



IDENTIFY: 8-Channel Collection/Bioidentification



BioHawk 8-Channel collection and bioidentification system.

BioHawk® is a portable 8-channel bioassay system integrated with an aerosol collector. It is suitable for the high-sensitivity monitoring of biological agents, toxins, explosives, and chemical contaminants. Assay results are typically available in 10 to 20 minutes. BioHawk can be programmed to monitor surrounding air for aerosol threats with the built-in air sampler, and to periodically transfer a wet concentrate from the air sampler to the bioidentifier portion.

Bioassays are performed within a small disposable credit card-sized plastic assay coupon, which can be used for up to 10 assay procedures before being discarded. Since a single assay coupon can handle up to eight different analytes simultaneously, up to 80 individual assays can be performed before discarding or removing the coupon. Assay results are transmitted through the touch panel LCD display, an audible alarm, a

pulsating light, or by Bluetooth wireless or RS-232 link to personnel at a remote location. System operation may also be remotely controlled in real time.

Functions such as air sampling and bioidentification are performed using multi-step recipes developed by Research International and stored in the system's computer memory. Users need only the most fundamental level of training since the internal processes and steps are preset through the built-in computerized recipes. For more advanced users, Windows-based software allows the user to develop their own customized sample collection and detection protocols.

For more technical information visit www.resrchintl.com.

FEATURES

- Portable. Weighs less than 30 pounds.
- Enhanced particulate collection.
- Air collection at 325 LPM, nominal.
- Disposable wet assay coupon. Reusable up to 10 times.
- Fast assays: 10 - 15 minutes typical.
- Auto-flush protocols for decontamination.
- Analyte range: toxins, bacteria, spores, fungi, multi-cellular pathogens.
- Sensitivity: analyte dependent, 1 to 10 ppb typical for toxins, 100 to 100,000 CFU/ml for bacteria.
- Designed to MILSPEC 810F.
- Flash memory retains raw / processed data for over 6,000 assays.

APPLICATION AREAS

- Medical
- Agriculture
- Military
- Homeland security
- Environmental
- Indoor air quality



Visit us at www.resrchintl.com

General Specifications for BioHawk 8-Channel Collector/Bioidentifier

Characteristic	Description
Use profile	Indoor/outdoor sample collection, transfer, and assay; storage of 255 assay recipes; user in full MOPP gear either walking or in moving vehicle.
Collection principle	Multi-stage wetted-wall cyclone with enhanced particulate collection.
Assay method	Disposable wet assay coupon is re-useable up to 10 times. Eight simultaneous software-based assays. Antibody or nucleic acid. Coupon reseals on removal for archival storage.
Fluid Handling	Fluids manipulated under microprocessor control using peristaltic and syringe pumps; sample may be oscillated to lower assay time; reagent is recovered for reuse.
Fluids storage	Snap on 3-section fluid pack. Clean water: 1 liter; Buffer: 250 ml. Waste: 500ml. Assay samples may be optionally stored in a detachable 8cc vial for later analysis.
Human interface	Day/night Touchscreen LCD display. Usable in MOPP gear.
Digital communication	RS-232 bi-directional serial link
Physical size	35.6 cm W x 36.5 cm H x 17.1 cm D
Weight	21.7 lbs. dry; 26.7 lbs. with battery and fluids (9.8/12.1 kg).
Operating/storage	1 to 66°C and -29 to 66°C. Reagent deterioration can reduce upper limit significantly
Humidity	10% and above. May be operated in rain.
Survivability	MILSPEC 810F; MTBF of about 30,000 hours is determined by air sampler fan
Data storage	Flash memory retains raw/processed data for over 6000 assays.
Power Consumption	6.2 W at idle; 17.8W with fan operating and one assay performed each 30 minutes.
Power source	Primary battery BA-5390A/U, 1.05 kg (2.3 lb); lifetime 14 to 45 hours. Rechargeable battery UBI-2590; lifetime is approximately 56% of the BA5390A/U primary battery. Universal lump-in-cord power supply, 82-265 Volt (47-63 Hz).
Alarm	Visual LED and 103 dB @0.6m waterproof horn; adjustable. RS-232 data link.
Decontamination	Auto-flush protocols using onboard water, or manual flush with detergent and/or disinfectant. High-performance pull-through fan easily remove if contaminated.
Sound level	60 dB (A).
Ancillary equipment	Heavy-duty hard-shell transport case with wheels.

Bioassay Specifications

Analyte range	Toxins, viruses, bacteria, spores, fungi, multicellular pathogens
Sensitivity	Analyte dependent, 1 to 10 ppb typical for toxins, 100 to 100,000 CFU/ml for bacteria.
Assay time	Dependent on assay; 10 to 20 minutes typical
Reagent storage	Reagent stored onboard assay coupon; may be reused up to 15 times depending on assay protocol.
Confirmatory sample	Confirmatory sample may be stored in assay coupon or 8cc sample vial.

Air Sampling Specifications

Air collection rate	325 LPM, nominal.
Particulates collection range	1-10 µm
Concentration ratio	65,000/min., nominal
Liquid inventory	4 to 5cc. Factory set but adjustable under computer control. Patented control process maintains a constant liquid volume in the sampler, independent of collection time, temperature, or humidity; useful for concentrating trace airborne analytes.
Air inlet	Screened rectangular opening. Hose adapters available.

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

U.S. Headquarters Office

Research International, Inc.

17161 Beaton Road SE, Monroe, WA 98272-1034

Phone: 360-805-4930 • Fax: 360-863-0439

Toll Free: 1-800-927-7831

Email: sales@resrchintl.com • Web: www.resrchintl.com

U.S. East Coast Office

Jon Tobelmann

Phone: 703-625-8381

Email: jontobelmann@resrchintl.com

For international distributors and representatives please contact us.