Australian Standard®

Test methods for limes and limestones

Method 8.1: Free moisture—Convection oven

1 SCOPE This Standard describes the method for determining free moisture in hydrated lime.

2 REFERENCED DOCUMENT The following document is referred to in this Standard:

AS
4489 Test methods for limes and limestones
4489.1.1 Method 1.1: Sample preparation—Quicklime and hydrated lime

3 PRINCIPLE The hydrated lime sample is dried for at least 8 h, to ensure loss of all free water.

4 APPARATUS The following apparatus is required:

(a) Balance, analytical type, accurate to 0.03g.

(b) Flask, Erlenmeyer, 250 mL with suitable stopper.

(c) Drying oven, 90 ±15°C.

(d) Desiccator.

5 PROCEDURE The following procedure shall be performed:

(a) Weigh a clean, empty Erlenmeyer flask and stopper (m_0).

(b) Fill the flask to the neck with the sample and record the total weight of the flask, the stopper and the sample (m_1). The sample preparation is performed in accordance with AS 4489.1.1.

(c) Place the flask, without the stopper and contents, into the drying oven at 90 ±15°C for at least 8 h.

(d) Remove from the oven and stopper the flask.

(e) Transfer to a desiccator and cool for 15 min.

(f) Reweigh the flask, the stopper and the contents (m_2).

6 CALCULATION The following calculation shall be made:

$$\text{Percentage of free moisture} = \frac{(m_1 - m_2)}{(m_1 - m_0)} \times 100$$