



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Garen Gevorkian	Project Number J0507
Project Title Verification of Avogadro's Law	
Abstract Objectives/Goals The purpose of my project is to see if equal volume of gasses at the same temperature and pressure contain equal number of moles (Avogadro's Law) Methods/Materials I poured the liquid reactant in the plastic bottle, hold the bottle horizontal and slowly added the solid chemical, capped the bottle with a syringe inserted in the stopper and turned it upright, for chemical reaction to start. I collected 135mL of the gas produced and find the mass. I used different reactants to produce different gases. I produced oxygen, carbon dioxide, ammonia, and hydrogen. I repeated the trials 3 times for each gas, find the average mass. Knowing the mass, and using the RAM (relative atomic mass) I found the number of moles. Number of moles for different gases was very close, but not identical. Results The number of moles for different gasses were not identical, but I was amazed that they were very close. Conclusions/Discussion I think one of the reasons to not get exactly the same number of moles for different gasses, was the precision of the scale I used. The scale precision was 100ths of gram, with 1000ths of gram I could have better reading. Also maintaining exactly the same pressure, needed more complicated equipment that I didn't have access to.	
Summary Statement Finding number of moles for equal volume of gasses at the same temperature and pressure.	
Help Received Mrs. Gevorkian, taught me all the chemical equations, and everything that was needed for the project. Mr. Ira from Tri-EssScience, helped me with the chemicals.	