CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY

Name(s)
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Project Number
J1229

Project Title
Gases Are Hot!

Abstract

Objectives/Goals
What is the rate of transmission of ultraviolet energy in atmospheric Greenhouse Gases such as Methane, Oxygen, Carbon Dioxide, Atmospheric Air, and Humdified Air?

Methods/Materials
Fill 10 balloons with a pure sample of Oxygen to a constant volume, measure initial temperature with electronic heat gun, expose for thirty minutes to an ultraviolet light source at a constant one meter distance, record secondary temperature as a measurnment of absorbed energy. Repeat 10 times with samples of Carbon Dioxide, Methane, Atmospheric Air, and Humidified Air. Measure volume change in all samples as a representation of molecular activity.

Results
Initial tests showed the hightest rates of energy absorption occured in Methane, followed by Humidified Air, then Carbon Dioxide, Dry Air, and lastly Oxygen. Volume/molecular activity tests are ongoing.

Conclusions/Discussion
The gasses tested are components of the atmosphere and The Greenhouse Gas effect. The author concludes that Methane and Humdified Air have great potential to absorb and trasmit ultraviolet energy within our atmosphere.

Summary Statement
This project tested how Oxygen, Methane, Carbon Dioxide, Atmospheric Air, and Humidified Air absorb ultraviolet energy.

Help Received
Parents obtained pure gases that were tested.