

Trace Organic Analysis Center within the Department of Environmental and Occupational Health Sciences provides analytical chemistry support and access to instrumentation on a fee-for service basis (not-for-profit). The Environmental Health Laboratory has been an American Industrial Hygiene Association-LAP, LLC (AIHA)-accredited laboratory since 1977 and is ISO/IEC 17025 compliant. AIHA certification requires quarterly proficiency testing and biennial inspection. Missions of the Environmental Health Laboratory include support of industrial hygiene and occupational medicine investigations for corporate and labor organizations throughout Washington State as a free service. The Center and Laboratory share personnel and laboratory space (6 fully equipped laboratory rooms, 2, 300 ft²).

These laboratories are under the direction of Russell Dills, (Ph.D. toxicology; B.S. chemistry) and supervision of Susan Tao (Ph.D. chemistry). The combined staff in addition includes hourly research technician, 5.5 research scientists and a program operations manager. The lab supervisor is also the quality assurance manager.

Table 1: Major Instruments Available in the Trace Organic Analysis Center

Organic Analysis	Liquid Chromatography (LC)	Agilent 1200, binary pump, UV & FL detectors
	Gas Chromatography (GC)	Agilent 7890, 7693 autosampler, TCD and FID detector, split/splitless inlet; Agilent 6890N, 7683 autosampler, FID detector, split/splitless inlet.
	GC-Mass Spectrometry (GC/MS & GC/MS/MS)	Agilent 7890/5973-inert, EI and CI capabilities, multimode inlet, cryo, 7693 autosampler; 2 Agilent 5890/5972 upgraded with metal quads, EI capability, 7673 autosampler, split/splitless and on-column inlets, cryo. Agilent 7890B/7000 GC/MS/MS with autosampler Thermo Trace 1310/ESQ GC/MS with Markes TD-100 Automated Thermal Desorption & Frontier EGA/PY 3030D Multi-shot pyrolyzer accessories
	LC/MS/MS	Agilent 6410, ES and APCI inlets, 1200 quaternary pump; Agilent 6460, ES and Jetstream inlets, 1200 quaternary pump, well plate compatible autosampler, thermostatic control for autosampler.
Inorganic Analysis	Ion Chromatograph	Metrohm 881 IC system, post-column derivatization system, UV and conductivity detectors; Dionex ICS-1000 system, autosampler, conductivity detector.
	Specific metals analysis	Atomic Fluorescence; Hg & As
	Inductively-Coupled Plasma Mass Spectrometry (ICPMS)	Agilent 7500CE with collision cell (He), data system, CETAC ASX-500 autosampler, SC-Micro autosampler, Agilent 1100 quaternary HPLC system (speciation)
Other Analytical Equipment	FTIR, Shimadzu Prestige-21, gas cell, thin film, and pellet capability FTIR, Bruker, Tensor 27, gas cell, thin film, and pellet capability Microwave Digestion Oven, CEM MARS, HTV & express vessels Microbalance, Mettler UMX-2 XRF, Portable, Bruker S1-Turbo SonicatorXL, high-energy probe Freeze-drier, Labconco, Triad. Turbovap, solvent evaporators (4)	