

Don Smith

Proteomics, Metabolomics, and Mass Spectrometry Facility
Department of Chemistry and Biochemistry

The Proteomics, Metabolomics, and Mass Spectrometry Facility offers state-of-the-art mass spectrometry instrumentation and methods to the Montana State community. Mass spectrometry is an analytical technique that measures the mass-to-charge ratio (m/z) of molecules present in a sample. Mass spectrometers can be used to identify unknown compounds by determining their exact molecular weight, to quantify known compounds in a sample, and to determine structural properties of the molecules by tandem mass spectrometry. Applications of mass spectrometry for “weighing” molecules is broad, and includes forensics, human health and disease, environmental sciences, and biochemistry.

Students will learn modern mass spectrometry techniques, with hands-on training in ionization methods, mass spectrometer operation, and data analysis. Students will collaborate with facility staff to choose a research project that utilizes facility instrumentation. Prerequisites: General Chemistry.

