



## Performance Examination - Aggregate

### Standard Method of Test for Organic Impurities in Fine Aggregates for Concrete (AASHTO T 21M / T 21-15) [ASTM C40 / C40M-16]

Candidate Name: \_\_\_\_\_ NICET ID: \_\_\_\_\_

Apparatus	Trial 1	Trial 2
<b>Bottles</b> Clear (colorless) glass or plastic graduated Outside thickness between 38.1 to 63.5 mm (1.5 to 2.5 in.) Approximately 240 to 470-ml (8 to 16-oz) nominal capacity Graduation lines in milliliters or ounces Lines at 2 ½ oz only necessary when using the standard color solution Stoppers or caps which are not soluble in specified reagents <i>Note: If the bottle is unmarked, lines may be scribed onto the bottle and are required only at the 75, 130 &amp; 200-mL (2 ½, 4 ½, &amp; 7-oz) levels.</i>		
<b>NaOH Solution</b> Three parts reagent grade NaOH (sodium hydroxide) to 97 parts water by weight		
<b>Standard Color Solution</b> Reagent grade Potassium Dichromate (K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> ) dissolved in concentrated sulfuric acid at the rate of 0.250 g/100ml of acid. The solution is freshly made (less than 2 hours old).		
<b>Glass Color Standard</b> <i>(one of the following)</i> Glass color plate with Organic Color Nos. 1-5 (Equal to Organic Color No. 3) Gardener Color Nos. 5, 8, 11, 14, & 16		

Procedures	Trial 1	Trial 2
1. The sample obtained by Method R 76		
2. If the sample is dried before testing, is it dried only by air drying		
3. Sample mass about 450 g (1 lb.)		
4. Sand added to the 130-mL (approximately four ½-ozs) level in the bottle		
5. NaOH solution added until the volume of fine aggregate and liquid after shaking, is 200 ml (approx. 7 oz) level		
6. Bottle stoppered and shaken vigorously		
7. Allowed to stand for 24 hours		
8. Color comparison made against color standards		

**First Attempt:** Pass: \_\_\_\_\_ Fail: \_\_\_\_\_ **Second Attempt:** Pass: \_\_\_\_\_ Fail: \_\_\_\_\_

**Exam Administration:** Remote \_\_\_\_\_ In-Person \_\_\_\_\_

**Comments:**

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**Examiner Name:** \_\_\_\_\_ **Examiner Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_