



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) So-Ky R. Loren	Project Number S0518
Project Title Electrolysis	
Objectives/Goals I wanted to see what would separate more hydrogen from salt water. Would a higher concentration of salt separate more, or would a higher voltage separate more.	
Abstract Methods/Materials How I went about this project was I set up a tub and filled it with 5000 mL of water at 47 degrees Celsius. I then added 5% salt concentration to the water. I put two graduated cylinders into the salt-water solution and filled them up to their top line. I would then put two electrodes attached to copper-wire in the cylinder and attach the wire to a 1.5-volt battery. I would allow the battery to be attached for a total of five minutes. After five minutes had passed I would observe how far the level of the water had dropped in the cylinder. I kept the first trial as a base trial, and I continued this process with a 10%, 15%, and 20% salt concentration at 1.5-volts. I tested a 5% concentration with 3-volts, 4.5-volts, and 6-volts.	
Results My results showed that the increase of voltage showed a significant increase of hydrogen separated. The amount of hydrogen separated during the voltage trials was much greater than the hydrogen separated during the concentration trials.	
Conclusions/Discussion My conclusion is that an increase of voltage will separate more hydrogen than an increase in concentration (of salt).	
Summary Statement I separated hydrogen from salt water.	
Help Received My teacher answered some questions, and I used my school's limited resources.	