

Colorado Procedure – Laboratory 4209-21

Standard Method of Test for

Physical Testing of Hydrated Lime and Limestone

1 SCOPE:

- 1.1 This test method determines the particle size distributions of limestone and hydrated lime by washing.

2 APPARATUS:

- 2.1 The sieves used shall conform to the requirements of Specification E11. Preferably the sieves should have a minimum depth of 4-in.
- 2.2 Spray Nozzle, conforming to the requirements of Test Method C430.
- 2.3 Pressure Gauge shall be graduated in 1-psi increments, and shall have a maximum capacity of 30-psi. The accuracy at 10 psi shall be +/- 0.25 psi
- 2.4 Attach a pressure gauge to the water faucet and tubing to the output side of the pressure gauge. On the other end of the tubing attach the spray nozzle

3 PROCEDURE:

- 3.2 Nest a No. 30 sieve over a No. 200 sieve.
- 3.3 Sample and weigh 100 g (+/- 5g) of the limestone or hydrated lime.
- 3.4 Starting with the top sieve, wash the material through each sieve by means of a stream of water from the nozzle after adjusting the water pressure to 10 +/- 0.25 psi. Carefully wash the sample through each sieve without allowing any splashing over the sides of the sieve.

NOTE 1: Take care not to let water accumulate on the No. 200 sieve, because the openings will become clogged and the operation may not be able to be completed in 30 min.

- 3.5 After the sample is washed through the top sieve, separate it from the next sieve and repeat the washing procedure with the next finer sieve.
- 3.6 When washing is complete the water should be clear, that is no particles can be seen in a beaker of the rinse water, but in no case shall washing be less than 5 minutes or last longer than 30 min.
- 3.7 Dry the material retained on each sieve at a temperature of 110 + 5°C for at least one hour, cool and determine the mass.

4. Report:

4.1 Report the results of the sieve analysis as the percentages retained on each sieve.