



News Release

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ECBC's Environmental BioMonitoring Laboratory focuses on the future

Aberdeen Proving Ground, Md. — Mindful of the tragedy of Sept. 11, 2001, and the anthrax attacks that followed, Edgewood Chemical Biological Center's (ECBC) Environmental BioMonitoring Laboratory (EBML) staff focuses on developing technologies and services that address the new world demands for global accreditation, increased service offerings, laboratory flexibility and quality control.

"We continue to work towards continuous expansion and leading the way in environmental bioanalytical laboratory services that meets the needs of the world post Sept. 11," said Isaac Fruchey, EBML team leader.

With this global view, EBML offers a variety of biosafety level one and two analytical technical services and is pursuing International Organization for Standardization (ISO)17025:2005 accreditation that is slated for completion in early 2009.

"This [accreditation] will increase confidence levels in analytical results and holds the laboratory accountable to internationally-recognized standards for testing and calibration, which is crucial to our continued success," Fruchey said.

Evolving as a broad-service bioanalytical laboratory, EBML is outfitted with modern facilities and equipment. The lab provides a wide range of environmental analytical testing services and, its staff has hands-on experience with a variety of challenging environmental sample matrices including soil, filters, high efficiency particulate air vacuum filters, biological sampling kits, surface swipes and cotton swabs.

"In our laboratory, we offer complementary technologies for the qualitative detection of both biological toxins and organisms," Fruchey said. "Our high-throughput screening approach allows us to provide same-day results for most samples, with a turnaround time of approximately six hours for complete analysis. This same-day service has an immediate impact on our clients."

As client demands for flexibility increase, EBML has been able to offer on-site and field-deployable biological hazardous material testing capabilities. Now, ECBC clients have the ability to send environmental samples to the EBML or have the lab deployed to the sample in the field or incident area.

“We outfitted the mobile laboratory with duplicate equipment from our fixed laboratory,” Fruchey said. “If a large number of samples are being generated at a remote location, the best solution is to bring the laboratory to the site, which is why we developed a seamless transition from fixed laboratory operations to field operations.”

After processing more than 10,000 samples for government agencies including the U.S. Army Corp of Engineers and the FBI, EBML continues its focus on maintaining quality.

“Our staff works closely with customers to determine best fit methods, custom configurations and specialized equipment test-outs that provide professional, defensible and cost effective analytical laboratory services,” Fruchey said. “As EBML continues to grow we will continue to focus on offering our clients the best in high-quality, timely service.”

Other EBML capabilities include:

- Monitoring, high-throughput analysis and detection of seven biological warfare agents utilizing robotics and high-speed instrumentation. With this capability, EBML can analyze 96 samples in an eight-hour time frame for seven targets using electrochemiluminescence detection and polymerase chain reaction technology.
- Presumptive identification for biowarfare agents using enzyme-linked immunosorbent assays, hand-held assays and gel electrophoresis.
- Identification of bacterial agents using cell culture coupled with traditional and fluorescence microscopy
- Analysis of samples for bacterial identification using a technology based on gas chromatographic analysis of cellular fatty acid methyl esters using the Microbial Identification System (MIDI).
- Routine identification of over 1,500 species of anaerobic and aerobic bacteria, to include six major bacterial bioterrorism agents, using the Sherlock Bioterrorism Library. In less than 10 minutes, the library can identify extract from anthrax, brucellosis, glanders, tularemia, melioidosis, plague and 15 challenge organisms.

EBML serves as a leading technical resource and “go-to lab” that addresses environmentally-related laboratory issues for its customers while providing high-quality, defensible data. EBML supports the Department of Defense Joint Program Executive Office for Chemical and Biological Defense, the Chemical Biological Medical Systems Critical Reagents Program and other government agencies. For the private sector, EBML performs technical support under test service agreements and cooperative research and development agreements.

ECBC is the Army's principal research and development center for chemical and biological defense technology, engineering and services. ECBC has achieved major technological advances for national defense, civilian needs and industrial competitiveness, with a long and distinguished history of providing the Armed Forces with quality systems and outstanding customer service. ECBC is a U.S. Army Research and Development Command laboratory located at the Edgewood Area of Aberdeen Proving Ground, Md. For more information about ECBC, please visit our Web site at <http://www.ecbc.army.mil> or call (410) 436-3610.

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