

## Organic Analysis and Preparation Methods

- Agilent 6890/5973 GC/MS system for headspace analysis of volatile compounds in solids or liquids
- Agilent 7890/5973 with Perkin-Elmer Thermal Desorber for analysis of air samples concentrated on sorbent tubes
- Agilent 7890/5975C GC/MS system with CombiPal sample introduction system for liquid, headspace or Solid Phase Micro Extraction (SPME) analysis. Capable of positive or negative EI and CI ionization
- Varian 3000 GC/TCD for % level digester gas analysis
- Shimadzu GC14 with HID universal detector for hydrogen analysis
- Shimadzu GC14 with FID/TCD and headspace sampler for light hydrocarbon and fixed has analysis
- Agilent 1200/6220 Liquid Chromatograph/Time-of-flight Mass Spectrometer for untargeted screening in liquid samples using high-resolution mass spectrometry
- Agilent 1290/6490 LC-QqQ triple quadrupole LC/MS/MS for ultra-low (ng/L) detection limits for target compounds in aqueous matrices
- Agilent 1100 HPLC with Diode Array (DAD) and Evaporative Light Scattering (ELSD) detectors for traditional HPLC/UV-Vis methods, in addition to analysis of compounds lacking a chromophore (i.e. sugars)
- Air samples via sorbent tubes
- Air samples via direct injection through sample valve headspace samples in 20 mL headspace vials
- Solid Phase Extraction (SPE) of organic compounds in water samples on C18 or mixed-mode resin cartridges
- Solid Phase Microextraction (SPME)
- Liquid-Liquid extractions via sep funnel
- Liquid-Solid extractions via traditional Soxhlet or ThermoFisher-Dionix Accelerate Solvent Extraction methods

## Elemental Analysis & Sample Preparation

- Agilent 7700x Inductively Coupled Plasma Mass Spectrometer for analysis of trace elements
- Perkin-Elmer AAnalyst 800 Atomic Absorption Spectrometer for analysis of metals by flame AA, and trace metals by graphite furnace AA, and arsenic, selenium, and mercury by hydride generation AA
- Milestone Ethos EZ Microwave Digestion System
- Environmental Express Hotblocks

## Nutrient Analysis

- Seal AQ2+ Automated Discrete Analyzer for ammonium, nitrate, nitrite and phosphate

### **Radiochemical Analysis**

- Beckman LS 6500 Liquid Scintillation System for <sup>14</sup>C and <sup>3</sup>H tracer studies
- Biological Oxidizers for sample preparation for radiochemical analysis of plant and soil samples

### **Ion Chromatography**

- Dionex DX-500 ion chromatograph for common anions and volatile fatty acids
- Dionex DX-1300 ion chromatograph (including a reagent free system, a gradient pump (GP40) and an electrical conductivity detector (CD20)) for common cations and anions and volatile fatty acids
- Dionex DX-1600 ion chromatograph with post column reaction and UV-VIS detection for hexavalent chromium

### **Microbiology**

- Bio-Rad iQ5 Real Time PCR Detection System for quantitation of targeted DNA sequences
- Thermo Electronics Px2 thermal cycler for standard PCR
- EC-Apparatus Co EC 570 gel electrophoresis apparatus
- FisherBiotech Model FBTI 816 Gel transilluminator and Kodak Gel Logic 100 imaging system for gel imaging and processing
- Thermo Scientific Nanodrop 1000 spectrophotometer for quantitation of total DNA
- Thermo Scientific Nanodrop 3300 fluorospectrometer for quantitation of total DNA
- Four reach-in incubators that can be operated at sub- and super-ambient temperatures, a laminar flow hood, biological safety hood, a -70° C Revco freezer, and microscopes with phase-contrast and epifluorescence capability

### **Facilities**

- Two Coy anaerobic glove bags
- Two constant temperature rooms of approximately 400 square feet of floor space each that are capable of maintaining temperatures of between 10° and 30 ± 2° C