DETERMINING PERCENT RESIDUE OF EMULSIFIED ASPHALT

SCOPE

This method is intended to determine the percent residue of emulsified asphalt. The apparatus and procedure are identical to Iowa Test Method No. 615, Residue by Evaporation Procedure.

PROCEDURE

A. Apparatus

    1. Container-the container in which the sample is to be tested shall be an iron, hemispherical, sand bath dish, 6 in. (150 mm) in diameter.

    2. Heat Source-continuous adjusting electric heater

    3. Balance-capable of weighing accurately to within 0.5 gram

B. Test Procedure

    1. Weigh 100 ± 5 grams of thoroughly mixed emulsified asphalt to the nearest 0.5 gram into the sand bath dish.

    2. Place the dish containing the sample on the electric heater and adjust to moderate heat so that the sample boils, without popping and spitting.

    3. Continue the boiling until the bubbling slows at which time the heater is adjusted to very low heat.

    4. When the bubbling stops, immediately remove the dish from the heater and weigh to the nearest 0.5 gram.

C. Calculation & Report

    Calculate the percent of residue as follows:

    $$\text{Residue percent} = \frac{B - C}{A} 100$$

    Where: A = the sample weight (mass) in grams
            B = weight (mass) of the dish and residue in grams
            C = tare of dish in grams

    Report the result of one test to the nearest 0.1 percent.

NOTE 1: When specifications require that tests be performed on the emulsion residue, the test samples shall be prepared immediately after step B4, while the residue is hot and in a fluid condition. If the amount of residual asphalt is insufficient for testing, the emulsion sample size for this method may be increased accordingly.

NOTE 2: Rejection of an emulsion, except diluted emulsions, cannot be made on the percent residue, or results of tests on the residue, when determined by this method. The noncompliant emulsions must have the residue obtained by distillation. Percent residues by this method on diluted emulsions are valid.

Electric Heater & Sand Bath Dish