

GILES CHEMICAL CORPORATION		
COMPANY PROCEDURE		
Standard Operating Procedure	Page : 1 of 2	Revision : Date : 3/27/06
Reviewed: Carl Mooney	Title: Determination of % MgSO ₄ by Specific Gravity	

QA-LAB-06

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

Procedures :

1. A dry 25 - mL volumetric flask is placed on the weighing balance and tarred to zero
2. Approximately 25 mL of subject sample is added to the graduate and the weight recorded.
3. The temperature of the sample is taken and recorded
4. Specific gravity is determined using the following formula

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

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

GILES CHEMICAL CORPORATION			
COMPANY PROCEDURE			
Standard Operating Procedure		Page : 2 of 2	Revision : Date : 3/27/06
	Reviewed: Carl Mooney		
Title: Determination of % MgSO ₄ by Specific Gravity			

QA-LAB-06

TRAINING DOCUMENTATION

	EMPLOYEE	TITLE	SIGNATURE	DATE
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				