



**CALIFORNIA STATE SCIENCE FAIR  
2006 PROJECT SUMMARY**

<b>Name(s)</b> <b>Misha Y. Khan</b>	<b>Project Number</b> <b>J1522</b>
<b>Project Title</b> <b>Viscosity's Effect on Liquid Droplets</b>	
<b>Objectives/Goals</b> This project was done in order to determine whether the property of fluids, viscosity, has an effect on the shape of a liquid's droplet. The hypothesis was viscosity affects the shape of a liquid's droplets. It also stated that liquids with higher viscosities have longer droplets and longer necks, because they take more time to separate and stretch out before dropping.	
<b>Abstract</b> <b>Methods/Materials</b> <ol style="list-style-type: none"><li>1. A stopwatch</li><li>2. A digital camera with multi-burst function</li><li>3. Straws cut into 5cm pieces</li><li>4. Graph paper</li><li>5. Water</li><li>6. Oil</li><li>7. Maple syrup</li><li>8. Chocolate Syrup</li><li>9. milk</li><li>10. Isopropyl</li><li>11. A ruler</li></ol> <p>The viscosity was determined by passing the liquid through a five centimeter straw and timing how long it takes to cover the distance. This gave a general idea of the viscosity of each liquid, because the longer a fluid takes to flow through the straw, the higher its resistance to flowing. Thus, its viscosity is higher. A sheet of graph paper was taped to the wall with the ruler taped to it. Each liquid was squeezed into a dropper and dripped constantly. While the drops were dripping, pictures were taken from a digital camera that was set on multi-burst function.</p>	
<b>Results</b> The results of this project proved that the viscosity of a liquid does not affect the size or shape of its droplet so that the liquid with a higher viscosity has a longer neck.	
<b>Conclusions/Discussion</b> My project could have been affected by human error, timing miscalculations, space provided, air pressure, and inaccurate calculations.	
<b>Summary Statement</b> My project experiments to find out whether the viscosity of a liquid has an affect on the shape of its droplet.	
<b>Help Received</b> Sister helped time, father helped take pictures	