



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Jacqueline Farrales; Danielle Vidal; Megan Westermeier</b>	<b>Project Number</b> <b>S1406</b>
<b>Project Title</b> <b>Does Beano(R) Reduce the Level of Gas Found in Human Digestion?</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> Our project tests the gas production of certain vegetables and tests to see if the food enzyme dietary supplement Beano#, reduces the level of gas. We hypothesized that if Beano# is related to the reduction of gas production, then adding Beano# to vegetables will significantly diminish the level of gas produced.</p> <p><b>Methods/Materials</b> By grinding vegetables, mixing water and yeast, and placing the mixture into a water bottle with a balloon on top, we first tested how much gas the vegetable produced on its own. Then, we created the same mixture, this time adding Beano# to it, in order to observe the amount of gas produced. Once the balloons were filled with gas, we tied them off and measured the amount of water each displaced.</p> <p><b>Results</b> Overall, we found that the trend in our results was that the balloons with the mixture containing Beano# formed more gas, thus refuting our hypothesis.</p> <p><b>Conclusions/Discussion</b> We think more gas was produced in the balloons with the water bottles containing Beano# because in our experiment the Beano# broke down the complex carbohydrates, starches, and cellulose. This allowed the yeast to devour the simpler substances with gas as the byproduct. In the human body, the Beano# would act in the same way, allowing the colon to absorb the nutrients of the simpler substances in a more efficient manner. This means that there is less substance left over for the gas-making bacteria to use, resulting in a significantly less amount of flatulence.</p>	
<b>Summary Statement</b> Our project tests the gas production of certain vegetables and tests to see if the food enzyme dietary supplement Beano#, reduces the level of gas.	
<b>Help Received</b> We would like to acknowledge Mrs. Wright, Mrs. Evashenk, and our parents for their support and guidance throughout the project.	