



CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

Name(s) Phoebe G. Ng	Project Number S1717
Project Title What Are You Eating?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals When people get a case of the "munchies," they go foraging in their refrigerator for last night's (or last week's!) leftovers. Although much research has been done on the longevity of a leftover, there is not much research on the most effective manner of reducing bacterial growth in a food item. This project explores the most effective treatments of leftover food items to minimize bacteria colonies grown</p> <p>Methods/Materials Prepare petri dishes (nutrition agar with chicken broth) and "leftover" simulator food dishes: one being a "leftover" soup[a liquid food source] and the other being a "leftover" pasta [a solid food source]; take samples of the leftover simulators immediately after preparation for a control. Set aside another petri dish for a control for the agar dishes. Take samples of the different methods of eliminating bacteria colonies (no treatment, refrigeration, reheating by microwave with the addition of refrigerating, reheating by stove top with the addition of refrigerating) at 3, 5, 12, 24,48, and 72 hours on both of the simulators. Count the number of bacteria colonies grown per sample within the method.</p> <p>Results "No treatment" produced the most bacteria colonies. The method that produced the least bacteria colonies was reheating by stove top(for both simulators); the method that produced the second smallest number of bacteria colonies was reheating by microwaving, it was bested by reheating by the stove top by only a small margin. Refrigeration produced the third least number of bacteria colonies.</p> <p>Conclusions/Discussion While leaving both types of leftovers at room temperature (no treatment)was certainly least effective, the real comparison was between the reheating by microwave and the reheating by stove top. While for both methods, the reheating by stove top was slightly more effective, reheating by microwave seems to be the more practical application as it is more convenient and less troublesome to implement [the treatment]. Also, with the solid food sample, the logistics of keeping the food from drying/burning further complicated the process. Simple refrigerating was adequate, but not recommended in the long run.</p>	
Summary Statement This project examines effective treatments of leftover food items in order to minimize growth of bacteria colonies.	
Help Received Sister provided moral support and assistance on the board.	