

Ap bio lab

[Science](#), [Chemistry](#)



However, the pigments will move up the chromatography paper at different rates because they are not equally soluble to the solvent. Photosynthesis has two main stages, the light-dependent reaction and the light-independent reaction. Light-independent reactions occur only in the light and produce ATP and NADPH which are then used by the light-dependent reactions to fuel its process. Part B of this lab involves differing variables of light and carbon dioxide and the effects they have on the rate of photosynthesis.

In this experiment, the rate of photosynthesis will be assessed through the floating of leaf disks in solution. III. Hypothesis, Materials, and Method part A: Hypothesis: The plant will produce varying bands of yellow and green pigment along the chromatography paper. Part B: Hypothesis: The more light or carbon dioxide there is, the faster the rate of photosynthesis. IV.

Variables Independent Variable: Colors of the bands Dependent Variable: Plant pigment part e: Independent Variable: Sodium bicarbonate solution Dependent Variable: Time each disk took to float

Control: Water/Soap solution without carbon dioxide V. Data and Observations. Part A: Plant Pigments and Chromatography Observations: The plant produced five visible bands of color: dark green, light green, green, light yellow and dark yellow. All of the bands were the same distance apart except for band 4 and the solvent front which were both 6 mm apart. Data:

Band #	Distance(mm)	Band Color
1	1.5 mm	dark brown
2	2.5 mm	light green
3	3.5 mm	green
4	4.5 mm	light yellow
Solvent Front	6.0 mm	dark yellow

Part B: Photosynthesis