

**1512.0065 ANALYZING CHECK SAMPLES AND ANALYTICAL DATA FOR GRANTING CERTIFICATION.**

Subpart 1. **Minimum laboratory analytical methods for laboratory certification.** Laboratories desiring certification must analyze the check samples for the following parameters as a minimum requirement: Bray or Olsen phosphorus, potassium, nitrate-nitrogen, pH, and organic matter. Any remaining analysis methods, as recognized by North Central Regional Publication 221, are required only if soil fertility recommendations are made. Each check sample must be handled and analyzed in duplicate for all analysis methods and procedures for which the laboratory is requesting initial or renewal certification. Duplicate check samples must be analyzed on different days and reported as individual results.

Subp. 2. **Reporting units on check sample analysis report.** Analytical data of check samples must be reported in elemental form as follows:

- A. nitrate-nitrogen, phosphorus, potassium, sulfate-sulfur, chloride, calcium, and magnesium to the nearest part per million (ppm);
- B. organic matter to the nearest tenth of a percentage;
- C. pH and buffer pH to the nearest tenth of a pH unit;
- D. all micronutrients reported to the nearest tenth of a ppm; and
- E. soluble salts reported to the nearest 0.1 mmhos/cm.

Subp. 3. **Check sample processing and handling.** Check samples, other than blind check samples referred to in subpart 7, must be processed and prepared by the department or by a person under contract with the department according to approved soil analysis methods and procedures. Check samples must be shipped in secure containers and be ready for analysis upon receipt.

Subp. 4. **Initial certification check samples.** Upon receipt of the application form and application and certification fees, the department shall send eight check samples for analysis. Check samples, accompanied by analysis data forms and instructions, must be sent by the department to a laboratory applying for initial certification between September 1 and December 31. The laboratory must submit analytical data to the department within 30 days of receipt of the check samples. Analytical data submitted after this deadline must be considered invalid. The laboratory may not be reimbursed for analysis costs incurred in obtaining initial certification.

Subp. 5. **Renewal certification check samples.** Laboratories applying for renewal certification must analyze two sets of four check samples on a semiannual basis. Check samples, accompanied by analysis data forms and instructions, must be sent by the department during the following time periods: March 1 to May 1 and August 1 to October

1. The laboratory must submit analytical data to the department within 30 days of receipt of the check samples. Analytical data submitted after this deadline must be considered invalid. The laboratory may not be reimbursed for analysis costs incurred in obtaining renewal certification.

Subp. 6. **Statistical guidelines for granting certification.** The department shall compile analytical data submitted by laboratories for each set of check samples. Check sample analytical data from qualifying laboratories must be composited by the department to provide statistical means and standard deviations for each soil testing method. Check sample analytical data points outside the range of plus or minus one standard deviation from the mean must be noted.

Statistical guidelines for determining initial and renewal certification are:

A. Initial certification. If more than 20 percent of a laboratory's individual check sample analytical data points are outside the range of plus or minus one standard deviation from the mean, the laboratory shall reanalyze check samples. Initial certification must be denied if more than 20 percent of a laboratory's check sample analytical data points are outside the range of plus or minus one standard deviation from the mean.

B. Renewal certification. If more than 20 percent of the analytical data points of each set of four check samples falls outside the range of plus or minus one standard deviation from the mean, the laboratory must reanalyze the check samples. The percent of analytical data points outside the range of plus or minus one standard deviation from the mean for both the analyzed and reanalyzed check samples must then be noted. Once both sets of semiannual check samples have been analyzed, the composite analytical data points from both sets of check samples must be combined to determine the percent that falls outside the range of plus or minus one standard deviation from the mean. Renewal certification must be denied if more than 20 percent of the total annual composite analytical data points falls outside the range of plus or minus one standard deviation from the mean.

Subp. 7. **Blind soil check samples to certified and uncertified laboratories.** The department may conduct blind check samples on either certified or uncertified laboratories as stated in Minnesota Statutes, section 18C.141, subdivision 2, paragraph (d). For purposes of this subpart, "blind check sample" means a sample sent to a laboratory by the department under an assumed name, and in a manner to make it appear that the sample came from a client. Check sample preparation as stated in subpart 3 may not be required so that the identity of the sending party is not revealed. The department shall bear the cost of requested analyses for blind check samples. If analytical data falls outside the range of plus or minus one standard deviation from the mean, the department shall consult with the laboratory concerning the discrepancy or inaccuracy of the blind check samples analytical data produced by the laboratory.

**Statutory Authority:** *MS s 18C.141*

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