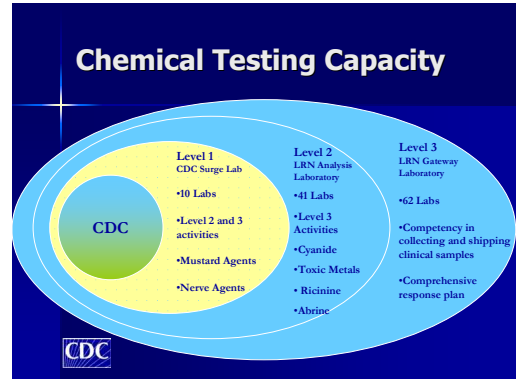


Chemical Defense Program



The Bureau of Laboratories' Chemical Defense program consists of four Laboratories that belong to the National Laboratory Response Network For Chemical Terrorism (LRN-C), located in Jacksonville, Miami, Pensacola and Tampa. The Jacksonville laboratory is one of only 10 Level 1 LRN-C labs in the nation. The Miami, Pensacola and Tampa laboratories are Level 3 LRN-C labs. The Jacksonville laboratory has a wide variety of analytical chemistry instruments that can be used to detect more than 150 different harmful chemicals in clinical and environmental samples. The other 3 locations provide training for hospital personnel in the collection and transport of clinical samples obtained from people who may have been exposed to hazardous chemicals.

Highlights/specialties

Level 1 Capabilities: Detection of cyanide in blood by headspace Gas Chromatography/Mass Spectrometry (GC/MS); ricin in urine by Liquid Chromatography(LC)/MS/MS; nitrogen mustard metabolites in urine by LC/MS/MS; organophosphorus nerve agents (OPNA) metabolites in urine by LC/MS/MS; abrin toxin added to the ricin method; volatile organic compounds (VOCs) in blood by Solid Phase Micro Extraction (SPME)-GC/MS, sulfur mustard metabolites in urine by LC/MS/MS; heavy metals in urine by Inductively Coupled Plasma(ICP)/MS (e.g., Beryllium, Cobalt, Molybdenum, Cadmium, Antimony, Cesium, Barium, Tungsten, Platinum, Thallium, Lead, and Uranium); Arsenic and Selenium in urine by ICP/Dynamic Reaction Cell (DRC)/MS; Cadmium, Mercury, and Lead in whole blood by ICP/MS; arsenic speciation in urine by High Performance Liquid Chromatography-ICP/DRC/MS (FY 07/08).

Level 3 Capabilities: Courses offered include CT 1504 – Chemical Weapons (Poison Control), CT 1505 – Chemical Terrorism Awareness and CT 1506 – Clinical Sampling for Chemical Terrorism.

Work load

- 1,700 people trained in Level 3 courses since 2004
- Hosted the Southeastern States CT Forum in 2006 and 2008
- Participated in the Chemical Terrorism Tabletop Exercise at the 2007 Region 10 Full Scale Exercise in Boise, ID
- Chemical Terrorism Tabletop Exercise at the 2007 Emergency Response at the Chemical Lab Conference in Atlanta, GA
- Chemical Terrorism Tabletop Exercise at the 2007 LRN National Meeting, Portland, OR
- BT-CT Preparedness Discussion Based Interactive Exercise at the 2007 LRN, National Meeting, Portland, OR
- BT-CT Preparedness Discussion Based Interactive Exercise at the 2007 NACCHO National Meeting, Atlanta, GA
- LRN Chemical Terrorism Full Scale Exercise in Tampa, FL 2008
- LRN surge testing exercise requiring the analysis of 500+ mock samples in spring 2008.

Challenges

- Recruiting skilled and credentialed individuals.
- Maintain a high level of readiness in the laboratory at a time when federal funding for chemical defense is diminishing, especially when equipment price tags are \$150,000 to \$350,000.

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