



California Science Center  
**CALIFORNIA STATE SCIENCE FAIR**  
**2001 PROJECT SUMMARY**

<p><b>Your Name</b> (List all student names if multiple authors.)  <b>Alexander D. Nikssarian</b></p>	<p><b>Science Fair Use Only</b></p>
<p><b>Project Title</b> (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9)  <b>A Little Dab Will Do You, Coke=Salt=Vitamin C, As a Preservative?</b></p>	<p style="font-size: 2em; font-weight: bold;">J0315</p>
<p><b>Preferred Category</b> (See page 5 for descriptions.)  <b>16 - Plant Biology</b></p>	<p><b>Division</b>  <b>J Junior (6-8) J Senior (9-12)</b></p>
<p><b>Abstract</b> (Include Objective, Methods, Results, Conclusion. See samples on page 14.)          Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges.</p> <p>In this experiment, my objective, or goal was to see which substance variable stopped apple halves from discoloring and rotting for the greatest length of time. My hypothesis was that the refrigerated group would do the best and that lemon juice would do better overall. The materials I used in this experiment were apple trays, Pink Lady apples, salt, fresh squeezed lemon juice, Coke, 7up, honey, vinegar, nothing (control), white sugar, brown sugar, and ground vitamin C powder. I took these materials and substance variables and put 1-teaspoon on the top of the newly cut apple half. The experiment lasted for 30 days.</p> <p>○The results of this experiment agree and disagree with my hypothesis. In my hypothesis I said that lemon juice would do the best and that the refrigerated group would do far better than the non-refrigerated group. Iodized Salt and Lemon Juice were the best substance variables in the non-refrigerated group, and the worst substance variable was vinegar. In the refrigerated group the best substance variables were vitamin C powder, lemon juice, and salt and the worst variables were Coke, 7-Up, brown sugar, vinegar, and the control group.</p> <p>○My results can be interpreted and applied in various ways. One important application is that you should put pieces of apples that have been cut into the refrigerator if you want them to keep from discoloring and rotting the longest. Also, if you want to preserve an apple longer than just putting it in the refrigerator, you should coat it with salt, vitamin C powder, or lemon juice and then put it in the refrigerator. The only problem with this experiment is that it is based on pure observations and it doesn't consider what an apple coated with salt for example might taste like.</p> <p>○This experiment proves that apples rot when exposed to air. It confirms the use of salt and lemon juice as preservatives. Also, it proves that vitamin C can be used as a preservative too. This experiment relates to what previously has been known about every other substance variable used. It proves that every substance variable except the ones that have been mentioned earlier are not good preservatives.</p>	
<p><b>Summary Statement</b> (In one sentence, state what your project is about.)          To see what substance variable stops apple halves from discoloring and rotting for the longest period of time in a refrigerated and normal room temperature atmosphere.</p>	
<p><b>Help Received in Doing Project</b> (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4.          Mother helped cut apple halves and glue papers on display board.</p>	