**Year 11 ATAR Chemistry**

Practical Assessment – Validation Test

Chromatography

NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TEACHER: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ MARKS: \_\_\_\_\_ /20

**Answer each question in the space provided.**

1. Describe the two following applications of chromatography. (2 marks)
2. Normal-phase chromatography:

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1. Reverse-phase chromatography:

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1. What is the purpose of the stationary phase in chromatographic separations? (1 mark)

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1. What is the purpose of the mobile phase in chromatographic separations? (1 mark)

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1. Complete the following table: (6 marks)

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| --- | --- | --- |
| **Analytical technique:** | **Composition of mobile phase:** | **Composition of stationary phase:** |
| Thin-layer chromatography |  |  |
| Gas chromatography |  |  |
| High performance liquid chromatography |  |  |

1. Label the following items in the diagram of a gas chromatography instrument. (4 marks)

Diagram

Description automatically generated

1. What are two applications of high-performance liquid chromatography? (2 marks)

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| **1.** |
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| **2.** |
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1. What is a detector that is used for the following techniques? (2 marks)
   1. Gas chromatography:

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* 1. High-performance liquid chromatography:

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1. Explain how retention times in chromatographic techniques can be used to determine the composition of mixtures. (2 marks)

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**End of Validation Test**