Facilities

Automated Thermal Desorption Gas Chromatography coupled to mass spectrometry (TD-GC-MS/MS)

Make: Thermo Fisher Scientific

Model: GC- Trace 1300 equipped with TSQ DUO MS

Analysis/Application: Qualitative and quantitative analysis of VOCs and Semi-VOCs and Organics using three different detectors MS/MS, FID and ECD.

Atomic Absorption Spectrophotometer (AAS)

Make: Thermo Fisher Scientific, UK) with Hydride generation
Model: iCE-3000

Analysis/Application: Ni, Cd, V, Cu, Sn, Co, Cr, Al, Fe, As, Mn, Mo, Hg, Zn, Pb, Sb, Na, K, Li, Ca
Three approaches are attached with AAS: 1) Vapor generator for AS and Hg, flame mode and graphite furnace

X-ray diffraction (XRD)
Make: BRUKER

Model: D2 PHASER
Analysis/Application: Crystalline phase, orientation and crystallographic information.

Ion Chromatography

Make: Thermo Fisher Scientific, UK

Model: Dionex 2000

Analysis/Application: Anions (e.g., fluoride, chloride, nitrate, sulfate and phosphate); and cations (e.g., ammonium, sodium, magnesium, potassium, and calcium)

Nuclear Magnetic Resonance (NMR)

Make: Bruker

Model: ASCEND 400

Analysis/Application: Molecular structure of a material to be analyzed by observing and measuring the interaction of nuclear spins. (Organic, inorganic compounds, plant extract etc.)

High Performance Liquid Chromatography (HPLC)

Make: Thermo Fisher Scientific, USA

Model: HPG-3200SD

Analysis/Application: Separate a mixture of compounds, Vitamins, Proteins, biomolecules etc.