

	GILES CHEMICAL		
	COMPANY PROCEDURE		
	Determination of % MgSO ₄ by Specific Gravity	Page : 1 of 3	Revision : 01 Date : 06/29/2009
	Author: Carl Mooney	Job Specific	

Safety: Wear safety glass and/or goggles when working in the lab.

Purpose: Determination of % MgSO₄ by Specific Gravity

Procedure:

Background Information:

Specific gravity is usually, and most easily, determined by immersing a suitable hydrometer in the subject solution, with adjustment for temperature as necessary. In order to check any solution thus obtained with a somewhat greater degree of accuracy the following procedure is used.

Procedure:

A measured volume of the subject solution is weighed and the weight divided by the volume. This produces a value for the specific gravity of the solution being measured and the % MgSO₄ is determined by reference to standard charts.

Equipment :

25 - mL laboratory volumetric flask
 Weighing Balance -- B440 Sartorius
 Laboratory Thermometer -- 0 - 100° C
 Set of standard charts for conversion of Specific Gravity and Temperature determination to % MgSO₄
 Microwave

Procedure:

1. Pour liquid sample in 500ml beaker.
2. Bring it to temp. that is recorded on sample bottle by using microwave.
3. Put sample on stir plate and record temp and pH using calibrated pH meter.
4. A 25 - mL volumetric flask is placed on the weighing balance and tared to zero
5. Approximately 25 mL of subject sample is added to the volumetric flask and the weight recorded.
6. Specific gravity is determined using the following formula

$$\frac{\text{Weight of sample (g)}}{\text{Volume of sample (mL)}} = \text{Specific Gravity (g / mL)}$$

7. % MgSO₄ is determined by referring the above mentioned charts, using the specific gravity Reading and the temperature of the solution



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TRAINING DOCUMENTATION

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