



## ADVANCED CHEMISTRY LABORATORY | ACL

The Advanced Chemistry Laboratory (ACL) is a unique facility designed for working with the most super toxic compounds known to man. The ACL allows the U.S. Army Edgewood Chemical Biological Center's (ECBC) world-leading scientists to conduct groundbreaking chemical research that benefits the nation's warfighters on the battlefield today and in the future.



Highly instrumented and adaptable, the ACL is designed for flexibility so that it can address the ever-changing requirements of scientific advancement. Safety in and outside the laboratory is a primary consideration. Engineering controls such as sophisticated ventilation and filtration systems protect scientists inside the lab as well as the surrounding communities and environment. The ACL moves U.S. defense capabilities a giant step forward.

Primary facilities within the ACL include advanced toxic agent laboratories, environmental chambers, and secure work spaces for classified materials. Chemical agent operations in this building include analytical chemistry, Chemical Weapons Convention (CWC) treaty support, filtration, decontamination and evaluation of chemical agent detectors.

A central feature of the lab is a suite of Nuclear Magnetic Resonance (NMR) spectrometers. The NMR spectrometer suite, a critical tool that helps scientists identify the molecular structure of chemicals, provides support to researchers working in the fields of decontamination, carbon studies and sample analysis for the CWC treaty.

In addition to supporting ECBC's warfighter mission, the ACL allows the Center to continue to serve the homeland security community as well as all federal agencies, including the intelligence community, Federal Bureau of Investigation, Department of Justice and the Department of State.

Phase I of the ACL replaced a laboratory constructed in February 1963 to accommodate today's specialized research with 75,000 square feet of modern laboratory space. The primary facilities constructed in Phase I included advanced toxic agent laboratories for filtration, environmental chambers, a suite of NMR spectrometers, decontamination chemical synthesis physical properties and secure work spaces for classified materials at a cost of \$46M. One third of the cost was for engineering controls, fume hoods, and filters, which are paramount to providing a safety environment.

Phase II of the ACL will realize the original plans for the construction and add approximately 11,000 square feet of laboratory space and 12,000 square feet of admin space. The primary facilities that will be built in Phase II include surface science, materials science, point detection, decontamination and chemistry laboratories at a cost of \$15.5M.

For more information, contact the  
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