

Faculty and staff scientists at the Wisconsin State Laboratory of Hygiene (WSLH) at UW-Madison are uniquely positioned to meet your analytical laboratory needs. For more than 100 years, the WSLH has provided clinical, environmental and occupational laboratory expertise to academic, healthcare, governmental and private-sector organizations across Wisconsin, the nation and internationally. Examples include:

Analyzing clinical specimens for **ultra-low levels of cadmium** as part of **cancer** studies by the University of Wisconsin Paul P. Carbone Comprehensive Cancer Center.

Researching the genetic causes of developmental delay, mental retardation and stillbirth by scanning **gene expression** and **comparative genomic hybridization (CGH) arrays**.

Collaborating with UW College of **Engineering** researchers on analyses of ambient **air** and vehicle emissions for up to **50 elements**.

WSLH facilities offer researchers state-of-the-art analytical testing capabilities, including a Trace Elements Clean Laboratory, two BSL-3 level laboratories and \$20 million in analytical equipment, including:

- **Multiple Real-Time PCR systems**
- **An Inductively Coupled Plasma-High Resolution Mass Spectrometer system**
- **High Performance Liquid Chromatograph-Tandem Mass Spectrometers**
- **A Microarray Chip Optical Scanner**
- **Nucleic Acid Sequencing systems**

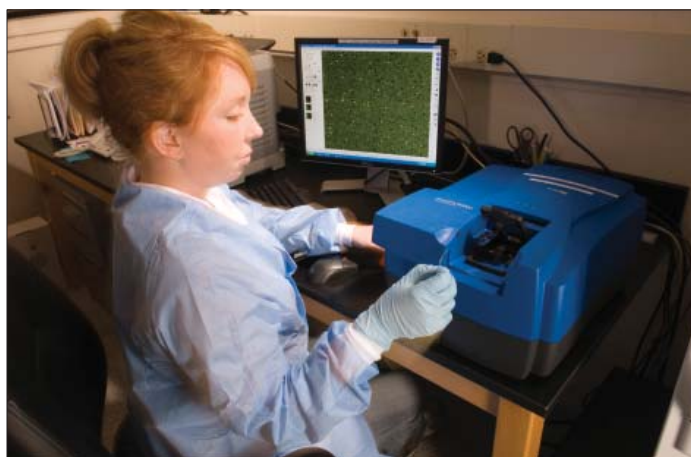
WSLH staff may also train your researchers and students to use this equipment to conduct analyses.

Our scientists, many of whom conduct research themselves, can assist you with proposal preparation, including designing testing methods and laboratory data collection models. They can also assist with results interpretation.

As the state's public health laboratory, researchers can benefit from the WSLH's close working relationships with local, state, and federal health and environmental agencies, as well as private-sector laboratories to link your research with the professionals putting science into practice.



In the Trace Element Clean Laboratory, a WSLH chemist prepares to analyze samples on an inductively coupled plasma-mass spectrometer (ICP-MS), which can test clinical and environmental samples for a variety of elements, including toxic metals at very low levels. In the background is an inductively coupled plasma-high resolution mass spectrometer (HR-ICP-MS) that can further resolve individual isotopes of elements at extremely low concentrations.



A WSLH cytogeneticist performs comparative genomic hybridization (CGH) using microarray technology that can test one patient specimen for up to 140 disorders. This technology is useful for patients who have non-specific, global developmental disorders.



A WSLH microbiologist reviews data from molecular analyses of clinical specimens using real-time PCR.

Photos by Bob Rashid

Advantages to Working with the Wisconsin State Laboratory of Hygiene

The Wisconsin State Laboratory of Hygiene (WSLH) is part of the University of Wisconsin-Madison and has years of experience partnering with faculty and staff at UW-Madison and other academic institutions across the country.

- Many WSLH scientists are experienced researchers themselves and hold UW-Madison faculty and academic staff appointments in the School of Medicine and Public Health, the College of Engineering and the College of Agricultural and Life Sciences.
- The WSLH can perform a wide range of clinical and environmental tests, including reference tests, ultra trace analyses and cutting-edge technology tests.
- WSLH staff work through UW Research and Sponsored Programs and use the same UW-Madison accounting processes as the rest of campus, so interactions with the WSLH can be relatively seamless.

Contact the WSLH Research Support Center at 608-890-1093 or research@slh.wisc.edu to discuss your needs.

Wisconsin State Laboratory of Hygiene Locations



Photo by Del Brown

Clinical Laboratories and Administration
465 Henry Mall
Madison, WI 53706



Environmental and Occupational Health
2601 Agriculture Drive
Madison, WI 53718

Your Laboratory Partner in Research