <p><b>Methods/Materials</b> To test this question, I filled popsicle trays with gelatin, and added a different additive to each tray. I used a testing instrument compose of two paper cups, and a popsicle stick, and continuously dropped quarters into the cup section of the campartment of the testing instrument, until the cup rested on the top of the tray, meaning it had cut through the gelatin. Afterwords, I weighed the quarters inside of the cup, to determine how much strength it took to cut through the gelatin with the certain additive.</p> <p><b>Results</b> Sugar is the additive that created the strongest gelatin. The sugar gelatin had an average average of 118.6 grams needed to cut through it.</p> <p><b>Conclusions/Discussion</b> The additive that makes the strongest gelatin is sugar. Sugar had an average of 118.6 grams of weight needed to break its gelatin, salt had an average of 63 grams of weight needed to break its gelatin, citric acid had an average of 61.47 grams of weight needed to break its gelatin, the control gelatin had an average of 59.97 grams of weight needed to break its gelatin, and lastly powdered milk had an average of 48.18 grams of weight needed to break its gelatin. The reason I received sugar as the additive that made the strongest gelatin, is because sugar is also a preservative. Food can be stopped from rotting by using natural preservatives. Bacteria doesn't live in places with a lot of sugar, therefore there was no bacteria to secrete their own enzyme to digest the food outside. The results of my experiment are important, because they inform scientists and chefs about the effect diverse additives have on food.</p>	
<b>Summary Statement</b> This project is solemnly focused around discovering the effects different additives have on gelatin, meaning whether the additives make the gelatin stronger or weaker, and the reason they have these diverse effects.	
<b>Help Received</b> No help received while doing the project.	