
	GILES CHEMICAL ~ PREMIER MAGNESIA		
	Company Procedure		
	Title: Crystal Size Determination of Dry Product	Number: L12-PR-100-026	
	Owner: Ashley Williams	Revision: 4	
	Effective Date: 04/07/2016	Page: 1 of 2	

## 1.0 Purpose

The purpose of this procedure is to determine the crystal size of finished crystalline product.

## 2.0 Scope

This procedure applies to all finished crystalline product. All testing is performed in the QA Lab.

## 3.0 Responsibility

QA Lab associates are responsible for testing finished products.

## 4.0 Safety Considerations

Steel toed safety shoes and safety glasses are required in the Manufacturing plant. Wear proper safety attire for the QA Lab.

Safety is a condition of employment. Employees are not authorized to work in an unsafe manner and are prohibited from harming the environment of the facility or community.

## 5.0 Materials/Equipment



- Sieves and Sieve shaker – Retsch AS 200
- Weighing Balance -- B440 Sartorius
- Small Spatula
- Weighing Boat
- Daily crystalline sample

## 6.0 Procedure

1. Calibrated Sieves are used to run sieve analysis. Sieves used for daily product are mesh size 12, 16, 20, 60, 100, 120, and pan.
2. A weigh boat is placed on the balance and the balance tarred to zero.
3. Approximately 50 grams of the sample of salt is weighed in the weigh boat.
4. The salt sample is then placed on the top of the Sieve stack (12, 16, 20, 60, 100, 120, and pan with the 12 mesh sieve being at the top and the pan being at the bottom)

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5. Place cover on top of stack.
6. The stack cover is put in place and tightened down on the sieve machine.
7. Ensure that the timer is set for 2 minutes on the sieve machine.
8. The sieve machine is activated and allowed to run.
9. When vibration has stopped:
  - A. Remove cover, remove 12 mesh sieve pan, invert pan over zeroed weigh boat, tap or scrape the screen lightly to remove lodged salt particles.
  - B. Record weight on the Final Product Crystal – Daily Quality Control Report (L12-FM-100-002)
  - C. Empty weigh boat into waste salt container, place back on balance, tare the balance to zero
  - D. Repeat steps A through C for the 16, 20, 60, 100, 120, and pan.
10. The crystal size determination is reported as the percentage retained on each sieve and the pan.
11. Sieve Analysis can be run with other mesh sizes if needed.

## 7.0 Reference Documents

Final Product Crystal – Daily Quality Control Report (L12-FM-100-002)

## 8.0 Amendment Record

*Changed the 90Mesh Sieve to a 100 Mesh Sieve.*

*Updated to new SOP Template.*

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