



Aggregate Laboratory Inspection Checklist

It is advised that a careful review of the following criteria be undertaken by the laboratory personnel who will be taking an active role in the inspection.

Scope of Inspection

The inspection covers the demonstration of each test method presented and a review of the equipment associated with each test.

The following ASTM test methods are included during a CCRL Aggregate Inspection (**test methods followed by an asterisk are not mandatory** (per C1077)):

- C40 Organic Impurities in Fine Aggregates for Concrete*
- C117 Materials Finer than 75- μm (No. 200) Sieve in Mineral Aggregates by Washing
- C127 Specific Gravity and Absorption of Coarse Aggregate
- C128 Specific Gravity and Absorption of Fine Aggregate
- C136 Sieve Analysis of Fine and Coarse Aggregates
- C566 Total Evaporable Moisture Content of Aggregate by Drying*
- C702 Reducing Samples of Aggregate to Testing Size*

There are various additional test methods (listed on the request form) that the laboratory may wish to add on to the scope of their inspection. Any additional tests that the laboratory might wish to include for inspection should be clearly conveyed to the inspector **prior to the scheduled inspection date**.

How to Prepare for Your Inspection

- Have individual samples for each test method and all of the associated equipment being presented ready for inspection/demonstration. Equipment should be clean and free of debris from laboratory testing, in working order, and in an accessible location. Any equipment that requires calibration/verification should be marked with accurate identification numbers. Aggregate samples should be at specified moisture levels whenever possible.
- The sample sizes used for the demonstration portion of the CCRL inspection should meet specifications from the standards whenever possible.
- The demonstrations of these procedures should be made in accordance with the requirements of the applicable **ASTM test methods**, and **special laboratory practices should be avoided**.
- The following checklists are not all inclusive and should be used along with careful review of the applicable standards to prepare the laboratory for the inspection.

Those pieces of equipment which the laboratory would like to present for inspection should be cleaned, in working order, and in an accessible location for the inspector's examination. Have the following equipment ready and available:

	Sample Drying Equipment	Have ovens pre-heated to testing temperature. Ovens should be empty to facilitate accurate temperature readings.
	Balances and Scales (C117, C127, C128, C136, C566)	Clearly indicate which balances are used for which tests. Balances should be clean and level.
	Sample Splitter (C702)	Splitters should be readily accessible (and quartering and/or stockpile sampling equipment, if presenting).
	Sieves (E11, C117, C136)	All required sieves should be readily accessible.
	Mechanical Sieve Shakers (C136)	Devices should be readily accessible and free of debris.
	Organic Impurities (C40)	Clear bottles with caps, NaOH, Color Standard.
	Coarse Specific Gravity (C127)	Please have the apparatus for C127 completely assembled prior to the inspection (balance, basket, and tank). Tank should be full of water at room temperature.
	Fine Specific Gravity (C128)	Pycnometer or Flask, Mold & Tamper.

Be prepared to demonstrate the following procedures:

	Organic Impurities (C40)	Have a sample of sand at the specified moisture condition prepared. Water may be used in place of NaOH for demonstration purposes only
	Minus No. 200 Wash (C117)	Have a dried sample prepared for the demonstration.
	Coarse Specific Gravity (C127)	Please have your weighing apparatus prepared before the inspector arrives, and coarse sample soaking in water. Have a towel or similar available for SSD preparation.
	Fine Specific Gravity (C128)	Have a sample prepared as specified in Section 8.1 of C128. Sample should be near SSD for demonstration of cone test.
	Sieve Analysis (C136)	Have dried coarse and fine samples prepared for demonstration
	Moisture Content by Drying (C566)	Know or be able to reference the test procedure (verbal).
	Reducing Field Samples (C702)	(Splitting, Quartering, and/or Miniature Stockpile) Have a sample of appropriate moisture condition prepared.

C1077 Quality System Requirements:

	Equipment Inventory, Calibration, Maintenance	A current inventory with appropriate records. The inspector will review all calibration/verification records for all equipment requiring calibration/verification. Have current and previous records available for review. Have calibration/verification procedures for applicable pieces of equipment available for review.
	Human Resources	Training, evaluation, and certification records for all supervisors and technicians. Records documenting education and experience for all supervisors and technicians.
	Operations	Office and laboratory procedures including procedures for customer complaints, identifying and transferring specimens, recording test results, and amending reports.
	Reports and Records	A completed cylinder break report as it would be issued to a client, including a cover letter if applicable. Also prepare a test record for review.
	Quality Control	Proficiency Sample records (3 years), ASTM (and AASHTO, if applicable) standards.