Chemical Analysis – Triple

Content	RAG
Describe what a pure substance is.	
Explain how melting and boiling point data can be used to identify pure and impure substances.	
Use melting and boiling point data to distinguish pure substances from impure substances.	
Describe what a 'pure substance' can mean in everyday language.	
Describe what a formulation is, how formulations are made & give examples of formulations.	
Identify formulations given appropriate information.	
State the uses of chromatography.	
Describe how paper chromatography is carried out, and explain how it works.	
Interpret chromatograms and calculate Rf values.	
Explain how Rf values can be used to identify substances.	
Describe and explain the test for hydrogen, oxygen, carbon dioxide and chlorine	
Interpret the results of gas tests.	
Describe how to test for metal ions using flame tests.	
Identify the following metal ions from the colours that their compounds produce in flame tests: lithium, sodium, potassium, calcium and copper.	
Explain why it can be hard to identify metal ions in a mixture.	
Interpret the results of flame tests.	

Content	RAG
Describe and explain how to test for metal ions using precipitation reactions and state the name of the precipitates formed.	
Describe the appearance of the precipitates that are formed from the reactions of aluminium, calcium and magnesium ions.	
State which of the above precipitates dissolves in excess sodium hydroxide.	
Identify copper (II), iron (II) and iron (III) ions from the colours of precipitates that they form.	
Interpret the results of metal hydroxide tests.	
Describe and explain how to test for carbonate ions.	
Interpret the results of carbonate tests.	
Describe and explain how to test for halide ions.	
Identify halide ions in solution from the colours of precipitates formed.	
Interpret the results of halide tests.	
Describe and explain how to test for sulfate ions.	
Interpret the results of sulfate tests.	
Describe the advantages of using instrumental methods over chemical tests.	
Describe the how flame emission spectroscopy is carried out.	
Explain what a flame emission spectrum shows and how it can be used.	
Interpret flame emission spectroscopy data.	