



CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

Name(s) Michael A. Cornacchia	Project Number J1204
Project Title Hard Wood vs. Soft Wood: Do Ashes from Certain Woods Put Higher Amounts of Particulates in Our Air?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of my science project is to determine if ashes from different types of woods put different levels of particulates into the air. We know that air pollution is a problem and according to the Harvard School of Public Health about 4% of deaths in the United States can be traced back to air pollution. This is one of the reasons I wanted to see if ashes from different types of wood put more particulates into our air.</p> <p>Methods/Materials I collected different types of wood (cherry,oak,redwood/cedar and pine). I burned each wood seperately to collect the ashes and than transferred the ash to my 18x18x36 apparatus. I placed lint roller tape on a removable side piece within the apparatus. I than dropped a 5 pound weight into the ashes and let them scatter for a period of 2 minutes. I removed the tape and repeated this trial 9 more times for each type of ash. I than recorded the color, density and height of ash dispersed for each trial. When I reference density in this project I am referring to the compactness of the ash on the tape. Also when discussing height of dispersement I am referring to the dissemination of ash as it travels upward.</p> <p>Results After measuring the density and height of ash dispersed from each trial; a total of 40 trials, 10 for each type of wood. I found that the measurements were different for each type of ash, it didn't seem to matter if the ash came from hardwood or softwood.</p> <p>Conclusions/Discussion Through testing I discovered that ashes from each type of wood did put particulates in the air. I also discovered that I couldn't make a general statement that ashes from hardwoods will put more particulates into the air, because the measurements were not the same for each type of ash. I feel further investigation is needed to test different variables that may affect ash dispersement. I also think it is necessary to find a sustainable wood or wood product that leaves little or no particulates in the air, to reduce air pollution and help the environment.</p>	
Summary Statement The objective of this project is to determine if ash from different types of wood put more particulates in the air which can affect our health and the environment.	
Help Received Mr. Carl Gong provided guidance; My parents helped with photographs, building apparatus and burning of wood.	