

# CALIFORNIA STATE SCIENCE FAIR 2009 PROJECT SUMMARY

Name(s)

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**Project Number** 

S2005

#### **Project Title**

# **UV Radiation and Plant Pigmentation**

#### Abstract

#### **Objectives/Goals**

To find out the effects that UV light has on plant growth, development, and pigementation.

#### **Methods/Materials**

Materials Used

- -Spectrophotometer
- -Spinach
- -Cuvettes
- -DPIP
- -Phosphate buffer
- -UV Bulb/Lamp
- -Distilled water
- -Blender
- -Cheese Cloth
- -Stop watch
- -Tissues
- -Ice
- -Hot plate
- -Large Beakers
- -Foil

### Results

The spinach that was exposed to UV light displayed a lower transmittance than the spinach that was exposed to regular sunlight.

#### **Conclusions/Discussion**

My hypothesis was correct because the spinach that was exposed to the UV lamp had a lower transmittance percent compared to the spinach that had been exposed to regular sunlight. This means that the chloroplast became inactive which halts photosynthesis. Therefore, UV light is more degenerative than regular light.

#### **Summary Statement**

My project tests the effects of UV raditions on plant pigmentation and development.

## **Help Received**

My school let me borrow materials and a spectrophotometer.