



WINNER



2003 R&D 100 Awards Winner

BASIS: High-Confidence Biothreat Detection and Characterization

The Biological Aerosol Security and Information System (BASIS) is a technology for protecting civilian populations against terrorist aerosol releases of microorganisms capable of inducing lethal infection. It enables the detailed identification, localization, and time-of-release pinpointing of select aerosol-released organisms. In turn, this precise detection facilitates the expeditious treatment of exposed individuals before symptomatic onset, a medical response capable of saving lives. By reducing the rate of false positives to nearly zero, BASIS prevents the potential disruption of civilian life that such false alarms would likely provoke. It protects civilian populations by expeditiously mobilizing medical responses and providing detailed forensic evidence about organisms used in bioterrorism, thereby engendering a broader umbrella of readiness and facilitating criminal investigations. BASIS can be deployed in a broad spectrum of locations where population clusters could be targeted by bioterrorists.

Applications

- Population centers (e.g., transportation terminals/portals)
- Border checkpoints
- Seats of government
- Critical infrastructure nodes (e.g., power plants)
- Tunnels and bridges
- Sports and entertainment venues