



**CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY**

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Project Title Flames, Flames, and More Flames	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of our project is to find the most flammable chemical between nail polish, rubbing alcohol, and hand sanitizer. We wanted to test and show people how dangerous some household chemicals are. We hypothesized that rubbing alcohol would be the most unsafe because it has the lowest ignition temperature.</p> <p>Methods/Materials First we measured one ounce of each chemical. We put each chemical in the pans individually, and bleached the pan in between uses. To ignite the chemicals we used a barbecue lighter. We used a stopwatch to measure how much time passed between contact with the open flame and total ignition of the chemical.</p> <p>Results Hand Sanitizer lit the quickest at .1 second. Rubbing alcohol was the second fastest to ignite at .74 second, and nail polish was the slowest at 1.32 seconds. Our hypothesis was proved wrong.</p> <p>Conclusions/Discussion Hand sanitizer was the quickest to ignite because it contained the highest concentration of the chemical Isocerphyl. These findings are important because people use these chemicals every day and likely don't know how dangerous they are.</p>	
Summary Statement This project researched the quickest household item to ignite when exposed to an open flame.	
Help Received	