











Available instrumentation:

Instrument	Model/features	Analysis
ICP-MS 	Perkin Elmer ELAN-DRCe with optional front-end Perkin Elmer series 200 HPLC. Available DRC gases include NH3 and O2.	Virtually any element, notably metals. The instrument is equipped with a dedicated HPLC that allows differentiation of some important species, for instance arsenic or chromium.
GC-MS 	Shimadzu GCMS-QP2010 plus	Volatile and semi-volatile species, including disinfection by-products (DBPs), pesticides, residuals of pharmaceuticals and personal care products (PPCPs) among others
GC-ECD 	Shimadzu GC-2010 with ECD detector	Volatile and semi-volatile species, including DBPs, halogenated solvents, aldehydes, carboxylic and fatty acids, among others.
GC-FID 	Shimadzu GC-2010 with FID detector	Volatile and semi-volatile species, including aldehydes, carboxylic, and fatty acids, among others
GC-FID 	Hewlett Packard 6890 series	Fatty acids only, method developed for 16 and 18 PUFAs
HPLC-UV/VIS/FLD 	UltiMate 3000 HPLC with attached Dionex RF 2000 Fluorescence Detector and UltiMate 3000 Diode Array Detector with temperature controlled autosampler and column compartment	Many organic compounds and products of their degradation.
LC-MS 	ABI 4000 Q TRAP with front-end Shimadzu 20AD HPLC and attached UV/VIS detector with temperature controlled autosampler and column compartment	Multiple classes of trace-level organic species, including endocrine disruptors, residuals of pharmaceuticals and personal care products.

<p>IC</p> 	<p>Dionex ICS-3000 with conductivity and electrochemical detectors</p>	<p>Inorganic anions (fluoride, chloride, nitrate, sulfate, bromide etc.), carboxylic acids, amino acids, carbohydrates, etc.</p>
<p>TOC/TON</p> 	<p>Shimadzu TOC-Vcsh with attached TNM-1 unit</p>	<p>Inorganic and organic carbon, total nitrogen</p>
<p>TOC</p> 	<p>GE Sievers 900 Portable TOC Analyzer with front-end Dionex UltiMate 3000 HPLC (no temperature control on column compartment)</p>	<p>Total organic carbon, inorganic carbon. The instrument can also be utilized for resolving carbon fractions by size exclusion or other chromatographic approaches.</p>
<p>Solar Simulator</p> 	<p>Atlas Suntest XLS+</p>	<p>Provides a chamber capable of accommodating large sample volumes (&gt;1 L) with constant simulated solar light. Temperature can be controlled using a water bath equipped with a recirculating chiller.</p>
<p>SPE Workstation</p> 	<p>Caliper Autotrace SPE Workstation</p>	<p>Solid phase extraction workstation; designed for varying sample volumes, high throughput, and automation of sample prep</p>
<p>Microwave Digester</p> 	<p>Anton Parr Multiwave 3000</p>	<p>Digestion system to break down complex environmental samples prior to analysis. May be used for accelerated organic solvent extractions or acid digestions. Required for many ICP-MS analyses.</p>

For more information, please visit the EEAC main page:

[http://www.ce.washington.edu/research/environment/analytical\\_center.html](http://www.ce.washington.edu/research/environment/analytical_center.html)