

State of Nevada  
Department of Transportation  
Materials Division

**METHOD OF TEST FOR SAND EQUIVALENT**

This procedure is the same as AASHTO T176-00 in its entirety with the following exceptions:

NOTE 2 - Either the mechanical or manually operated shaker shall be used when performing referee sand equivalent determinations. Either the mechanical or manually operated shaker should be used in lieu of the hand method whenever possible.

2.8 Delete last sentence (Working solutions more than 30 days old shall be discarded).

2.10 A thermostatically controlled drying oven capable of maintaining a temperature of 60°C (140°F).

3.1 The test may be performed without strict temperature control; however any referee testing must be performed with the temperature of the working solution at  $22 \pm 3^\circ \text{C}$  ( $72 \pm 5^\circ \text{F}$ ).

**4. SAMPLE PREPARATION (IN IT'S ENTIRETY)**

1. Prepare sand equivalent test samples from the passing 4.75mm (No. 4) sieve portion of the material to be tested. Oven dry the wet samples at 60°C (140°F) sufficiently to permit a complete separation on the 4.75 mm (No. 4) portion passing the 4.75 mm (No. 4) sieve. Be sure all fines are cleaned from the retained 4.75 mm (No. 4) sieve portion and included with the passing 4.75 mm (No. 4) sieve material.

2. Split or quarter enough material from the passing 4.75 mm (No. 4) portion to fill the 85 ml (3 oz) tin to within 0.48 mm (3/16 in.) of the brim (three tins of material are required for source and contract samples) without overflowing the tin. Use extreme care in the sand equivalent test sample preparation to obtain a truly representative sample. Striking off the tin measure level is not allowed.

a. Splitting and quartering instructions and information.

(1) Experiments show that as the amount of material being reduced by splitting or quartering is decreased the accuracy of providing representative portions is decreased. For this reason it is imperative that the sand equivalent test sample, which is already relatively very small, be split or quartered carefully to the correct size. When it appears necessary, dampen the material to avoid segregation or loss of fines.

(2) Adjustments are usually required to provide the desired test sample size. However, make these adjustments before the sample is reduced below a volume equal to four tin measures, or approximately 450 g for material of average specific gravity.

(3) After obtaining the 85 ml (3 oz) tin measures of material, then dry the test samples in the tin, in an oven, to a constant mass at 60°C (140°F) and cool to room temperature before testing.

8.1.1 Change  $\pm 4$  points to  $\pm 2$  points.

8.1.2 The average of three tests by an operator on any given material must correspond within  $\pm 2$  points with the average of three tests on the same material when tested using the three tin method.

8.3.1 Change  $\pm 4$  points to  $\pm 2$  points.

8.4 Change  $\pm 4$  points to  $\pm 2$  points.