Equipment Details

Mass Spectrometers

LC/MS/MS system including Shimadzu 20A UFLC HPLC and AB Sciex 5500Qtrap with Parker Balston 5000 gas generator

- Predominantly for ultra-sensitive quantification of drugs from tissue, plasma, and in vitro samples, and metabolite identification study with Information-Dependent Acquisition techniques
- Performs multiple reaction monitoring (MRM) for quantitation using this high-sensitivity triple quadrupole system
- Identify, characterize, and quantitate metabolites more quickly and easily
- Discover and quantitate targeted drug lever and biomarkers
- Detector type: AcQuRate Pulse Counting CEM
- Ionization sources: Turbo IonSpray, ESI and APCI
- Scan types: Q1 MS, Q3 MS, Product Ion, Precursor Ion, Neutral Loss or Gain, MRM, EMS, EPI, ER, MS3, NRM3, TripleTrap

LC/MS/MS system including Shimadzu 20A UFLC HPLC and AB Sciex 4500Qtrap with Peak ABN2ZA gas generator

- Robustness and performance for the application of contaminant analysis, drug monitoring research, peptide quantitation, drug discovery and development
- Ionization sources: Turbo IonSpray, ESI and APCI
- Scan types: Q1 MS, Q3 MS, Product Ion, Precursor Ion, Neutral Loss or Gain, MRM, EMS, EPI, ER, MS3, NRM3, TripleTrap
- Mass range： 5~1000 Da
- Resolution: > 12,000 FWHM（Trap）
- Sensitivity: Improved MRM sensitivity by 10X vs. Qtrap 3200
- Scan speed： up to 12,000 Da/sec

Waters Xevo TQD Triple Quadrupole Mass Spectrometer with UPLC built in.

- A faster device for sensitive chemical detection with a wide range of molecular mass-to-charge ratio, up to 2000 M/Z.

LC/MS/MS system including Agilent 1200 HPLC and AB Sciex 3200Qtrap with Peak ABN2ZA gas generator

- The system performs Multiple Reaction Monitoring (MRM) scans for highest quantitative sensitivity
- Mass Accuracy (with internal reference): 20 mmu
- Dynamic Range: 1 cps to 4x106 cps (pulse counting)
- Mass Range: m/z 5-1,700-quad mode and 50-1,700- linear ion trap mode
- Scan speed: up to 2400 amu/sec in quad mode, up to 4000 amu/sec in linear ion trap mode
- Scan types: Q1 MS, Q3 MS, Product Ion, Precursor Ion, Neutral Loss or Gain, MRM, EMS, EPI, ER, MS3, NRM3, TripleTrap

Waters SYNAPT G2-Si uses StepWave and UPLC separations with Quantitative Time-of-Flight technologies.

- Enables extensive characterization of complex mixtures and molecules with high specificity. When integrated with imaging software, this technology permits detection and spatial resolution in a heat map format without the need for radioactive tracers.

SCIEX X500 QTOF System HPLC separations with Quantitative Time-of-Flight technologies

- High performance accurate mass spectrometer appropriate for Food/Environmental/Forensic routine tests.
- Includes: Turbo V Source for X500R that accepts either the ESI Probe or APCI Probe A source combining ESI and APCI (Atmospheric Pressure Chemical Ionization) modes for automated calibration.
- The All-in-One HR-MS/MS library contains the high resolution MS/MS spectra in positive and negative ion mode (where appropriate) comprising more than 2200 compounds. The high resolution library is designed for library searching against high resolution product ion data generated on the Triple TOF series of instruments.

Other Instruments

Shimadzu LC-6AD semi-preparative HPLC system

Shimadzu 20A UFPC HPLC system

Thermo DNA120 SpeedVac concentrators

Thermo Legend X1R centrifuge

Eppendorf centrifuges 5424 and 5424R

Precellys Evolution homogenizer