Spectrophotometer Experiment

This document outlines the experiment conducted using a spectrophotometer to measure the absorbance of various materials across different wavelengths. The experiment includes data collection, calibration, and results visualization.

Experiment Details

1. **Objective**: To measure the absorbance of various materials using a spectrophotometer and to analyze the results.

2. **Materials**:

- Spectrophotometer

- Light Source (LEDs)

- Sample Materials

- Potentiometer

- LDR (Light Dependent Resistor)

- Data Collection Software

3. **Method**:

- Set up the spectrophotometer.

- Calibrate using known reference materials.

- Measure the voltage with and without material at different wavelengths.

- Collect and store data for analysis.

Results

The results of the experiment will be recorded in a table format, showing the voltage readings with and without the material for various wavelengths.

Additionally, graphs will be generated to visualize the data.

Conclusion

The experiment successfully demonstrated how absorbance can be measured using a spectrophotometer. The data collected will aid in understanding the absorption characteristics of different materials.