

sources that may be used in weapons of mass destruction." The stanchionSPEC "can be set up quickly in almost any location," Dempsey continued, "and can be used as a stand-alone detection device or in combination with other surveillance systems – video monitoring, for example."

Disposable Discs and Aptly Named CANARY Capabilities

Innovative Biosensors Inc. (IBI) – the key word in that name is "Innovative" – combines imagination, energy, and a clear sense of purpose in its quest to develop and build a versatile line of bio-detection systems and devices that provide high value at relatively low cost. Focusing on end-to-end solutions that encompass not only biological aerosol sampling but also the collection, detection, and identification of pathogens, the company emphasizes both affordability and efficiency in its easy-to-use products.

Probably the best known of those products is IBI's BioFlash™ biological aerosol sampler and identification system, which offers an integrated biological aerosol sampler and detector, that can be used for the rapid and sensitive identification of a potential biological threat. "The BioFlash biological detector," says Richard R. Thomas, president of the company's Environmental Group, "is a highly portable, high-performance, easy-

to-use integrated aerosol sampler and identifier that was created specifically for biodefense applications."

The BioFlash detector, which incorporates the aptly named CANARY (Cellular Analysis and Notification of Antigen Risks and Yields)* diagnostic technology developed by MIT Lincoln Laboratory scientists, provides sensitive and specific identification of up to 21 biological threat agents, including but not limited to *Bacillus anthracis* spores, *Yersinia pestis*, *Francisella tularensis*, VEE, and vaccinia as well as botulinum toxin and ricin. Recent government aerosol testing, Thomas said, "has validated the BioFlash breakthrough sample collection efficiency and speed of detection." [*Canaries used to be carried into coal mines to provide an early warning of potentially fatal gases.]

The use of simple disposable plastic disks permits the BioFlash to simultaneously collect and identify up to 21 biological threat agents. According to Thomas, the system detects and identifies bacteria, viruses, and toxins in the air in less than three minutes with sensitivities approaching those of polymerase-chain-reaction (PCR) detectors at a fraction of the cost. The BioFlash technology is now being deployed in a number of buildings, Thomas said, to provide accurate and rapid biological agent threat detection and identification.

RadEye, Hand-Held Devices And Entirely Integrated Solutions

"A complete line of high-sensitivity instruments and devices" specifically designed for use by U.S. and allied defense and law-enforcement agencies and organizations "to detect illicit radioactive materials and to monitor ... [suspect] areas for radioactivity." That is the noble goal, briefly summarized, and mission set for itself by Thermo Fisher Scientific, which designs, develops, and builds a full range of products, ranging from hand-held devices to "entirely integrated solutions," that serve "the entire radiation-measurement needs" of U.S. homeland-security professionals.

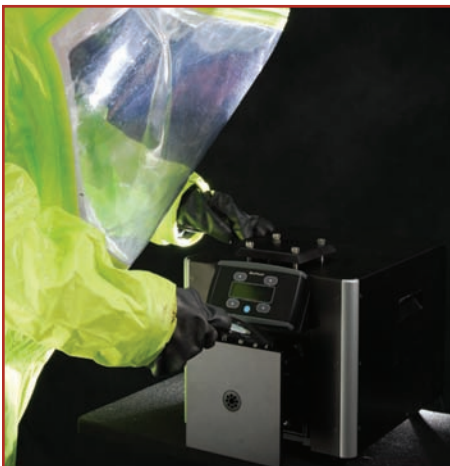


The RadEye PRD is 5,000 – 100,000 times more sensitive than a typical electronic dosimeter. This capability is achieved through a special technique based on the company's patented Natural Background Reflection (NBR) technology.

At the top of the company's product list, according to Adam Grose – general manager of Thermo Fisher Scientific Radiation Measurement and Security Instruments – is the RadEye product family. RadEye can be used not only "as a prevention and detection device before, during, and after a radiation event," he told DPJ, but also as a preventive device to help the first-responder community carry out its surveillance duties.

"During a radiation-related event," he continued, first responders "can use the RadEye to detect airborne radiation while being secure in the knowledge that the RadEye will not provide false alarms" (triggered by naturally occurring background radiation). RadEye "delivers radiation detection, gamma dose-rate measurement, and area monitoring in a convenient, pocket-sized instrument," Grose said.

In addition to its RadEye products, he added, the company "markets a broad range of environmental instruments that can comprise a whole homeland-protection system, including air-, water-, and radiation-monitoring instruments and integrated systems." Its radiation measurement and protection products, he continued, "provide unequalled radiologic performance and protection." ▼



The BioFlash™ is a highly portable, high-performance, easy-to-use integrated aerosol sampler and identifier that is used specifically for biodefense applications.