

Physical Soil Testing Laboratory



American Association for
Laboratory Accreditation
A2LA Cert. No. 1794-01

USGA recommends using an
A2LA accredited testing lab



Quality You Bank On!

- ✓ Prompt
- ✓ Accurate
- ✓ Confidential

Resulting in the Highest Quality Turf Possible



DAKOTATM

Analytical Inc.

800-424-3443

www.dakotapeat.com

Physical Soil Testing For Golf Course and Athletic Field Construction

Rootzone Analysis:

- Particle Size Analysis
- Sand Size Distribution
- Porosity Values
- Organic Content
- Infiltration
- Bulk Density
- Particle Density
- Particle Shape
- pH



Bunker Sand Analysis:

- Particle Size
- Particle Shape
- Fried Egg Lie
- Infiltration

Drainage Gravel Analysis:

- Sand Particle Size Analysis
- Gravel Size Distribution
- Particle Shape
- Bridging Analysis



Proficiency Testing Program



DAKOTA Analytical Inc. is a full service physical soil testing laboratory. We offer complete soil testing for the golf and sports field industries. We are able to test any rootzone material such as peat, mulch, compost, rice hulls, sphagnum, soil, and inorganics. We also can test any material used for drainage or bunkers.

DAKOTA Analytical specializes in Quality Control on construction projects.

DAKOTA Analytical can test your completed mixes or create the proper mix for your project. We do *only* the tests you need or want.

DAKOTA Analytical will have your tests completed in a timely manner. We know how important it is to get your project moving.

For your protection, we follow stringent confidentiality guidelines!

Taking Soil Samples

1. Submit a 1 gallon sample of every material tested. Small quantities of material may not be representative of the entire mix and can lead to misleading interpretations of the results.
2. Samples should be taken from several places in the pile and should be taken with probes to get samples from inside the piles. Mix all samples thoroughly to eliminate any chance of a nonrepresentative sample.



3. Place composite soil sample in 1 gallon Zip-Lock plastic bags. Seal bag and put into second Zip-lock bag with top of first bag at the bottom end of the second bag. Seal second bag. Double bagging will lessen the chance of sample bag opening and spilling before reaching lab.
4. Straight sand samples should be taken, mixed and bagged as described above.
5. Mark all samples so that they are easily identified. Using a black permanent marker to write on the plastic bags will usually be the best method for marking the sample.
6. For existing greens, use soil probes and sample to the depth of the rootzone, usually 12 inches. Take approximately 10 probes for each green, from various locations on the green. Mix the samples thoroughly and place the composite sample in a double Zip-Lock bag as described above.
7. Test results will take 1-5 business days from day received depending on the tests required. Results will be faxed to you upon completion of all tests requested and hard copies can be mailed to you if requested. Please include the company name and address, contact person, phone, fax, tests requested and whom to bill with the sample.

Taking Undisturbed Soil Core Samples

1. Cut 2" PVC pipe into a section long enough to reach 6-12 inches into the green. The PVC pipe diameter must be 2 inches to fit our equipment.
2. Sharpen one end of pipe to penetrate the green.
3. Drill 2 holes opposite each other near the tip of the unsharpened end so that a metal rod can be inserted as a handle to remove the core.
4. Pound the PVC pipe into the green. If greens are old push-up greens, pound the pipe as far as it will go (6" minimum).
5. Remove the core, pack each end with paper, tape both ends with duct tape, and pack cores securely for shipping.
6. A complete Rootzone Analysis will be performed on the top 3" core. This includes a physical analysis (ASTM F1815), complete particle size analysis (ASTM F1632), organic matter analysis minus the top ¼" layer (ASTM F1647, method 2), pH and USGA recommendations for a putting green rootzone mixture.



A2LA Accredited Methods:

ASTM C136 ASTM D421
ASTM D2974 ASTM D2976
ASTM D4972 ASTM F1647
ASTM F1632 ASTM F1815

DAKOTATM
Analytical Inc.

833 Gateway Drive NE
East Grand Forks, MN 56721
701-746-4300 800-424-3443
Fax: 218-773-3151