



**CALIFORNIA STATE SCIENCE FAIR  
2007 PROJECT SUMMARY**

<b>Name(s)</b> <b>Thomas M. Kwak</b>	<b>Project Number</b> <b>J0509</b>
<b>Project Title</b> <b>Sunlight's Degradative Effects on Chlorine in Water</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My goal was to find if sunlight played a role in the loss of parts per million in the chlorine sample. <b>Methods/Materials</b> I had to label three flasks and three pipettes. After taking samples from each bottle I put them into the flasks and added potassium iodide and acetic acid to create the color. After titrating each flask, I found the amount of ppm (parts per million) inside each sample, and kept titrating each sample every thirty minutes. To keep it short, I used chlorine mixed with distilled water, a twenty-five milliliter burette, burette clamp, burette stand, thermometer, funnel, potassium iodide, acetic acid, sodium thiosulfate, and starch. Also I used a teaspoon, a clock, a notebook, a calculator, a pen, a cup, two droppers, a bulb, one roll of aluminum foil, four two-liter bottles, three erlenmeyer flasks, three ten millimeter pipettes, a refridgerator, string, a table, and tape. <b>Results</b> Bottle A, which was fully exposed, had lost the most parts per million during my experiment. Bottle B, which was foiled next to Bottle A, had lost barely any parts per million during the experiment. Bottle C, the bottle in the refridgerator, lost the least amount during the whole experiment. <b>Conclusions/Discussion</b> The sunlight does effect the chlorine's parts per million when the chlorine is fully exposed to the sunlight for a period of time.	
<b>Summary Statement</b> My project is showing if sunlight will effect the parts per million of chlorine when it is exposed to the sun.	
<b>Help Received</b> Dad supervised.	