

Lab 4 - PLANT PIGMENTS & PHOTOSYNTHESIS

Exercise 4A: Plant Pigment Chromatography (pages 45 - 48)

READ lab introduction page 45-46.

LAB:

1. Use the chromatography bottles and add approximately 1 cm of chromatography solvent to the bottom. CAP.
2. Use the strips of chromatography paper, and draw a faint pencil line 1.5 cm from the bottom.
3. Use a coin to extract chlorophyll from the spinach leaves onto the pencil line. (Roll the coin across the top of the leaf over the pencil line 8-10 times using a new portion of the leaf each time.)
4. Place the chromatography strip into the chamber so that the chromatography liquid is BELOW the chlorophyll on your pencil line.
5. RECAP and do not disturb the bottle until the chromatography front is about .5 cm from the top.
6. Remove the strip & IMMEDIATELY MARK THE SOLVENT FRONT WITH A FAINT PENCIL LINE.
7. Measure the migration distance in millimeters (mm) of each pigment from its starting point (your first pencil line) to its highest migration point. Also measure the total migration distance for the chromatography solvent.
8. Draw Data table 4.1 into your notebook and record the migration distances and colors.

ANALYSIS:

1. Draw and complete table 4.2 and answer questions 1-3 on pages 47 & 48.

Exercise 4B: The Light Reaction of Photosynthesis

READ lab 4B introduction of pages 48 & 49.

LAB:

1. Use the sample data in Table 4.4 percent transmittance to analyze the effect of various environmental conditions on chloroplasts.

ANALYSIS:

1. Graph the results being use to label the x and y axis.
2. Write out and answer questions 1-8 on pages 52 & 53.
- 3.

Cuvette	Time (minutes)			
	0	5	10	15
2 unboiled/dark	31.5	32.7	35.7	35.2
3 unboiled/light	32.7	54.5	63.7	65.1
4 boiled/light	32.7	32.9	33.1	32.5
5 no chloroplasts/light	31.0	31.0	31.0	31.0

Write TWO SEPARATE REPORTS for lab 4. The first report will be on plant pigment chromatography, and the second will be on the light reaction of photosynthesis.

Plant Pigments And Photosynthesis Lab Report

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Plant Pigments And Photosynthesis Lab Report:

A Unit on Photosynthesis and Cellular Respiration for Secondary Biology Students Kathy R. Pollock,1998 **Subject Index to Unclassified ASTIA Documents** Defense Documentation Center (U.S.),1960 **U.S. Government Research Reports** ,1963 *As If on Cue* Marisa Kanter,2023-10-24 It seems that aspiring playwright Natalie and musician Reid have been in competition all their young lives but when they are forced to compete for scarce school budget dollars they embark on an all out prank war which backfires now they are forced to cooperate pool their talents and ambitions to produce a school musical and not only is cooperation an unfamiliar role but they are suddenly starting to have feelings for each other

Learning and Understanding National Research Council,Division of Behavioral and Social Sciences and Education,Center for Education,Committee on Programs for Advanced Study of Mathematics and Science in American High Schools,2002-09-06 This book takes a fresh look at programs for advanced studies for high school students in the United States with a particular focus on the Advanced Placement and the International Baccalaureate programs and asks how advanced studies can be significantly improved in general It also examines two of the core issues surrounding these programs they can have a profound impact on other components of the education system and participation in the programs has become key to admission at selective institutions of higher education By looking at what could enhance the quality of high school advanced study programs as well as what precedes and comes after these programs this report provides teachers parents curriculum developers administrators college science and mathematics faculty and the educational research community with a detailed assessment that can be used to guide change within advanced study programs *Analytical Methods in Chemistry - Lab* Mr. Rohit Manglik,2024-03-04 EduGorilla Publication is a trusted name in the education sector committed to empowering learners with high quality study materials and resources Specializing in competitive exams and academic support EduGorilla provides comprehensive and well structured content tailored to meet the needs of students across various streams and levels

The Impact of Formative Assessment Techniques on the Instruction of the High School Biology Units of Photosynthesis and Cellular Respiration Shanna Fawn Tury,2010 *Title Announcement Bulletin* ,1955 **Biology** Sylvia S. Mader,2004 This text covers the concepts and principles of biology from the structure and function of the cell to the organization of the biosphere It draws upon the world of living things to bring out an evolutionary theme The concept of evolution gives a background for the study of ecological principles **Oceanography** ,1963 *Proceedings of Technical Meetings* U.S. Atomic Energy Commission,1959 Oceanography Defense Documentation Center (U.S.),1963 *Solar Energy Update* ,1983 **Scientific and Technical Aerospace Reports** ,1984 *Bibliography of Scientific and Industrial Reports* ,1962 *Current Catalog* National Library of Medicine (U.S.),1970 First multi year cumulation covers six years 1965 70 **Nuclear Science Abstracts** ,1967 **Cumulated Index Medicus** ,1970 Basic Life Science ,1964 **Life in the Lab** Humphrey,1997-11

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