



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

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Project Title The Microbes Are Coming!	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective is to determine which type of meat/fish has the least amount of bacterial contamination after thawing over an 8-hour period.</p> <p>Methods/Materials Sterile nutrient agar was poured into sterile Petri dishes. Two-ounce portions of chicken, pork, beef, and salmon were laid out to thaw at room temperature over an 8-hour period. Every hour a sterile inoculating needle was used to swab each sample and streak the agar plate. After a 48-hour incubation period the colonies were counted and plotted against time and temperature of the samples. A total of three trials were run.</p> <p>Results Results showed that beef had the least amount of bacterial contamination. Chicken, salmon and pork followed it. Both temperature of the meat or fish and time affect levels of bacterial contamination. As both increased so did the bacterial levels.</p> <p>Conclusions/Discussion After doing my experiment, my hypothesis proved to be incorrect. I was able to achieve my objective to determine bacterial contamination when meat or fish are left to thaw at room temperature. Food safety regulations are put in place for this reason. The Department of Health states that food that has thawed must not rise above 5°C for more than 4 hours. My data helps to support why food handlers should abide by this regulation. Food should be thawed by either the refrigerator or cold-water method. Food left to thaw to room temperature allows the opportunity for bacterial contamination and possible food borne illnesses.</p>	
Summary Statement This project is about allowing meat or fish to thaw to room temperature and determining which specimen develops the least amount of bacterial contamination over time.	
Help Received Mother helped pour hot agar into petri dishes.	