

**OHD L-9
METHOD OF TEST FOR
FIELD DETERMINATION OF CLAY LUMPS IN AGGREGATE**

- I. **SCOPE.** This method of test covers the field procedure for determining the amount of clay lumps, mud balls, and sand clusters in aggregates without correction for moisture. This method of test is also applicable to the determination of the amount of sticks and roots.
- II. **APPARATUS.** The apparatus shall consist of the following:

- A. **Balance** - Balance or scale capable of weighing the sample to the nearest gram.
- B. **Container** - A container of such size and shape to permit spreading the sample in a thin layer on the bottom.
- C. **Sieves** - Sieves conforming to the Standard Specifications for Sieves for Testing Purposes (AASHTO M 92).

III. **SAMPLES.**

- A. Test sample shall be obtained from representative samples by quartering or by the use of a splitter. Minimum weights of test samples shall be:

Coarse Aggregate - 5,000 grams
Fine Aggregate - 1,000 grams

- B. Samples shall be tested without drying, unless they are too wet to permit adequate separation by sieving. In this case, the sample may be air-dried until it reaches a moisture content which will permit sieving.

IV. **PROCEDURE.**

- A. The test sample is sieved (either hand or machine sieving is permissible) over the No. 4 sieve. Care must be taken that flooding of the sieve does not occur. (i.e., not more than 200 grams is retained on the No. 4 sieve on any one sieving.)
- B. The portion of the sample retained on the No. 4 sieve is spread in a thin layer over the bottom of a large flat container and the clay lumps, mud balls, and sand clusters are picked out and weighed to the nearest gram. Normally, clay balls can be broken down with slight pressure of the fingers. Questionable fragments should be soaked for four (4) hours, then examined for slaking or softening.

- V. **CALCULATION.** The percentage of clay lumps shall be calculated to the nearest 0.1 percent in accordance with the following formula:

$$\% \text{ Clay Lumps} = \frac{\text{Weight of Clay Lumps}}{\text{Weight of Total Test Sample}} \times 100$$

The percentage of clay lumps reported shall be based on the average of a minimum of three (3) test samples.