

PETROGRAPHIC ANALYSIS OF COARSE AGGREGATE

LS-609-R29 \_\_\_\_\_  
ASTM C294, 5-12 \_\_\_\_\_

APPARATUS

1. Hand lens, 10x magnification? ..... \_\_\_\_\_
2. Magnet? ..... \_\_\_\_\_
3. Knife, good quality, with blade hardness between 5.5 and 6 on Moh's scale? ..... \_\_\_\_\_
4. Anvil and hammer, suitable for breaking aggregate particles?..... \_\_\_\_\_
5. Reagent, technical grade hydrochloric acid, 5% by volume, in a polyethylene squeeze bottle w/spout ..... \_\_\_\_\_
6. Binocular microscope, 4x to 25x final magnification, with illumination source? ..... \_\_\_\_\_
7. Scale of sufficient capacity, and accurate to 0.1 g? ..... \_\_\_\_\_

CERTIFIED TECHNICIAN(S)

<u>Name:</u>	<u>Card Number:</u>	<u>MTO Correlation last year</u>	<u>This year</u>

**Note: Technicians are certified by CCIL for the LS 609 test method only.**

Preparation of Sample

1. Sample obtained by LS-600 or ASTM C702?..... \_\_\_\_\_
2. Sample conforms to following masses:..... \_\_\_\_\_

Pass	Retained	Approx. Mass, g
75 mm	19.0 mm	10000
53 mm	19.0 mm	5000
37.5 mm	19.0 mm	4000
26.5 mm	19.0 mm	3000
19.0 mm	13.2 mm	1500
13.2 mm	9.5 mm	500
9.5 mm	4.75 mm	200

**Note:** Each sieve size examined should contain a minimum of 200 particles.

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Preparation of Sample Con't

- 3 Begin on coarsest fraction comprising at least 10%? .....
- 4 Treat all material retained on the 19.0mm sieve as a single fraction?.....
- 5 Fractions examined constitute a minimum of 90.0% of the sample?.....

Test Procedure

- 1 Sample spread out on clean tray (flat working surface) and covered with either a paper or soft towel to absorb excess water?.....
- 2 Visual estimate for percentage crushed and/or flat and elongated particles (if required)?.....
- 3 Visual examination for coatings (clay), cementations and encrustations? .....
- 4 Separate all particles that may break down in water (Do Not Soak).....
- 5 Sample soaked in warm water for minimum 12 hrs and washed?.....
- 6 Sample spread on absorbent surface for examination? .....
- 7 Each particle classified into rock type using criteria in 6.9 1 - .11 as relevant (form PH-CC-343a and supplementary list)? .....
- 8 Each group of particles weighed to nearest 0.1 g and recorded on PH-CC-343a?.....

Calculation

- 1 Percentage of each rock type calculated to 0.1%? .....
- 2 Percentage of good, fair, poor and deleterious particles calculated (total 100)?.....
- 3 Petrographic number for hot mix, surface treatment and concrete calculated using the appropriate correction factors for each category?.....
- 4 Petrographic number for granular base calculated using appropriate correction factors for each rock type?.....
- 5 Weighted petrographic numbers calculated when more than one size fraction examined? .....

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Reporting Results

- 1 Report (MTO form PH-CC-343b) includes correct sample source identification information
- 2 (including MAIDB #)?..... \_\_\_\_\_
- 3 Report includes fraction(s) examined, date and name of analyst?..... \_\_\_\_\_
- 4 Percentages (to nearest 0.1%) for each rock type, and of good, fair, poor and deleterious particles?..... \_\_\_\_\_
- 5 Petrographic numbers (to nearest whole number) of each fraction tested?..... \_\_\_\_\_
- 6 Weighted petrographic numbers (to nearest whole number), when more than one size fraction tested? ..... \_\_\_\_\_
- 7 Other information as required such as percentage of individual or combined rock types or contaminants by mass?..... \_\_\_\_\_

COMMENTS: