



Agricultural Services

History

Minnesota Valley Testing Laboratories (MVTL) has a long history in agricultural testing. MVTL was established in 1951 in New Ulm, Minnesota, with additional laboratories added in Nevada, Iowa, in 1967, and Bismarck, North Dakota, in 1977. MVTL has provided a broad range of testing services for over 65 years.

Services

Analytical services are available for agricultural professionals, food processors, environmental consultants, municipalities, and industries. Testing capabilities include a wide variety of matrices, including soil, manure, plant tissue, nematodes, feed, fertilizer, pesticide screens, soil health, bio-solids, compost, water, wastewater, coal, fuels, ground water, leachate, and foods. Sample matrices and client requirements determine the analytical methods for testing these samples.

MVTL has made a strong commitment to customer service. Staff is readily available to address any issues that clients may have and our schedule is set by your needs. Sample status and test results are available electronically through our on-line web portal.

AGRICULTURE

*Dependable and accurate
agricultural testing services with
incredibly fast results.*

www.mvtl.com

MVTL – Scientifically sound testing services delivered with care and confidence.

Staff

MVTL's full-time agriculture laboratory staff has many years of combined experience in agronomic analytical services. Our laboratory staff is proficient in the sciences of chemistry and agronomy, and includes Certified Crop Advisers (CCA). This experience translates into quality workmanship that starts when the sample arrives at the laboratory and continues until the customer receives and understands the results.

Sample Preparation and Login Samples are organized by company, grower, farm, field, and sample ID. Samples are then issued an individual lab ID number for tracking. Enhancements in organizing, layout, and identification ensure accuracy in your final report.



Soil Testing Methodology

MVTL is on the cutting edge of technology while keeping approved methodology in place. The increase in precision soil sampling requires laboratory equipment to be updated regularly to meet increased volume. MVTL partners with engineering firms to design and build robotic laboratory equipment that fits our testing needs. This allows greater efficiencies and consistent, accurate results. The addition of a new 30,000 square ft. agriculture laboratory in 2017 further enables us to meet our customer's needs.

In 2007, MVTL was one of the first laboratories in the Midwest to begin offering low temp soil drying (80-84 degrees). Based upon work with local Crop Consultants and University of Minnesota soil scientists, MVTL became aware that high temperature drying (100-104 degrees) on certain soil types can result in erratic potassium soil test values. Although these high temperatures are standard procedure and adopted by laboratories to provide rapid turn-around time, MVTL recognized the need to make this change to provide the highest quality data to our customers. In 2010, MVTL made significant improvements to the low temp drying procedure maximizing speed and ensuring sample result integrity. MVTL follows North Central Region (NCR)-13 approved methods for all analyses.



Quality Control and Data Review

MVTL takes great pride in the quality of data that is reported to our customers. Three quality control samples are run for every 18 unknowns to check for precision and accuracy. These include a blank extract reading, a check sample, and a duplicate. Each of these has a purpose in determining if a set of data meets strict guidelines outlined in our quality manual. Samples that do not pass these measures will be rerun before final review. When all analyses have been completed for a set of samples they are reviewed by laboratory management for final approval. In this stage, samples are reviewed for accuracy and trends, any data falling out of range will be rechecked. This also allows us to contact our customers with any questions regarding data, prior to result release. This saves our customers time and money.



Laboratory Certification

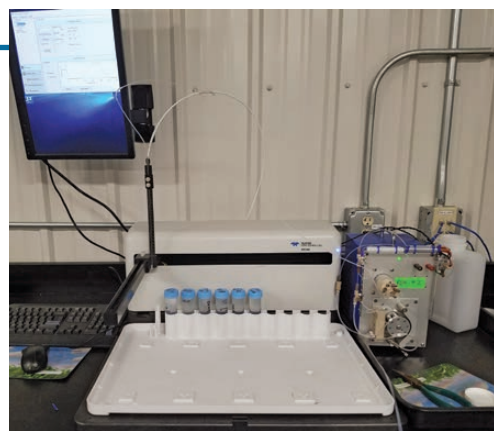
MVTL maintains certifications in Minnesota, Iowa, Missouri, North Dakota, South Dakota, and Wisconsin for soil, plant, and manure testing. Participation in both the North American Proficiency Testing (NAPT) and Agricultural Lab Proficiency (ALP) certification programs ensure results are accurate. MVTL's participation in these programs has been constant since their inception. Certification requirements emphasize the importance of providing accurate analytical results to our customers and MVTL consistently scores in the upper percentile group for all labs participating.

Laboratory certification is also important when participating in United States Department of Agriculture's Natural Resources Conservation Services (USDA-NRCS) 590 nutrient and manure management planning and other cost share programs. MVTL participates in the Performance Assessment program (PAP) through the NAPT that is recognized by USDA-NRCS for nutrient/manure management planning.



Soil Test Endorsements

PH (1:1) WATER	CALCIUM
PH BY CACL2	COPPER
PH BY SIKORA BUFFER	ELECTRICAL CONDUCTIVITY
PH BY WOODRUFF BUFFER	INORGANIC NITROGEN
PHOSPHORUS BY BRAY	IRON
PHOSPHORUS BY MEHLICH-3	MAGNESIUM
PHOSPHORUS BY OLSEN	MANGANESE
POTASSIUM BY AMMONIUM	SODIUM
ACETATE	SOIL ORGANIC MATTER BY LOI
POTASSIUM BY MEHLICH-3	SULFUR
BORON	ZINC



To verify this information, go to the following links.

<http://www.naptprogram.org/about/participants>

<http://soiltesting.agron.iastate.edu/>

<http://www2.mda.state.mn.us/webapp/lis/soillabs.jsp>

<https://datcp.wi.gov/Documents/NMSoilManureLabs.pdf>

<https://www.naptprogram.org/pap/>

Turn-Around Time and Capacity

Turn-around time depends on many factors in the laboratory, including layout, drying, extraction, and analysis. MVTL continues to identify and remove bottlenecks that can cause a delay in turn-around time and consistently manages a 48 hour or less turn-around time for getting data back to you. To achieve this required adequate space for drying and analysis but an even greater factor in our success is MVTL's employees. There are currently 150 employees in the New Ulm location. During the busiest times of the year, well-qualified technicians are brought in from other laboratory departments to help with increased workloads. This large reserve of technicians gives MVTL a competitive edge during the busiest of soil seasons.



Sample Pickup & Shipping

MVTL values your time. We will arrange for free pickup of samples during the heavy volume seasons. This service also coordinates with other service providers you may work with, ensuring samples are delivered to the laboratory in a timely manner. Also, through MVTL's on-line web portal, customers can also print out reduced rate shipping labels.

www.mvttl.com



Data Management

MVTL uses the Northwest Analytical Laboratory Information Management System (LIMS) for data management. LIMS provides an effective way to track the progress of your samples, thus reducing turnaround time. MVTL provides data electronically through their cloud based web portal or through traditional reporting methods. This allows you to import the data directly into a spreadsheet or database saving hours of manual data entry. Our data processing personnel will work with you to develop a report format to fit your needs.

Our secure cloud based website portal allows for instant sample status, data review, and archiving. The customer has the ability to print different sample reports. Sample report information is archived for 8 years, so the customer can access this information effortlessly through an easy search function. The sample submittal function allows information sheet and label printing capabilities. MVTL can set up customer accounts for different locations, branches or report-to authorizations. The customer can receive notifications (email or text) when sample results are posted.

MVTL is able to upload data using application programming interfaces (API) to numerous data management software companies. This process is seamless and works behind the scenes to automatically transfer soil results to your data management software upon final approval. Currently, API interface capabilities include SST Summit, Premiere Crop, EFC Systems, Encirca, Map Shots Ag Studio, Soil Pro, and Midwest Agronomic Professional Solutions (MAPS) SOILMAP.

Data Privacy & Ownership

Once samples are submitted and results are completed, the customer is the only one who has access to the data. MVTL is very conscious of protecting the customer's data. Data will only be released to other parties with documented written authorization from the customer.

Soil Sample Archive

MVTL stores soil samples for a reasonable period of time. This allows our customer adequate time to review data and request additional analysis or rechecks if applicable. An email notification is sent out prior to disposal of samples.

Customer Care

MVTL is committed to providing quality service that meets and exceeds our customer's needs. Our knowledgeable staff is available to answer questions and address concerns that may arise. MVTL staff takes pride in our quality services and values close customer relationships to address any concerns in a timely manner.



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