

Preparation and standardization of H₂SO₄

AIM: To prepare and standardize 0.1 N H₂SO₄.

APPARATUS: burette, pipette, conical flask etc.

CHEMICALS: 0.1 N H₂SO₄, 0.1 N sodium carbonate solution, methyl orange.

PRINCIPLE: Standardisation of sulfuric acid is an example of alkaliimetric titration. When sulfuric acid is allowed to react with sodium carbonate, sodium sulfate, carbon di oxide and water are obtained. This is an example of acid base reaction. In this titration, to locate the end point methyl orange indicator is used

PROCEDURE: Into a conical flask pipette out exactly 10 ml of 0.1 N sodium carbonate solution and add one or two drops of methyl orange indicator. Titrate the solution against sulfuric acid till red color is obtained. Repeat the titration to get concurrent values.

OBSERVATION TABLE:

S.No.	Volume of 0.1 N sodium carbonate solution (ml)	Burette reading		Volume of H ₂ SO ₄ used (ml)
		Initial (ml)	Final (ml)	

--	--	--	--	--

FORMULA: The normality of H₂SO₄ is calculated using the formula

$$N_1V_1=N_2V_2$$

RESULT: The normality of the given sulfuric acid solution is