



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Avery L. Smith	Project Number J0533
Project Title Superglue Girl to the Rescue! Will Adding Color during Superglue Fuming Enhance Latent Prints?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My goal with this project was to find out if adding color in a liquid form during fuming would enhance the visibility of latent prints using the Superglue or Cyanoacrylate Fuming Method.</p> <p>Methods/Materials Five acrylic frames were prepared with a latent print from the same subject. Five test groups were set up with a frame, 1 .07 oz tube of Super Glue (cyanoacrylate ester), 1 1ml glass dropper, 1 aluminum foil 9x8, 1 10 x 10 x 10 inch cardboard box. Test 0 was the test standard to compare other prints and was fumed using the standard Superglue Fuming technique with no color added. Test #1 was Lightstick fluid (green), #2 was Glo-It glow in the dark paint (yellow-green), #3 was Glass Stain (white), and #4 was Highlighter Ink (pink). The method of Superglue Fuming I used was heating a coffee warmer to 150°, placing Superglue with color liquid added in a foil test area on coffee warmer, placing test frame 3 inches from the coffee warmer and covering with a cardboard box for 10 minutes. Each test was examined in a black painted box, with the naked eye, and a magnifying glass with a black light attached.</p> <p>Results Test # 4 with the Highlighter Ink (pink) handprint is very visible, print lines are readable and glow with the black light. Points of identification were easy to match. Best overall print for visibility and comparison.</p> <p>Conclusions/Discussion The tests proved my hypothesis that the Glo-It glow in the dark paint would enhance the visibility of latent prints incorrect. The pink Highlighter fluid had the best results. The findings lead me to believe that the Glow-It paint was too thick of fluid to mix well with the Superglue. The Glass Stain was too runny and white might not have been the best color to use. The Lightstick fluid was a close second in visibility. I had fun doing these experiments and discovered that by adding something as simple as a hot pink highlighter will enhance the visibility of a latent print.</p>	
Summary Statement My experiment questions whether adding color in a liquid form to the Superglue during the fuming process will enhance the visibility of latent prints.	
Help Received Jeremy & Cari Smith, (Parents) helped with getting supplies and watched me fume. Cal-Draulics, Inc. (Grandma & Grandpa Johnson) For allowing me to use their work to do my experiments. Pam Smith (Grandma) for helping with supplies, and Stan Cox (Grandpa) for helping with supplies.	