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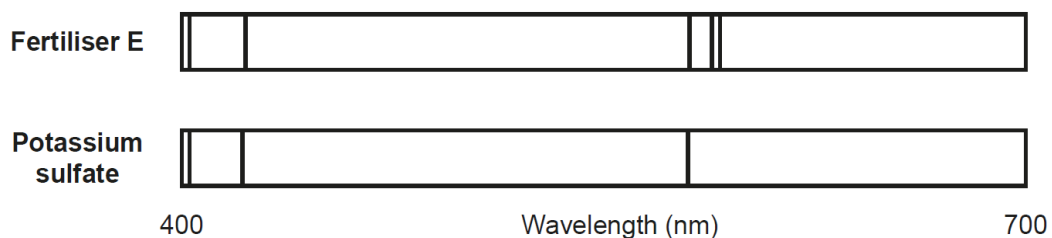
GCSE Chemistry B (Twenty First Century Science)

J258/03 Breadth in chemistry (Higher Tier)

Question Set 29

- 1 Amir is given a solution of potassium sulfate, which can be used as a fertiliser.
- (a) He carries out a flame test on the solution.
- (i) Describe how Amir does the flame test. [3]
- (ii) What colour does Amir see when he carries out the flame test on potassium sulfate? [1]
- (b) Write a **balanced symbol** equation for the reaction of potassium sulfate (K_2SO_4) solution with barium chloride ($BaCl_2$) solution. Show state symbols. [3]
- (c) Amir has a sample of another fertiliser, **Fertiliser E**.

He looks at the emission spectra of **Fertiliser E** and potassium sulfate:



- (i) What can Amir conclude about **Fertiliser E** from these emission spectra? [1]
- (ii) Compounds can be analysed using a flame test **or** an emission spectrum. State **one** advantage of using an emission spectrum to analyse compounds. [1]

Total Marks for Question Set 29: 9

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