

ASAP III

The next generation in CBRNe postal screening systems

The ASAP III postal processing system is a fully automated detection and identification system that can be configured to screen mail in real time for all CBRNe threat types. When used with a downdraft table in a negative pressure room, it will protect both the operator and the facility from agent contamination. All types of postal articles can be rapidly screened – letters, overnight mail, and boxes.

The biothreat component of the system can detect and identify up to eight bioagents concurrently in real time. A sensitive biofluorescence-based trigger monitors for anomalous bioaerosol events. The trigger responds within 15-30 seconds of the threat event. The bioassay is initiated by the trigger and provides a test result within 10-25 minutes total elapsed time. Light and sound alarms and a touch-panel display keep operators informed.

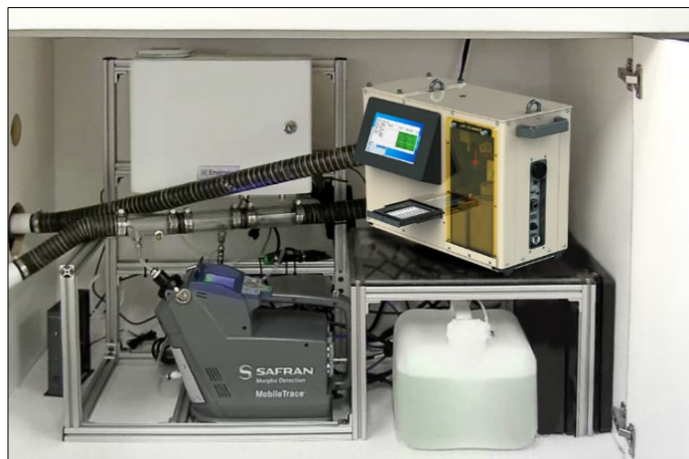
The system can operate in a fully automatic mode where the trigger automatically initiates a wet lateral flow bioassay protocol, or in a lower-cost semi-manual mode where the assay process is initiated manually. Results are summarized on the touch panel display and simultaneously transferred to a monitoring ASAP computer for alarm response purposes, data archiving and communication. Even though every piece of mail is subject to examination and the overall process is real-time, the cost of operation is greatly reduced and operationally less intrusive compared to periodic or batch testing since the bioassay is only initiated when a suspicious event is detected.

FEATURES

- CBRNe & drugs of abuse supported
- Integrated bioaerosol trigger greatly lowers operating costs and speeds up mail processing
- Bioagents in 10-25 minutes total elapsed time
- No sample preparation: Up to eight simultaneous automated assays for spores, bacteria, viruses, and toxins
- 99.3% functional availability
- Targets detected in aerosol or vapor form
- Low operating costs

APPLICATION AREAS

- Government and corporate mailrooms



ASAP III System showing BioHawk® LF with chemical and explosives detectors.

Other optional components of the system test for chemicals, explosive particles, drugs of abuse, and radiation. These components will typically detect, identify, and report in less than 20 seconds. The ASAP III system, installed in a negative pressure room equipped with a down draft table, can handle thousands of pieces of mail per hour.

An air sampling module continuously samples air drawn into the downdraft table while mail is being jogged or opened over the table's perforated top surface. Sampling and the related biological, chemical, and nuclear detection and identification processes are continuous during mail handling whether it is a matter of a few minutes or several hours.

This system can be operated by general mailroom personnel, is fully automated and requires little operator assistance.

SPECIFICATIONS FOR ASAP III FOR POSTAL PROCESSING

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
Sample preparation	Sample preparation for bioassay is fully automated.
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. 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.
Communication	RS-232 bi-directional serial link is standard.
Data storage/ programmability	Raw/processed data storage. Operating protocols are RS-232 re-programmable.
Fluids storage	5-day supply of distilled water for aerosol collector.
Software interface	Windows® user interface.
Physical size	Varies. Usually installed as an under-counter system with video monitor on counter top.
Temperature range	Operating: 5°C to 40°C; instrument storage: -29°C to 66°C.
Humidity	5% to 95%, non-condensing.
Power consumption	Less than 100 W @ 115 VAC, nominal, excluding X-ray. X-ray system requires 183-253 VAC, 50 Hz. 10 A max.

Research International, Inc. reserves the right to change specifications or product source without prior notice.

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