

Objectives

To find the volume of one mole of $\text{CO}_2(\text{g})$

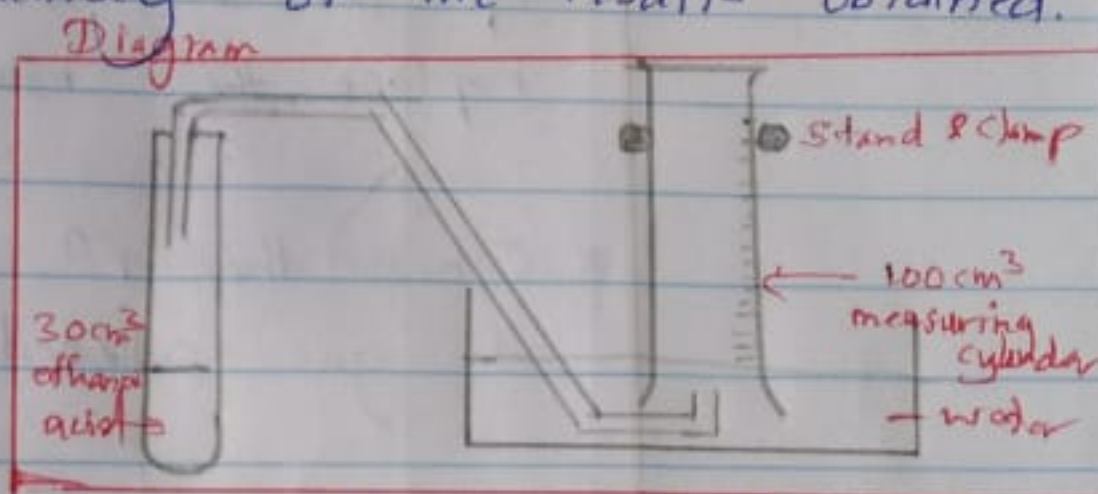
Measuring of the molar volume of a gas

Method (1)

- This experiment provides opportunities
 - to consider procedural errors and measurement uncertainties
 - to identify changes that could be made to improve the accuracy of the results obtained.

Equipment

- boiling tube
- stand and clamp
- bung fitted with delivery tube to fit boiling tube
- Water bath of gas collection
- 100 cm^3 measuring cylinder
- 50 cm^3 measuring cylinder
- test tube
- mass balance (2 d.p.)
- 1 mol dm^{-3} ethanoic acid
- Powdered calcium carbonate



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1. Set up the apparatus to capture and measure gas evolved from a r° in the boiling tube

2. Place 30 cm^3 of 1 mol dm^{-3} ethanoic acid in the boiling tube

There are 3 measurements taken

1. the volume of ethanoic acid using a 50 cm^3 measuring cylinder
2. the mass of CaCO_3 using a two decimal place balance
3. the volume of gas using a 100 cm^3 measuring cylinder.