



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Gustavo A. Chavez	Project Number J1307
Project Title What Are the Effects of Different Humidity Levels on Mold Growth?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My objective is to prove if humidity really effects mold growth and how it effects it. If it's by making the mold grow faster of making it grow sooner.</p> <p>Hypothesis The higher the humidity the faster the mold will grow will grow to a certain level. Once it has reached a humidity point it will not grow as fast.</p> <p>Methods/Materials 1. Fill pot with water halfway of height of agar containers; 2. Put pot on range and put on medium heat wait until it is boiling; 3. Put Agar containers in with caps off and wait until it is melted; 4. When agar is melted gets your Petri dishes and pours evenly into the dishes; 5. Wait until agar has hardened and when ready get your cotton swabs and you test tubes filled with rhizopus; 6. inoculate the dishes; 7. When you finish with all thirty-six put them in their corresponding boxes. Six to each box and close the boxes; 8. Quickly grab the towels and soak them thoroughly. Pick towels that soak approximately 400 ml; 9. Put towels in each of the boxes except for one; 10. In each box put a thermometer and a hot pad; 11.Each 12 hours record mold growth, temperature, and humidity with hygrometer; 12. After growth dispose dishes.</p> <p>Results The box with an average humidity of 97% started growing at 48 hours and at 108 hours all specimens reached 100% coverage. The box with and average humidity 88% specimens started growing 60 hours and at 132 hours all the specimens reached 100% . The box with an average humidity of 80% started growing 84 hours and at 156 hours the specimens all reached 100 % coverage. The box with an average humidity of 68% the specimens started growing at 84 hours and at 168 hours the specimens reached 100% coverage.the box with an average humidity of 55% the specimens started growing at 96 hours and reached 100% coverage at 180 hours. The box with an average humidity of 38% the specimens started growing at 108 hours and reached 100% coverage at 192 hours.</p> <p>Conclusions/Discussion Knowing information about mold can be useful because there is wide variety of mold species that can be dangerous to a human being. If you know how it grows you can prevent it. Humidity was the variable that I was testing and plays a major growth in mold growth. The higher the humidity the faster the mold grows which was my hypothesis. But it really effects how soon it#s starts to grow rather than how fast the mold grows.</p>	
Summary Statement Growing mold in different humidity levels and charting their growth rates and patterns.	
Help Received Teacher ordered Rhizopus, Agar and sterile petri dishes.	