



Research Chemist (Explosives)

Highlights:

- You'll be joining a dynamic forensics team with many opportunities to grow professionally and working with other forensic experts in various fields to support the FBI and TEDAC missions.
- This is a unique opportunity to work with the FBI laboratory.
- You'll obtain some or enhance your experience working in a fully functional government laboratory working closely with other forensics experts.

Tasks:

- Supports TEDAC explosives scientists and forensic examiners in research, development, testing and evaluation (RDT&E) of explosives and their material properties, in particular the explosive properties that affect the bulk and /or trace explosive detection of such materials. The daily duties of the RC are to support the EU and other TEDAC units that work with the EU by performing operations and logistics duties as directed by the EU Senior Scientist and PM of the joint FBI/DHS/TSA program titled "Physical, Chemical, and Detection Characteristics of Improvised Explosives". Mastery in the areas of chemistry, physics, engineering, materials science, or mathematics, sufficient to enable the RC to direct complex studies that are focused on RDT&E problems pertinent to explosives characterization and detection is required.
- Serves as the co-PM of the joint FBI/DHS/TSA research program titled "Physical, Chemical, and Detection Characteristics of Improvised Explosives."
- Reviews/authors interagency agreements (IAAs) and statements of work (SOWs), produces rough order of magnitude (ROM) estimates for independent Government cost estimates (IGCEs), reviews/authors monthly status reports (MSRs) and technical reports, and provides technical direction and oversight of explosives characterization RDT&E, including material properties testing (e.g., density, particle size, optical properties), physical and thermal hazards testing (e.g., impact, friction, electrostatic discharge, vacuum thermal stability, calorimetry, time-to-explosion, differential scanning calorimetry, thermogravimetric analysis), effects testing (e.g., detonation velocity, diameter effects, detonation calorimetry, air blast), and bulk/trace detection testing of interest to DHS and TSA (e.g., advanced technology x-ray, explosives trace detection, explosives detection systems, bottle liquid scanners, advanced imaging technology, computed tomography).
- Identifies the areas of need or inadequacy in current explosives characterization RDT&E protocols and proposes research study paths considered most effective
- Provides program planning and directs comprehensive testing of new methods and technologies in explosives characterization RDT&E to ensure their reliability and analytical limits under operational conditions.
- Recommends modifications or adaptations of current methods in explosives characterization RDT&E or recommends the development of entirely new methodologies and technologies.
- Serves as the only member of the EU that has experience in bulk and trace detection technologies of interest to DHS and TSA.
- Researches, develops, and author whitepapers, information papers, and policy documents, as required.
- Supports activities, functions, or duties, as defined in future TOs.

Requirements:

- Education: B.S. degree in Chemistry, Physics, Engineering, Materials Science, or Mathematics.

- Experience with the following:
 - Bulk and trace explosives detection technologies of interest to DHS and TSA, such as but not limited to, advanced technology x-ray, explosives trace detection, explosives detection systems, bottle liquid scanners, advanced imaging technology, and computed tomography.
 - Explosives characterization RDT&E, such as but not limited to, material properties, physical and thermal hazards, and effects testing.
 - Authoring detailed, technical tasks for inclusion in SOWs and IAAs relating to explosives characterization and bulk/trace explosives detection RDT&E.
- Skills: Program management of technical projects, in the areas of explosives characterization and bulk/trace explosives detection RDT&E.

Clearance: US Secret Clearance

Location: (1) Quantico VA and (2) Huntsville, AL

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