

Descriptions of Services

The mission of the Montana State University Schutter Diagnostic Laboratory is to provide the highest quality of diagnostic laboratory support service for the identification of plant diseases, insects, plants, and mushrooms.

Routine Diagnosis includes a visual inspection of a sample and may include examination with a dissecting microscope and/or a compound microscope.

An **ELISA** test is an enzyme-linked immunosorbent assay that uses antibodies and color change to detect specific organisms. In the Schutter Diagnostic Laboratory, we use ELISA mainly for the detection of wheat streak mosaic virus. While the test is very sensitive, it is time-consuming and will take days until results are available.

Culturing includes the isolation of a pathogens by transferring the affected plant tissue onto selective agar plates, followed by incubation.

Immunostrips are lateral flow devices for the rapid detection of pathogens. Test kits that the Schutter Diagnostic Laboratory has routinely available are:

Fungi: *Phytophthora* sp.

Viruses: Tobacco Mosaic Virus (TMV), Cucumber Mosaic Virus (CMV), Impatiens Necrotic Spot Virus (INSV), and Tomato Spotted Wilt Virus (TSWV).

Bacteria: *Clavibacter michiganensis* subsp. *michiganensis* (CMM) and *Erwinia amylovora* (Ea).

PCR, polymerase chain reaction, is used to detect pathogens by amplifying the specific DNA of organisms. The Schutter Diagnostic Laboratory uses PCR mainly for the detection of wheat streak mosaic virus.

Service Fees

PLEASE NOTE – WE HAVE NEW FEES STARTING JANUARY 1, 2017!

TESTING SERVICE*	IN-STATE (MT) FEE/SAMPLE	OUT OF STATE FEE/SAMPLE
Routine Diagnosis	none	\$ 50.00
Routine Diagnosis + ELISA**	\$ 60.00	\$ 110.00
Routine Diagnosis + Culturing	\$ 50.00	\$ 100.00
Routine Diagnosis + Immunostrip	\$ 10.00	\$ 60.00
Routine Diagnosis + PCR	\$ 120.00	\$ 170.00
DON-Mycotoxin Testing	\$ 10.00	\$ 60.00
Phytosanitary Testing	\$ 60.00	\$ 110.00

*If you are uncertain which testing is needed, please contact the Schutter Diagnostic Laboratory for more information (diagnostics@montana.edu or 406-994-5150).

**In the case that wheat streak mosaic virus is suspected, please submit at least four (4) symptomatic tillers for ELISA testing.

PAYMENT

The Schutter Diagnostic Laboratory accepts payments only in form of checks. Please make checks payable to "MSU – Schutter Diagnostic Lab".