



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Joshua Wong	Project Number J0420
Project Title Effects of Different Strains of Yeast on Rate of Fermentation and Wine Flavor	
Abstract Objectives/Goals The objective is to investigate whether the rate of fermentation and the wine flavor are affected by different strains of yeast. Methods/Materials Two different yeast strains of <i>S. cerevisiae</i> 71B-1122 and K1-V1116 (1.16 g. and 0.5g) were inoculated into 9oz 100% Dole pineapple juice and 100% Welch grape juice to determine their rate of fermentation at 20C. The control samples had no yeast. The pH of each juice was measure before inoculation and after fermentation was completed. Hydrometer was used to measure the brix, and the potential alcohol content. When the brix read 0%, the fermented juice was transferred to the refrigerator for a day before it was racked into another sanitized bottle. Ten people using Davis Score chart conducted sensory evaluation. The results determined which yeast produced a more desirable flavor. Results <i>S. cerevisiae</i> K1-V1116 fermented faster in pineapple juice, whereas the strain 71B-1122 fermented faster in white grape juice. The strain K1-V1116 produced more froth during fermentation in both juices. Both strains of yeast produced the same average pH 3.52 in wine fermented from pineapple juice. The strain 71B-1122 produced a lower average pH 3.78 than the strain K1-V1116 with an average pH 3.81. Conclusions/Discussion The yeast strain K1-V1116 produced higher desirable flavor ratings in wine from both juices, even though the rate of fermentation and pH varied.	
Summary Statement Different strains of yeast affect the rate of fermentation and the wine flavor in different juices.	
Help Received Mother helped in wine tasting with the neighbors, and Ph measurements in FSU enology lab.	