

## DEPLOYABLE BIOLOGICAL LABORATORY

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Deployable Biological Laboratory represents a laboratory with a capability for fast on-site diagnostics. It combines functionality, efficient use of space and flexibility in a BSL-3 containment. In the case of attack with weapons for mass destruction and biological agents, a rapid and effective response and correct identification of the biological agents is extremely important. The Deployable Biological Laboratory containment integrates different instruments with hard and software support. The equipment enables data identification, communication, transmission of NBC reports. The NBC-Filtration System is operated with NBC-Filters and provides protection against NBC-warfare in laboratory. Positive pressure system assures clean air in the laboratory as well as the negative pressure system in the glove box assures clean and safe working environment.

Deployable Biological Laboratory is divided into 3 compartments:

- engine room,
- shower room,
- laboratory with BSL3 cabinet (glove box).

High quality BSL3 cabinet and instruments for the microbiological diagnostics enable accurate detection and identification of microorganisms which could be potential bioterroristic agents. With such containment, Deployable Biological Laboratory can provide safe, fast and accurate working process. Methods for direct and indirect detection of microorganisms performed in the Deployable Biological Laboratory include:

- molecular-biological methods (detection of the nucleic acids, PCR),
- light and fluorescent microscopy,
- serological testing (detection of specific antibodies as a response to the infection),
- safe sample handling in the laboratory/glove box ("hot/hazard" input),
- survey of the results and output of the data.

In the case of bioterroristic act, the prompt response to the threat is one of the key elements.

The operating time of the Deployable Biological Laboratory allows identification of most likely used bioterroristic agents in several hours:

- Bacillus anthracis (Anthrax), Yersinia pestis (Plague), Francisella tularensis (Tularemia) – identification within 2 hours (normal working procedure),
- Coxiella burnetii (Q fever), hemorrhagic fever viruses (Ebola, Lassa, CCHF, etc.) - identification within 2 hours (normal working procedure).

Deployable Biological Laboratory can be further customized to fit specific needs.

