



California Science Center  
**CALIFORNIA STATE SCIENCE FAIR**  
**2001 PROJECT SUMMARY**

<b>Your Name</b> (List all student names if multiple authors.) <b>Arturo Luna</b>	<b>Science Fair Use Only</b>  <h1 style="margin: 0;">J1416</h1>
<b>Project Title</b> (Limit: 120 characters. Those beyond 120 will be ignored. See pg. 9) <b>Brake Fluid Batteries</b>	<b>Division</b> <u>X</u> Junior (6-8) _ Senior (9-12)
<b>Preferred Category</b> (See page 5 for descriptions.) <b>4 - Chemistry</b>	
<b>Abstract</b> (Include Objective, Methods, Results, Conclusion. See samples on page 14.) Use no attachments. Only text inside these boxes will be used for category assignment or given to your judges.	
<p>The whole point of my project was to develop a method by which I would be able to evaluate precisely the condition of brake fluid. This was crucial because many evaluation processes are not very practical. In my procedure I simulated the brake lines of cars with various amounts of water in them along with the brake fluid and measured their resistances and voltages. My research had to include many topics, such as electrolytes, ions, brakes, brake fluid, water absorption, resistance, voltage, and various other topics. After recording all of my work I analyzed my data. I found out that my hypothesis was correct and graphed my work. I tried to find an equation for my data using a program called Mat Lab and I found out that I had to find the best fit line. I can conclude from my project that I now have a precise way to evaluate brake fluid, and that someday this method may very well set the standards for brake fluid evaluation.</p>	
<b>Summary Statement</b> (In one sentence, state what your project is about.) throughCurrently, there exists no practical method to evaluate brake fluid and through my project, I was able to devise a method to evaluate brake fluid with exact results.	
<b>Help Received in Doing Project</b> (e.g. Mother helped type report; Neighbor helped wire board; Used lab equipment at university X under the supervision of Dr. Y; Participant in NSF Young Scholars Program) See Display Regulation #8 on page 4. Techer Helped Running Data Software	