METHOD OF DETERMINATION OF MOISTURE CONTENT

DOH 2

1. SCOPE

1.1 This method is used to determine the percentage of water in a sample by drying the sample to a constant weight.

1.2 The water content is expressed as the percentage, by weight, of the dry sample.

2. APPARATUS

2.1 *Drying equipment* – An oven, hot plate, field stove or the like suitable for drying moisture samples at a uniform temperature not exceeding 239º F (115º C).

2.2 *Balance* – A balance or scale sensitive to 0.1 percent of the minimum weight of the sample to be weighed and with a capacity equal to the maximum wet weight of the samples to be weighed.

3. SAMPLING

3.1 Select a representative quantity of the moist sample based on the maximum particle size of the sample.

3.2 Quantities for approximate minimum weights are listed in the table below.

Maximum Particle Size	Minimum Weight of Sample, ounces (grams)
No. 4 (4.75 mm)	4 (100)
¾ in. (19.0 mm)	17 (500)
2 in. (50 mm)	36 (1000)

4. PROCEDURE

4.1 Weigh moisture sample immediately and record as "wet weight of sample"

4.2 Dry the wet sample to a constant weight, at a temperature not exceeding 239º F (115º C) using the suitable drying equipment.

4.3 Allow the sample to cool.

4.4 Weigh the cooled sample again, and record as the "dry weight of sample"

5. CALCULATION

5.1 The moisture content of the sample is calculated using the following equation:

$$\%W = \frac{A - B}{B} \times 100$$

Where:

%W = Percentage of moisture in the sample,

A = Weight of wet sample (grams), and

B = Weight of dry sample (grams)

5.2 Report the moisture content to the nearest tenth of one percent.