

## **Critical Equipment and Consumables Utilized in the *Draft Interim AHRF Protocol***

All of the types of equipment and consumables listed below are commercial off the shelf (COTS) items. If specific equipment and consumables are referenced, this should not be considered to be a product endorsement. Specific equipment and consumables only represent the equipment and consumables that were deployed with the initial AHRF prototypes; other comparable items could be used to perform the *Draft Interim AHRF Protocol*.

### **Chemical Screening**

- Colorimetric tests for general chemical properties
  - pH Paper
  - Starch Iodide Paper
  
- Colorimetric tests for chemical warfare agent (CWA)
  - Alkylating agent dye test (DB-3)
    - Wet chemistry test with COTS reagents
  - CWA indicator paper
    - Anachemia M8 Detector Paper
  - Nerve agent enzyme test (acetylcholine esterase inhibition test)
    - Anachemia Nerve Agent Vapor Detector
  
- Detectors for general chemical and CWA-specific screening
  - Ion Mobility spectrometer (IMS)
    - Smiths Detection LCD-3 Lightweight Chemical Detector
  - Flame spectrophotometer (with sulfur and phosphorus windows)
    - Proengin AP2Ce Detector
  - Photo-ionization detector (PID)
    - MultiRAE Plus Monitor (LEL/O<sub>2</sub>/10.6eV PID)

### **Explosives Screening**

- Colorimetric kit for screening wipe samples collected from packages
  - E.L.I.T.E. Model EL100 Explosive Detection Kit

### **Radiation Screening**

- Detectors to perform  $\alpha$ ,  $\beta$  and  $\gamma$  screening of packages
  - Ludlum Model 2360  $\alpha/\beta$  Data Logger with Model 43-93  $\alpha/\beta$  Scintillator
  - Berkeley Nucleonics SAM 935 Gamma Spectroscopy System
  
- Detectors to perform  $\alpha$  and  $\beta$  screening of wipe samples collected from packages
  - Ludlum Model 2929 Alpha/Beta Scaler w/Model 43-10-1 Sample Counter