2019 ONTARIO AND QUÉBEC MINI-CORRELATIONS – SOILS

Please read the following Mini-correlation instructions carefully BEFORE you start testing!

- **Testing shall be according to the "Ontario & Québec Correlation Instructions – Soils" that are included in this document.**
- **Please report the Results by the date indicated in the letter from CCIL notifying you that an additional testing program(mini-correlation) is required.**
- **All test results MUST be reported through your CCIL lab portal at https://portal.ccil.com/. After signing into the portal, all mini-correlation reporting forms appropriate to your lab certification will be accessible under the tab for Reporting Forms. You will be able to enter your test results into the forms and submit to CCIL through the portal.**
- **New: Please record the mini-correlation sample identification information found on the sample labels in the "Comments" section of the reporting forms.**

SAMPLES FOR MINI-CORRELATION TESTING

- Samples for the mini-correlation are shipped to the laboratory at the time the laboratory is notified a mini-correlation is required.
- **The mini-correlation samples are pre-prepared to meet the requirements of the appropriate test method and are to be tested as received.**
- Generally, only one sample will be shipped for each test requiring a mini-correlation. Tests for a mini-correlation are not generally carried out in pairs.
- The soil mini-correlation samples are in a dry state and therefore no drying should be necessary.
- Should you find it necessary, dry the soil mini-correlation samples to a constant mass at no more than 60°C.
- Dry the LS706 mini-correlation sample to a constant mass at 110 ± 5ºC.

ONTARIO AND QUÉBEC MINI-CORRELATION INSTRUCTIONS – SOILS

Please read the instructions carefully BEFORE you start testing!

PARTICLE SIZE ANALYSIS OF SOILS, MTO LS-702:

Compute the specific gravity correction factor α and constant K.

DO NOT use the specific gravity values determined by your lab.

If your lab received a **2016** mini-correlation sample for LS-702, use a freshly prepared dispersing agent with distilled water and **48 grams** of sodium hexametaphosphate per litre of solution and ensure the pH value of the solution is adjusted to 8 or 9. The soil samples supplied should be dispersed in the stirring apparatus for 10 minutes. Assume a value of **2.781** for the specific gravity of soil particles.

If your lab received a **2017** mini-correlation sample for LS-702, use a freshly prepared dispersing agent with distilled water and **48 grams** of sodium hexametaphosphate per litre of solution and ensure the pH value of the solution is adjusted to 8 or 9. The soil samples supplied should be dispersed in the stirring apparatus for 10 minutes. Assume a value of **2.785** for the specific gravity of soil particles.

If your lab received a **2018** mini-correlation sample for LS-702, use a freshly prepared dispersing agent with distilled water and **40** grams of sodium hexametaphosphate per litre of solution and ensure the pH value of the solution is adjusted to 8 or 9. The soil samples supplied should be dispersed in the stirring apparatus for 10 minutes. Assume a value of **2.775** for the specific gravity of soil particles.

If your lab received a **2019** mini-correlation sample for LS-702, use a freshly prepared dispersing agent with distilled water and **40** grams of sodium hexametaphosphate per litre of solution and ensure the pH value of the solution is adjusted to 8 or 9. The soil samples supplied should be dispersed in the stirring apparatus for 10 minutes. Assume a value of **2.766** for the specific gravity of soil particles.

Report the Percent Passing the 425µm, 75µm, 20µm, 5µm and 2µm to the nearest 0.1 percent.

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS, METHOD LS-703/704):

Determine the Liquid Limit, Plastic Limit and Plasticity Index of soil samples according to **ASTM D 4318**. Prepare the test specimens as outlined in Section 10.2 Dry Preparation, and determine the Liquid Limit according to the procedure described in Section 11.0, Method A Multi-Point Liquid Limit. Determine the Plastic Limit using a minimum of two trials and report the mean value. Report th***e*** **Liquid Limit, Plastic Limit and Plasticity Index** to the nearest one decimal (0.1 percent).

SPECIFIC GRAVITY OF SOILS MTO LS-705:

Determine the specific gravity of soil samples in according to **MTO LS-705**. Carry out the test according to the procedures as outlined in Section 8.1 Procedures for Oven Dried Specimen.

Perform the test on **minimum of three specimens** and report the **Mean Specific Gravity** of the soil to the nearest three decimal places (0.001). The calculated test results from three specimens (range) should be within 0.02 of each other. If the range exceeds 0.02, the test must be repeated.

MOISTURE-DENSITY RELATIONSHIP, MTO LS-706:

Dry the LS706 mini-correlation sample to a constant mass at 110 ± 5ºC.

Report the maximum wet density and maximum dry density in Mg/m^3 (equivalent to g/cm^3), and optimum moisture content in percentage.

If you receive a 2018 mini-correlation sample for LS-706 the following instructions apply:

Follow LS-706 (ASTM D698 Method C) to perform the test. There is no correction for oversize particles.

If you receive a 2019 mini-correlation sample for LS-706 the following instructions apply:

Follow LS-706 (ASTM D698 Method C) to perform the test. Use the following to calculate the oversize correction.

* Bulk specific gravity of the oversize fraction = 2.690
* Water content of the oversize fraction = 0.91%fa