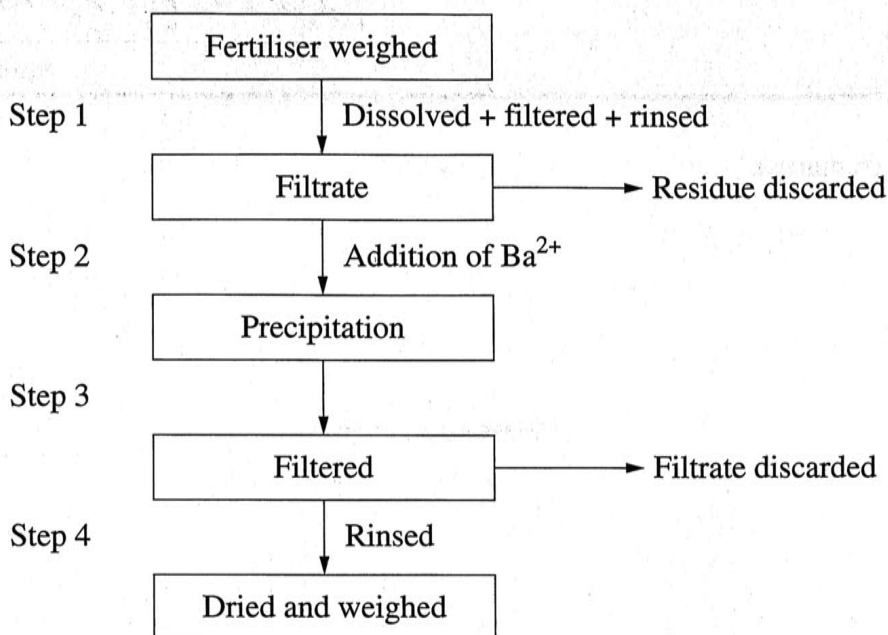


**Question 29** (6 marks)

The flowchart shown outlines the process used to determine the amount of sulfate present in a sample of lawn fertiliser.



(a) What assumptions were made and how do these affect the validity of this process? 3

1. They discarded the filtrate instead of weighing and drying it until constant.  
 2. This affects the overall standard weight.  
 The assumption that was made was that they thought that the filtrate was weigh correct instead of double checking it.

(b) It was found that 4.25 g had a sulfate content of 35%. 3

What is the mass of the dried precipitate at Step 4? Include a chemical equation in your answer.

$\text{BaSO}_4$   
 $\text{Ba}^{2+} + \text{SO}_4^{2-}$