1.0 Purpose:

The purpose of this procedure is to verify that the sieves used for the final crystal product testing are within their stated limits of size and assure their accuracy.

2.0 Scope:

This procedure is to be performed quarterly on the calibrated sieves used for daily final crystal product testing in the quality laboratory.

3.0 Responsibility:

This procedure is to be performed by any QA qualified laboratory personnel; a second analyst will review data for accuracy and completeness.

4.0 Safety Considerations:

Proper PPE should be worn at all times during this procedure. Including but not limited to steel-toed shoes, safety goggles, and lab coat.

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:

Calibrated Sieves:
- Mesh No. 12
- Mesh No. 16
- Mesh No. 20
- Mesh No. 60
- Mesh No. 90
- Mesh No. 120

Calibration Beads:
- 125-150um
- 150-180um
- 250-300um
- 850-1000um
- 1180-1400um
- 1700-2000um

Sieve Pan
Weigh Boat

6.0 Procedure:

Note: Each sieve is to be tested individually to ensure complete recovery of the calibration beads and to obtain an accurate measure of the effectiveness of the sieve.

- Clean the salt from the sieves by running hot water through them and placing them into the oven at 100˚C to dry.
- Once dry, test each sieve by emptying the entire contents of the corresponding calibration beads into a tared weigh boat. Record the initial weight on the (*Sieve Calibration Verification Form L15-PR-100-F070).*
- Empty the contents of the weigh boat into the sieve and run for 2 minutes on the roto-sieve at an amplitude of 50.
- Weigh the mass of the beads retained on the sieve and the mass lost through the sieve. Record the weights on (*Sieve Calibration Verification Form L15-PR-100-F070).*
- Calculate the % of the mass lost through the sieve as follows:

$$\frac{Initial\ wt\ (g) - \ Mass\ lost\ (g)}{Initial\ wt\ (g)} * 100 = \%\ Loss$$

- Record the % loss on the *Sieve Calibration Verification Form (L15-PR-100-F070).*

  - Passing requirements:
    - The initial wt must equal the sum of mass retained and the mass lost.
    - The % loss must not exceed 1.0% (with exception of the No. 90 sieve which may not exceed 35.0%)

Note: The justification for the No.90 sieve having a higher passing criteria than the other sieves is due to the sizing of the calibration beads. The pore size of 160um (associated mesh size of the No.90 sieve) lies between the calibrated bead size of 150-180um.

7.0 Reference Documents:

Sieve Calibration Verification Form (L15-PR-100-F070)

8.0 Change Information:

New Document