

**Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates  
ASTM C 136 - 14**

**APPARATUS / SECTION 6**

1. Balances
  - a. FA – readable and accurate to 0.1g or 0.1% of the test load, whichever is greater, at any point within the range of use? .....
  - b. CA or Mixture of CA/FA, readable and accurate to 0.5g or 0.1% of the test load, whichever is greater, at any point within the range of use? .....
  
2. Sieves: Sieve cloth and standard sieve frames conform to ASTM E11 specifications? .....
  
- Note 1: For CA recommend using sieves mounted in frames larger than (8" diameter).
  
3. Mechanical Sieve Shaker: meets sieving sufficiency criteria? .....
  
- Note 2: For samples greater than 20 kg, a mechanical sieve shaker should be used (can also be used for smaller samples and FA material).
  
4. Oven: Capable of maintaining a uniform temp. of 110 ± 5.0°C? .....

**SAMPLING / SECTION 7**

1. Field Sample / Clause 7.1
  - As specified in ASTM D 75? .....
  - Where no specification, sample 4 times minimum mass given in ASTM C136 clause 7.4 & 7.5? .....
  
2. Test sample / Clause 7.2
  - Reduced according to ASTM C 702 to the quantity desired? .....
  
  - a. FA Test Sample: Reduced to **300g minimum** after drying as specified clause 7.3? .....
  - b. CA Test Sample: Reduced to CA requirements as specified in clause 7.4? .....
  - c. CA/FA Mixtures Test Sample: Reduced to CA requirements as specified in clause 7.4? .....
  - d. Test Samples of Large Size CA (**50mm nominal max. size or larger**), refer to clause 7.6? .....

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**SAMPLING / SECTION 7 (CONTINUED)**

3. Samples requiring determination of the P/75µm (ASTM C117) – Procedure is as follows:
  - a. Aggregates with a nominal max. size of 12.5mm or less – same test sample to perform both C117 & C136 – C117 performed first followed by C136 as specified in clause 7.7.1? ..... \_\_\_\_\_
  - b. Aggregates with a nominal maximum size greater than 12.5mm - use a single test sample as in item a. or use separate test samples for C117 and C136?..... \_\_\_\_\_

Note: Upon completion of C117, add mass of P/75µm as determined by test method to the mass passing the 75µm dry sieved according to C136 of the same sample.

**PROCEDURE / SECTION 8**

1. Sample dried to constant mass at a temp. of 110 ± 5°C? ..... \_\_\_\_\_  
 Note: Samples may be dried at a higher temperature when using hot plates providing that steam escapes without generating pressures sufficient to fracture the particles.
2. Select sieves with suitable openings as required by specifications for the material to be tested? ..... \_\_\_\_\_
3. Nest the sieves in order of decreasing size then place sample on the top sieve?..... \_\_\_\_\_
3. Agitate sieves by hand or by a mechanical apparatus for a sufficient period as established by sieving sufficiency method (Refer to ASTM C136 Item 8.4)? ..... \_\_\_\_\_
4. Determine the mass of each size increment on balance and record to the nearest 0.1% of the total original dry sample mass? ..... \_\_\_\_\_
5. Total mass of material after sieving should not differ by more than 0.3% of the original dry sample after completion of sieving procedure – if greater than 0.3%, the results should not be used for acceptance purposes? ..... \_\_\_\_\_

**General Notes:**

*To prevent overloading individual sieves consider the following methods.*

1. *Insert intermediate sieves between the sieve that may be overloaded and the sieve immediately above it.*
2. *Split the sample into two or more portions – sieve each portion individually and recombine mathematically.*
3. *Use larger frame size sieves with greater sieving area.*
4. *For CA & FA mixtures refer to items 1 to 3 or reduce the P/4.75 material using a riffle splitter according to ASTM C702. If the reduction method is used, compute the mass of each size increment of the original sample (Refer to ASTM C136 / Item 8.5.1 for formula).*

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**CALCULATIONS / SECTION 10**

1. Calculate % passing, total % retained, or % in various size fractions to the nearest 0.1% on the basis of the total mass of the initial dry sample? ..... \_\_\_\_\_
2. Calculate fineness modulus if required? ..... \_\_\_\_\_

**COMMENTS:**

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