



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

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Project Title Bread Battle: Wild Yeast vs. Commercial Yeast	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of my project is to determine whether wild yeast starter contributes to a better loaf of homemade bread, comparing the results to a homemade loaf of bread made with commercial yeast. My hypothesis was that the wild yeast starter would result in overall better bread results. I decided to measure height, weight, porosity, taste, texture, and smell of the wild and commercial yeast breads to test my hypothesis.</p> <p>Methods/Materials My materials and the procedures consisted of four (4) parts: Part I: Growing the Wild Yeast; Part II: Testing the Wild Yeast; Part III: Baking the Wild Yeast Bread; and Part IV: Baking the Commercial Yeast Bread.</p> <p>Results My hypothesis was not correct. The commercial yeast bread was more successful than the wild yeast bread. The average height of the commercial yeast bread was higher than the wild yeast bread. The average porosity was also greater in the commercial yeast breads than in the wild yeast breads. The weight of the wild yeast bread was heavier than the weight of the commercial yeast bread, and I think this connects to the wild yeast bread's low porosity. The commercial yeast bread kept a consistent 908 grams through all three tests. The wild yeast bread's average was 1210.6 grams, making wild yeast bread's score on weight greater. Finally the taste, texture and smell were better from the commercial yeast bread.</p> <p>Conclusions/Discussion I figured out why my first 2 tests of wild yeast starter didn't rise well. In Part II, the balloon did not rise like it is supposed to, and I couldn't understand why until I left the bottle with the balloon overnight. In the morning, the balloon was fully inflated, which led me to conclude that wild yeast starter takes longer to digest food and produce gases than commercial yeast! My research showed the purpose of commercial yeast was not for better bread, but faster rising. At the time, I assumed that both yeasts took the same amount of time to produce gas. Now I know wild yeast needs 24-72 hours! That's one reason why the wild yeast starter did not rise as well. My conclusion is that wild yeast starter did not give as successful bread results as commercial yeast. If I changed my bread machine to a different time frame that would allow the starter to take time to produce gas, then maybe the results would have leaned more toward the wild yeast starter. Thank you for reading about my project!</p>	
Summary Statement I grew wild yeast starter and tested its rising/baking results in bread against rising/baking results in bread made with commercial yeast.	
Help Received Mother showed how to use bread machines.	