

ASAP[®] III



Threat Detection for Mail Rooms

The next generation in CBRNe postal screening systems

Features

- CBRNe & drugs of abuse supported
- Threat detection in seconds
- Real-time testing – immediate release if no threat
- Integrated bioaerosol detector slashes operating costs and speeds up mail processing
- No sample preparation
- Up to eight simultaneous automated assays for spores, bacteria, viruses, and toxins
- Options for detecting CWAs, drugs, explosives particles
- Targets detected in aerosol or vapor form
- 99.3% functional availability
- Low operating costs

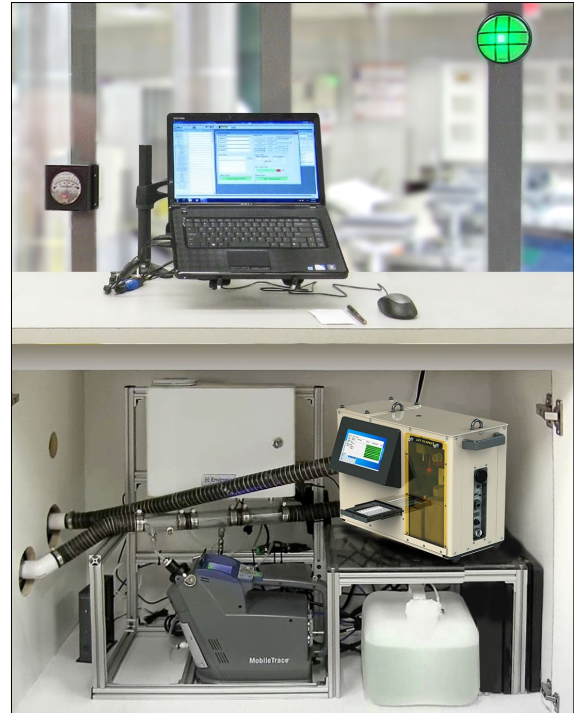
Application Areas

- Government and corporate mailrooms

ASAP III Postal Screening is a fully automated, customizable system for the real-time detection and identification of CBRNe mail threats. ASAP III can handle thousands of pieces of mail per hour, and all types of postal articles can be screened – letters, overnight mail, and boxes. When installed in a negative pressure room, ASAP III protects the operator from harm and the facility from contamination. The system can be operated by general mailroom personnel and requires little operator assistance.

Rapid processing, low operating costs In other mailroom systems, every batch of mail is sampled and tested – a slow and expensive method. But with ASAP III, the biofluorescence-based detector reports anomalous bioaerosol events within 15-30 seconds; if there is no threat, no costly testing is needed, and mail is immediately released for delivery.

Flexible modes of operation The system can operate in a fully automatic mode where the trigger automatically initiates a wet lateral flow bioassay protocol, or in a lower-



ASAP III with optional chemical and explosives detectors.

cost semi-manual mode in which the assay process is initiated manually.

Software and communication Results are summarized on the touch panel display and simultaneously transferred to a monitoring ASAP computer for alarm response purposes, data archiving, and communication.

Multiple options for detection Optional system components can be integrated into ASAP III to test for chemicals, explosive particles, drugs of abuse, and radiation. These components will typically detect, identify, and report threats in less than 20 seconds.

Worker safety, building protection ASAP III can be optionally housed in a negative pressure room equipped with a down draft table. Air is continuously drawn into the downdraft table while mail is being jogged or opened over the table's perforated top surface. The particle-laden air is delivered to the detection and identification instruments, while ensuring that any potential toxins are immediately drawn away from workers.

Sampling & Identification

Use profile	Automated, programmed, continuous monitoring/identification of targeted toxins, viruses, bacteria, spores, industrial chemicals, explosives, drugs of abuse, and nuclear materials. Continuous or batch sample examination supported.
Duty cycle	Continuous. Functional availability > 99.3%. Calculated as total work time the system is functional averaged over a 90 calendar day period.
System control	ASAP III software controls equipment, reports alarms on screen, and communicates results. Large green/amber status light; annunciator optional.
Aerosol biodetector	UV bio-fluorescence detector. Average time-to-alarm is 15-30 secs. Will detect 20 ACPLA bioaerosol levels with 90% or better probability at a background alarm rate of 1 per month.
Air sampling rate (collector)	300 LPM from downdraft table or alternate sources.
Air sampling rate (biodetector)	1.2 liters/min
Bioassay method (confirmation only)	A bioassay is only required when the bioaerosol detector observes a potential threat, typically about once per month in mail rooms. Testing is done by automatic robotic lateral flow immunoassay for up to 8 biowarfare agents simultaneously. Total time to result: 10 - 25 minutes.
Toxic industrial chemicals subsystem (optional)	Ion mobility spectrometry or long baseline infrared spectrometry. Gas libraries of 15 to 40 targets, depending on technology used. Analysis time less than 10 seconds.
Explosives subsystem (optional)	Ion trap mobility spectrometer. Analysis time: 8 seconds.
Nuclear materials subsystem (optional)	Area and portal styles available. Typical specifications: 0.05 to 3.0 MeV gamma detection window. Detects 360 kBq of Cs-137 and 6 gm Pu(2); neutron detection optional.

Research International reserves the right to change specifications without prior notice.



Physical Specifications

Data storage/programmability	Raw/processed data storage. Operating protocols are RS-232 reprogrammable.
Temperature range	Operating: 5°C to 40°C; instrument storage: -29°C to 66°C.
Humidity	5% to 95%, non-condensing.
Physical size & weight	Varies. Usually installed as an under-counter system with video monitor on counter top.
Fluids storage	5-day supply of distilled water for aerosol collector.
Power consumption	Less than 100 W @ 115 VAC, nominal, excluding X-ray. X-ray system requires 183-253 VAC, 50 Hz. 10 A max.

Software & Communications

Communication	RS-232 bi-directional serial link is standard.
PC Software requirements	Windows® version 7 or higher; processor: 400 MHz Pentium or equivalent (min.); RAM: 96 MB (min.), 256 MB (recommended); hard disk: 1.2 MB available space; USB port or CD-ROM drive.
Data storage/programmability	Raw/processed data storage. Operating protocols are RS-232 re-programmable.



An operator sorting mail over a downdraft table. ASAP III control software runs on the laptop, while detection instruments are installed under the counter.

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