**Facility Details**

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**Low Resolution Gas Chromatography Mass Spectrometry (GCMS) and Low Resolution Liquid Chromatography Mass Spectrometry (LCMS)**

**Location: GCIS Building in Room E449**

* Agilent 6130 LCMS: installed with VWD detector and ESI ion source; majorly for molecular weight confirmation of synthetic compounds of organic and inorganic molecules and/or separation of reaction mixtures of organic molecules
* Agilent 5977A GCMS: installed with EI/CI ion source; majorly for the separation of reaction mixtures of organic compounds with lower boiling points

**Location: Searle Building in Room 340A**

* Varian Saturn 2000 GCMS: installed with EI ion source; ideal for volatile and semivolatile organic molecules
* Agilent 6130 LCMS: installed with DAD detector and ESI/APCI multimode ion source; majorly for molecular weight confirmation of synthetic compounds of organic and inorganic molecules and/or separation of reaction mixtures of organic molecules

**High Resolution Accurate Mass Spectrometry with Electrospray Ionization (HRA-ESI) or Electron Ionization (HRA-EI)**

**Location: Searle Building in Room 340A**

* Agilent 6224 Tof: installed with ESI/APCI ion source; excellent for accurate mass measurements of synthetic compounds of both organic and inorganic molecules to meet publication requirements
* Agilent 7200B Q-Tof GC: installed with EI ion source and MS/MS technique; meet publication requirement of accurate mass measurement for low boiling point organic molecules; excellent for targets, un-targets and unknowns; ideal for metabolomics, nature products, contaminants (pesticides, etc.) screening, etc.

**Target and Discovery LCMS for Biological Related Samples**

**Location: GCIS Building in Room E449**

* Agilent 6540 Q-Tof LCMS: installed with AJS-ESI ion source, MS/MS technique, DAD detector and internal reference pump; excellent for simple proteomics, metabolomics and biomarkers
* Agilent 6460 Triple Quad LCMS: mounted with AJS-ESI ion source and MS/MS technique; high sensitivity and selectivity; excellent for target quantitation via MRM technique

**Low Resolution or High Resolution Matrix-Assisted Laser Desorption/Ionization Tome-of-Flight (MALDI-Tof)**

**Location: GCIS Building in Room E449**

* Bruker autoflex maX MALDI-Tof/Tof: installed with both linear and reflector detectors, MS and MS/MS techniques; capable of MALDI Imaging analysis such as mapping drugs/biomarkers/proteins/etc. in tissues; able for rapid identification of organisms from microbial cultures; excellent for rapid screening of non-volatile organics, inorganics, polymers, peptides/proteins, lipids, oligoes, etc.
* Bruker Ultraflextreme MALDI-Tof/Tof: installed with both linear and reflector detectors, MS and MS/MS techniques, good for sequence proteins, mapping biomolecules in tissues, identify microorganisms, and analyze peptides, proteins, RNA, synthetic compounds, large synthetic polymers, etc.

**Gas Chromatography (GC):**

**Location: GCIS Building in Room E534**

* Agilent 7890B GC: installed with both FID and TCD detectors; ideal for the separation of permanent gas (H2, CO, CH4, CO2, N2, O2, etc.) and light hydrocarbons (C2-C3)

**Fourier Transform Infrared Spectroscopy (FT-IR)**

**Location: Searle Building in Room 340A**

* Thermo Nicolet iS50 Flex FT-IR: installed with DLaTGS Detector and KBr window; mid-IR only and transmission measurement only

**Location: GCIS Building in Room E449**

* Thermo Nicolet iS50 Advanced FT-IR: capable for near-, far-, and mid-IR measurements; two sample compartments, Main for transmission measurements and B-ATR (Built-in Attenuated Total Reflection) for reflection measurements; extra Smart SAGA (Specular Apertured Grazing Angle) Accessory for thin film analyses.

**Publication Acknowledgments**

Please acknowledge the NSF instrumentation grant CHE-1048528 in publications that include results or spectra obtained in the MS Facility. For supporting future grant applications, we would appreciate if our users can acknowledge the UofC MS facility in your publication