horizontal line

#### **Chromatography Lab Report**

#### **1. Title**

* **Title**: Specify the type of chromatography used (e.g., Gas Chromatography, Liquid Chromatography).

#### **2. Abstract**

* A brief summary of the chromatography experiment, including the purpose, method, and key findings.

#### **3. Introduction**

* **Objective**: State the purpose of the chromatography experiment.
* **Background**: Briefly explain chromatography and the specific technique used.
* **Hypothesis**: Mention what you expect to observe based on the experiment.

#### **4. Materials**

* List of materials and reagents used, including:
  + **Chromatography column** or **instrument type** (e.g., gas, liquid, or paper chromatography).
  + **Solvents and reagents** used in the mobile phase.
  + **Samples**: Specific details of the sample being analyzed.

#### **5. Procedure**

* A step-by-step description of how the chromatography experiment was conducted, including:
  + **Preparation** of the stationary and mobile phases.
  + **Sample Injection**: Describe how the sample was injected or applied to the chromatography system.
  + **Flow Rate** and **Temperature**: Parameters of the mobile phase flow and temperature control.

#### **6. Results**

* **Chromatogram**: Include the chromatogram obtained (graph showing peaks for different compounds).
* **Retention Time**: Mention the retention times for the components separated.
* **Peak Areas/Heights**: Quantify the components based on peak areas or heights.
* **Tables and Graphs**: Present data in tables or graphs to illustrate your results.

#### **7. Discussion**

* **Analysis**: Interpret the results, explaining how the different compounds were separated based on their retention times.
* **Error Analysis**: Discuss any errors or discrepancies in the chromatography process.
* **Comparison**: Compare the results with expected values or previous data, if available.

#### **8. Conclusion**

* A summary of the findings, confirming or rejecting your hypothesis.
* Explain the significance of the results in relation to the experiment's objectives.

#### **9. References**

* List any scientific papers, textbooks, or manuals that were referenced in preparing the lab report.

#### **10. Appendices**

* Include any additional chromatograms, raw data, or calculations relevant to the experiment.