

Explosives Detection Capabilities



Hound



MicroHound

**Hand-portable
Explosives
Detection**



**Checking a vehicle
for explosives
using a prototype
vehicle portal**



**Walk-through
Personnel
Portal**

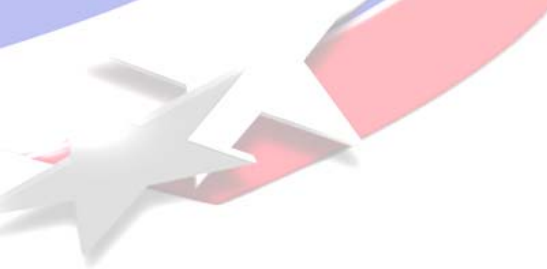
Description

The Contraband Detection Technologies Department at Sandia National Laboratories performs R&D, prototype development, and testing and evaluation of explosives detection systems. The team has emphasized sample collection and preconcentration technology to enhance trace detection capabilities by delivering a better sample to the detector.

We use our capabilities to:

- Develop system solutions for the most challenging problems in explosives protection
- Develop and design advanced prototypes for specialized applications
- Consult with government agencies on how to create better explosives protection systems
- Characterize explosives threats
- Test and evaluate explosives detection systems for specific customers

The group also contributes to the Explosives Defense Analysis Team (EDAT), which performs security evaluations of potential explosives threats at DOE sites. The EDAT makes recommendations to improve explosives protection based on the results of these studies.



Mission

Our mission is to deliver innovative, real-world solutions to explosive detection needs by

- Identifying the problem,
- Developing and evaluating state-of-the-art systems, and
- Creating partnerships with research and engineering institutions and our customers

Projects

Significant projects include

- Developing a prototype, walk-through portal for people that was later commercialized
- Developing prototype, hand-portable explosives detection systems for packages (the Hound and MicroHound)
- Developing a prototype, movable vehicle portal
- Developing reference documents on explosives detection technologies



Customers

Customers include the Department of Homeland Security, the Department of Energy (Office of Security and Safety Performance Assurance), the Transportation Security Administration, the Technical Support Working Group, the National Institute of Standards and Technology, the National Institute of Justice, the US Mint, and the Federal Bureau of Investigation.

William (Bill) Rhodes III (wgrhode@sandia.gov)
Contraband Detection Technologies
(505) 844-4597

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