

CALIFORNIA STATE SCIENCE FAIR 2002 PROJECT SUMMARY

Name(s)

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Project Number

S0424

Project Title

Can Paper Chromatography be Used to Identify Different Species of Plants?

Objectives/Goals

Abstract

The objective is to determine if plant pigments were distinctive for each species.

Methods/Materials

Leaves of different plants were obtained. Residue from leaves was applied onto strips of chromatography paper by placing the leaf on top of the strip of paper and rolling a coin back and forth on top of the leaf. This step was repeated around ten times for each leaf. Once the strips were prepared, chromatographs were run with a solvent containing 9 parts ether to 1 part acetone. The test ran for 30 minutes on the shorter strips and up to an hour and a half on the longer strips.

Results

The results on the same kind of leaves did not remain constant. Multiple test were performed and the pigments did not deposit at the same spot.

Conclusions/Discussion

Using chromatography to recognize plant pigments is not possible. The test produced differnt results every time the same leaf was run.

Summary Statement

Using paper chromatography on plant leaves to see if a recognizable pattern would appear every time.

Help Received

Mr. Jones gave me the name of the speices of plants that I used.