

Joint Biological Agent Identification and Diagnostic System (JBAIDS)

Executive Summary

- The Service Operational Test Agencies (OTAs) conducted a follow-on test on the Joint Biological Agent Identification and Diagnostic System (JBAIDS) December 1-17, 2008.
- JBAIDS used in conjunction with the Platinum Path Extraction sample preparation kit improves the operational effectiveness of the currently fielded system. The Platinum Path Extraction Kit provides increased sensitivity, reduced sample processing time, and reduced risk of cross contamination.
- System modifications post full-rate production improved the reliability and suitability of the JBAIDS system. The Platinum Path Extraction Kit has a reduced logistics footprint and reduces the need for support equipment over the currently fielded set of extraction kits.

System

- JBAIDS is to provide biological agent identification and diagnostic capability for fixed-site, mobile (shelter, man portable, and trailer), and shipboard applications.
- The Services intend the JBAIDS to be a reusable, portable, biological agent identification and diagnostic system capable of identifying multiple biological warfare agents (BWAs) simultaneously.
- JBAIDS is designed to provide enhanced capabilities to the warfighter to identify conventional infectious organisms that occur naturally in the environment and in BWAs.
- JBAIDS is intended to satisfy a need to rapidly identify these BWAs in environmental samples and in clinical samples after Food and Drug Administration certification.
- JBAIDS consists of an analytical device, sample preparation kits, reagent kits, laptop computer, and other support equipment.
- JBAIDS is intended to be employed in units such as:
 - Army Area Medical Laboratories
 - Army Combat Support Hospitals
 - Army Veterinary Food Service Analysis Laboratories

Activity

- The Service OTAs conducted a follow-on test on the JBAIDS using the Platinum Path Extraction Kit to prepare samples for analysis December 1-17, 2008, in accordance with the test plan DOT&E approved on November 26, 2008.
- DOT&E approved an update to the JBAIDS Test and Evaluation Master Plan on January 8, 2009.
- The Army Test and Evaluation Command published the OTA Follow-on Evaluation Report for the JBAIDS Platinum



1 - Polymerase Chain Reaction (PCR) Thermal Cycler

2 - Notebook Computer

- Navy Environmental Preventive Medical Units, and aboard aircraft carriers, amphibious assault ships, and amphibious command ships
- Marine Logistics Groups and Chemical/Biological Incident Response Force
- Air Force Forward-Deployed or Forward-Positioned Medical Biological Augmentation Teams
- Air Force Homeland Defense Laboratories

Mission

- Units equipped with JBAIDS identify biological agents to support a commander's force protection decisions by providing timely information for determining appropriate treatment, preventive measures, prophylaxis, and operational decisions.
- Units with JBAIDS will be tasked to provide rapid confirmatory identification of specific BWAs detected or identified by other biological detection systems employed in operational environments.

Prime Contractor

- Idaho Technology Inc., Salt Lake City, Utah

Path Extraction Kit Pre-Planned Product Improvement in April 2009.

- The Chemical Biological Medical System, in collaboration with the Centers Disease Control (CDC), the Food and Drug Administration (FDA), and DoD's Global Emerging Infectious Surveillance and Response System, submitted to the FDA a DoD Emergency Use Authorization to include the H1N1 (swine flu) assays on JBAIDS to leverage the use of PCR

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systems worldwide. The Assistant Secretary of Defense/ Chemical, Biological, Radiological, and Nuclear approved funds to integrate the CDC H1N1 assays on the JBAIDS to assist in the national emergency effort.

- The program manager is considering an assay panel expansion to address deficiencies identified in operational use.

Assessment

- JBAIDS, used in conjunction with the Platinum Path Extraction Kit, improves the operational effectiveness of the currently fielded system. The Platinum Path Extraction Kit provides increased sensitivity, reduced sample processing time, and reduced risk of cross contamination.

- System modifications post full-rate production improved the reliability and suitability of the JBAIDS system. The Platinum Path Extraction Kit has a reduced logistics footprint and reduces the need for support equipment over the currently fielded set of extraction kits.

Recommendations

- Status of Previous Recommendations. The DOT&E recommendation to refine the algorithm that translates the measured crossing threshold data into estimates of concentration from FY07 remains open. The remaining recommendations have been addressed.
- FY09 Recommendations. None