



**CALIFORNIA STATE SCIENCE FAIR  
2008 PROJECT SUMMARY**

<b>Name(s)</b> <b>Browly C. Do</b>	<b>Project Number</b> <b>S0406</b>
<b>Project Title</b> <b>Catobolic Pathways in Saccharomyces cerevisiae</b>	
<b>Abstract</b> <b>Objectives/Goals</b> Observing the amount of carbon dioxide released through fermentation in <i>Saccharomyces cerevisiae</i> , or baker's yeast, when white sugar, honey, and brown sugar are given. It was hypothesized that because honey is composed of mainly simple sugars the <i>Saccharomyces cerevisiae</i> will be able to consume honey more easily and thus create a greater amount of carbon dioxide. <b>Methods/Materials</b> <i>Saccharomyces cerevisiae</i> placed into test tubes and activated with water, either white sugar, brown sugar, or honey is given to the yeast. The test tube is then sealed with a one-way valve and placed into a water displacement apparatus. Carbon dioxide is caught in beakers and measured. <b>Results</b> After multiple trails, it was found that honey produced the least amount of carbon dioxide. The yeast given white sugar produced the most amount of carbon dioxide, and the yeast with brown sugar produced the second most amount of carbon dioxide. <b>Conclusions/Discussion</b> The results was ironic because I predicted that honey would produce the most amount of carbon dioxide and white sugar would create the least amount of carbon dioxide. Based on the results, it can be seen that refined sugars are better for yeast to produce carbon dioxide.	
<b>Summary Statement</b> The efficiency of different forms of glucose in the fermentation of yeast.	
<b>Help Received</b> The Carter High School science department for lending me the equipment needed to make the water displacement apparatus.	