1. **Scope**

This test is used to determine the percentage by mass of quicklime retained on the 425 µm sieve after slaking with water.

2. **Apparatus**

   (a) Balance with a limit of performance not exceeding 0.5 g.
   (b) Oven thermostatically controlled to operate at a temperature of 105-110°C preferably with mechanical ventilation.
   (c) 425 µm AS Sieve.
   (d) A beaker of about 1 litre capacity.
   (e) Scoops, spatulas, metal dishes, gloves and safety goggles.

3. **Procedure**

   (a) Clean and dry a container and determine its mass ($M_1$) to the nearest 0.1 g.
   (b) Weigh about 100 g of the quicklime into the container and determine the mass of the container plus sample ($M_2$) to the nearest 0.1 g (see Note 1).
   (c) Pour the quicklime onto the 425 µm sieve and wash it with water until the main wash water is practically clear. Discard the washings.
   (d) Transfer the material retained on the sieve to the beaker, fill the beaker with water and allow to stand undisturbed for 30 ± 2 minutes.
   (e) Decant the water through the 425 µm sieve and wash the residue until the wash water is practically clear.
   (f) Transfer the material retained on the sieve to the beaker and allow the materials to settle. Decant as much water from the beaker as possible.
   (g) Dry the material to constant mass (see AS 1289.2.1.1) at 105-110 °C in the original container and determine the mass of the container plus residue ($M_3$) to the nearest 0.1 g.

4. **Calculation**

   Calculate the residue of quicklime after slaking ($R_s$) from:
   
   $$ R_s = \frac{(M_3 - M_1)}{(M_2 - M_1)} \times 100 $$

   where $R_s$ = residue of quicklime after slaking (%)
   $M_1$ = Mass of container (g)
   $M_2$ = Mass of container plus sample (g)
   $M_3$ = Mass of container plus dry residue (g)

5. **Report**

   Report the percentage of residue after slaking to the nearest whole number.

**Note:**

1. When handling quicklime, care should be taken to avoid contact with the skin and eyes. Gloves and safety glasses should be worn.

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**Test Method - Revision Summary**

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<td>Full document</td>
<td>Re-issued without change</td>
<td>Manager - Construction Materials</td>
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