

METHOD OF TEST FOR MATERIALS FINER THAN 75 μm SIEVE IN MINERAL AGGREGATES BY WASHING

1. SCOPE

1.1 This method covers a procedure for determining the amount of material finer than a 75 μm sieve in aggregate by washing.

1.2 Two guidelines are included, Guideline A for as-received aggregate samples and Guideline B for coarse aggregate retained on 4.75 mm sieve only. Unless otherwise specified, Guideline A shall be used.

2. RELEVANT DOCUMENTS

2.1 LS-602, Method of Test for Sieve Analysis of Aggregates

2.2 ASTM C 117, Standard Test Method for Materials Finer than 75- μm (No. 200) Sieve in Mineral Aggregates by Washing

2.3 AASHTO T 11 Method of Test for Amount of Material Finer than 0.075-mm Sieve in Aggregate

3. PROCEDURE

3.1 Procedures of ASTM Standard C 117 shall be followed, except as noted below.

3.1.2 Follow ASTM Standard C 117, Procedure A (use of water only) shall be followed unless otherwise specified.

3.1.3 The use of the 1.18 mm protection sieve may be omitted when 100 % of the material passes the 4.75 mm sieve.

3.1.3 Sieves: The minimum diameter of the sieves shall be 200 mm.

3.2 Guideline A: Unless otherwise specified, test the aggregate as-received by using the minimum mass of test sample specified in Section 6 of ASTM C 117.

3.3 Guideline B: To determine the amount of materials finer than the 75 μm sieve in coarse aggregate retained on 4.75 mm sieve only. Separate the material on the 4.75mm sieve according to the procedure given in LS-602 and test only the material retained on the 4.75 mm sieve fraction. Discard any material passing 4.75 mm sieve.

4. PRECISION

4.1 Precision estimates are based on aggregates having a nominal maximum size of 19.0 mm with less than 2.0% finer than the 75 μm sieve. The single-operator standard deviation has been found to be 0.10^A. Therefore, results of two properly conducted tests on samples of the same aggregate by the

same operator using the same equipment are not expected to differ by more than 0.28^A of their average, 95% of the time. The multi-laboratory standard deviation has been found to be 0.19^A . Therefore, the results of two properly conducted tests by different laboratories on samples of the same aggregate are not expected to differ by more than 0.53^A of their average, 95% of the time.

^A These numbers represent, respectively, the (1s) and (d2s) limits as described in ASTM C670.

