

GENERAL INFORMATION

The mass spectrometry facility (MSF) at the University of New Mexico is located in the Department of Chemistry & Chemical Biology.

The facility is equipped with modern, state-of-the-art mass spectrometers operated by well-trained staff. The facility offers support for investigators wishing to analyze compounds ranging from organic small molecules to large proteins. The MSF capabilities, instrumentation and rates are summarized in the enclosed table. Investigative and collaborative projects welcomed.

The MSF is the only place in the State of New Mexico where investigators can access such advanced mass spectrometry capabilities.

PERSONNEL

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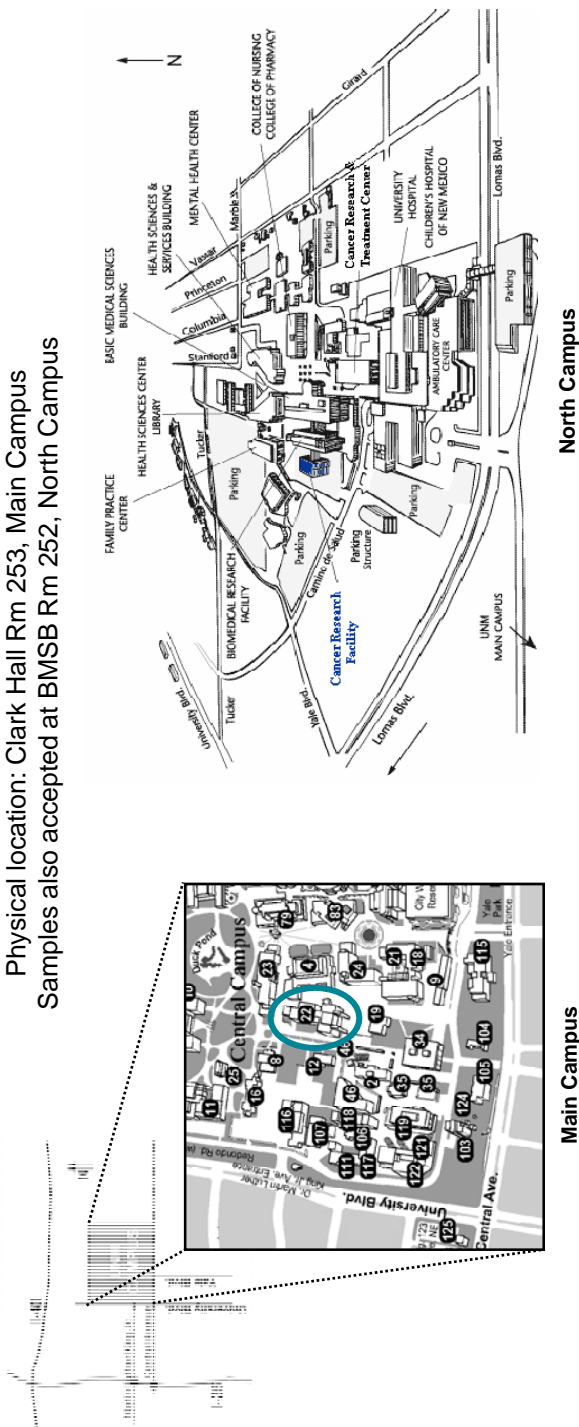
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HOW TO FIND US

Physical location: Clark Hall Rm 253, Main Campus
Samples also accepted at BMSB Rm 252, North Campus



The University of New Mexico
MASS SPECTROMETRY FACILITY
AFFILIATED WITH THE CANCER RESEARCH
TREATMENT CENTER



<http://masspec.unm.edu>
<http://hsc.unm.edu/crtc/proteomics>

UNM Mass Spectrometry Facility – Routine Analyses*

Sample Type	Service Type	MS Analysis Type	Instrument	Rates	Comments
Small molecules (synthetic/natural)	Exact mass measurement	High resolution ESI+ or ESI-, APCI, APPI	Waters LCT premier (ESI-ToF)	\$30/sample	Provide vital information about the exact elemental composition of compound that can be use to verify the synthesis and compound identification
Small molecules (synthetic/natural)	Compound detection	Unit resolution ESI+ or ESI-, APCI, APPI	Waters LCT premier (ESI-ToF)	\$15/sample	Peak at specific mass can verify the presence of particular compound in the sample
Small molecules (synthetic/natural)	Partial structural characterization	Various	Waters LCT premier (ESI-ToF)	Per Hour	The use of in-source collision induced dissociation will yield structural information.
Small molecules (volatile/hydrophobic)	Detection / purity	Various	Finnigan TSQ-7000 (triple quad)	Per Hour	Presence of volatile compound and their purity can be determined
Small molecules (synthetic/natural)	Quantification	Various	Finnigan TSQ-7000 (triple quad)	Per Hour	With an internal standard, exact quantity of a compound can be determined
Protein(s)	Intact protein mass measurement	On-line LC-ESIMS with high resolution	Waters LCT premier (ESI-ToF)	\$50/sample	Accurate mass measurement of intact protein confirms protein ID
Protein(s)	Peptide mapping/ Identification of PTM	On-line LC-ESIMS with high resolution	Waters LCT premier (ESI-ToF)	\$150/hr	Types and sites of post translational modifications in proteins can be determined
Protein(s)	Peptide mapping/ Identification of PTM	MALDI based MS MS/MS, data base searching	Applied Biosystems 4700 (MALDI ToF-ToF)	\$50/spot	PTM identification and protein characterization
Protein complex (simple)	Protein identification	In-gel digestion, MALDI spotting, MS+MS/MS, data base searching	Applied Biosystems 4700 (MALDI ToF-ToF)	see webpage	Protein identification with high level of confidence
Protein complex (complicated)	Protein identification	2D-LC, MALDI spotting, MS+MS/MS, data base searching	Applied Biosystems 4700 (MALDI ToF-ToF)	see webpage	Protein identification with high level of confidence
Protein complex (cell lysate)	Protein expression & quantification	Protein digestion, iTRAQ labeling, 2D-LC, MALDI spotting, MS+MS/MS, data base searching	Applied Biosystems 4700 (MALDI ToF-ToF)	see webpage	Identification and quantification of up and down regulated proteins in various tissue types / sources
Protein(s)	Partial sequencing	MS+MS/MS, data base searching	Applied Biosystems 4700 (MALDI ToF-ToF)	\$100/hr	High quality and complete MS/MS will improve the denovo sequencing.
Small molecules and Biomolecules	Chromotography separations	HPLC	Shimadzu	\$100/hr	Cleanup or separations of mixtures

•special sample analyses and larger collaboratory research are also available upon consultation with the facility directors