ASAP II™

Postal Processing Systems

Multi-Functional CBRN Solutions

The ASAP II postal processing system is a fully automated CBRNe detection and identification system that screens mail in real time for all types of agents. The system can be configured to meet each customer's exact threat deterrent requirements. Used in conjunction with a downdraft table in a negative pressure room, the system protects the operator and the facility from agent contamination. The system will rapidly screen letters, overnight mail, and boxes.

ASAP II System showing SASS 2300 air sampler with chemical detector and explosives detector.

The biothreat component of the system can be set up to detect and identify from two to four bioagents in real time. Periodically, or on demand, a concentrated wet bio-sample is transferred to the bio-identification system. Within fifteen minutes the system will identify the presence of any of the pre-selected agents, and automatically notify the operator if the mail is clear or if a pathogen has been detected. The cost of biological consumables in these systems is minimized by using disposable/reusable bioassay coupons that can be reused many times over a 48-hour period.

FEATURES

- All CBRNe threats can be monitored for and identified
- Wet bioassays detect spores, bacteria, viruses and toxins
- 99.3% functional availability
- Targets detected in aerosol, liquid or solid form
- Minimal or no sample pre-preparation
- Fast: 15-20 minutes for bioagents
- CRNe & drugs of abuse are detected
- Low per-measurement costs
- On-board storage of all fluids and reagents: up to 5 days
- Sample collection periods can range from minutes to hours

APPLICATION AREAS

- Government and corporate mailrooms

ASAP II environmental cabinet with RAPTOR, buffer and waste bottles, and supplies storage.

The chemical, explosive particle, drugs of abuse, and radiation components of the system will detect, identify and report in less than 20 seconds.

The ASAP II system installed in a negative pressure room equipped with a down draft table and can handle thousands of pieces of mail per hour. An air sampling module in the system continuously samples air drawn into the downdraft table while mail is being jogged or opened over the table's perforated top surface, providing appropriate samples for all CBRNe agents. Sampling is a continuous process that goes on until processing of a batch of mail is complete, whether it takes a few minutes or several hours.

All systems report to an onsite computer using ASAP Software for monitoring, alarms, and communication. This system is designed to be operated by general mailroom personnel, is fully automated and requires little operator assistance.

Specifications for ASAP II for Postal Processing	
Characteristic	**Description**
Use profile	Automated, programmed, continuous identification of targeted toxins, viruses, bacteria, spores, industrial chemicals, explosives, drugs of abuse, and nuclear materials. Batch sample examination also supported.
Duty cycle	Continuous. Functional availability >99.3% (1)
Air sampling rate	325 LPM from downdraft table or alternate sources
Sample preparation	None for aerosol samples, none or minimal for liquid samples; solids must be minimally extracted with buffer.
Bioassay profile	Four simultaneous assays performed on 1 cc samples using a credit card-size assay coupon. Coupon and associated re-useable reagents provide from 20 to 50 assays over a 24 to 48 hour use period.(2)
Total bioassay time	15 to 30 minutes for collection and identification combined, is typical.
Toxic Industrial Chemicals Subsystem	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	Ion trap mobility Spectrometer; analysis time= 8 seconds
Nuclear materials Subsystem	Area and portal styles available. Typical specifications: 0.05 to 3.0 MeV gamma detection window. Detect 360 kBq of Cs-137 and 6 gm Pu(2); neutron detection optional
Bioassay Sensitivity	Dependent on analyte; 1-10 ppb is typical for toxins, 3 x 10^5 CFU/ml typical for bacteria and spores
Fluids storage	5-day supplies of buffer, disinfectant and distilled water for aerosol collector.
User Interface	Windows® user interface.
Physical Size	Usually installed as an under-counter system with video monitor on counter-top
Temperature range	Operating: above freezing to 50C; storage: -29 to 66C.
System control	ASAP II software controls equipment, reports alarms on screen, and communicates results. Large green/amber status light; annunciator optional.
Communication	RS-232 bi-directional serial link is standard.
Data storage/ programmability	Raw/processed data storage. Operating protocols are RS-232 re-programmable.
Power Consumption	Less than 100 W @ 115 VAC, nominal, excluding X-ray. X-ray system requires 183-253 VAC, 50 Hz. 10 Amp max.
Humidity	5% to 95%, non-condensing.
Research International, Inc. reserves the right to change specifications or product source without prior notice.	

NOTES:

(1) Functional availability is the percentage of total work time that the system is functional, averaged over a 90 calendar day period.
(2) Maximum usable life measured in a 25^{O}C postal room environment. Other applications may result in different consumable lifetimes.

Research International, Inc.

U.S. Headquarters Office

17161 Beaton Road SE, Monroe, WA 98272-1034
Phone: 360-805-4930 • Fax: 360-863-0439
Toll Free: 1-800-927-7831
Email: info@resrchintl.com • Web: www.resrchintl.com

U.S. East Coast Office

Jon Tobelmann
Phone: 703-625-8381
Email: jontobelmann@resrchintl.com

To locate an international distributor, please contact our headquarters office.