



**CALIFORNIA STATE SCIENCE FAIR  
2003 PROJECT SUMMARY**

<b>Name(s)</b> <b>Ryan D. Anders</b>	<b>Project Number</b> <b>J0999</b>
<b>Project Title</b> <b>Are the Arsenic Levels in Wood Products Hazardous to Our Health?</b>	
<b>Objectives/Goals</b> Most of the Arsenic pressure treated wood tests will be more than 10 parts per billion (ppb) which is the current Government Standard. Some tests should be more than the arsenic levels recommended as the Government Standard. At these levels it would be considered hazardous to our health.	
<b>Abstract</b> <b>Methods/Materials</b> 1.Keep a detailed journal on all pressure treated wood tests. 2.Make an Arsenic level graph chart. 3.Ordered an Arsenic test kit from the Hach Company. The kit contains: 100 testing strips, 100 packages Reagent #1 (Sulfamic Acid), 100 Reagent #2 (Zinc), two testing vials, one each Arsenic color chart, distilled water, and Johnson & Johnson pads size 1 1/2 inch. 5.Take samples at lumbar yards such as Home Depot, Lowes Home Centers, Terry's Lumber, taking samples of picnic tables, parking lot poles, and children's play equipment, and wood products in nurseries such as tree and plant stakes. 6.Find Arsenic pressure treated wood. 7.Take Johnson & Johnson pads while wearing surgical gloves and rub the Arsenic treated wood within approximate one square foot for one minute. 8.Place the Johnson & Johnson pad inside vial and fill to fill line with distilled water. 9.Lift the top of the vial and insert test strip with pad side down on. 10.Add Reagent #1 (Sulfamic Acid). 11.Add Reagent #2 (Zinc) 12.Swirl and mix. Do not shake or invert vial. 13.Wait for 20 minutes 14.Pull out test strip. 15.If Arsenic is present in the vial it will react to the gases produced by mixing of Reagent #1 and Reagent #2. 16.Compare color of test strip to color of Hach Company chart to find Arsenic levels from 0 to 500 parts per billion and record in journal. 17.Perform the test at all three lumber departments of the stores mentioned above, telephone poles, wood patios, and wooden picnic tales. 18.Analyze the data from graph chart and determine if the Arsenic pressure treated wood that we handle	
<b>Summary Statement</b> This project is testing how much arsenic is in wood products that we use everyday.	
<b>Help Received</b> My father drove me to testing sites and my mother helped with the backboard.	