



# CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

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<b>Project Title</b> <b>Electrolysis of Water</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives</b> The objective of this study is to determine if the amount of electrolytes affect the rate of production of hydrogen gas during the process of electrolysis.</p> <p><b>Methods</b> Water Salt (electrolyte) 9 volt battery Push pins (electrodes) Container Test tubes Timer</p> <p><b>Results</b> Results were collected on five different tests. Each test was taken with increased amount of electrolytes which produced more hydrogen as more electrolytes were added. This was not the case with oxygen.</p> <p><b>Conclusions</b> After completing my tests, I determined my hypothesis was partially correct. Each test was taken with increased amount of salt. The salt increase created more amounts of hydrogen produced during the test. However, with two hydrogen atoms bonded with one oxygen atom to create a water molecule, it would be reasonable to assume that the hydrogen produced would be twice the amount of the oxygen produced. However, this did not occur. As I reviewed the data chart and data table, I noticed that the test tube did not collect a lot of oxygen. The only large amount of oxygen readable was on one of my tests which still did not add up to two parts hydrogen and one part oxygen.</p>	
<b>Summary Statement</b> By simply adding table salt and electricity to water, I will make hydrogen, which is a clean fuel source of renewable energy.	
<b>Help Received</b> My dad help me with the layout after I researched the techniques and topic on the Internet.	