

BioBadge® 100

PORTABLE PERSONAL AIR SAMPLER

The BioBadge® 100 air sampler is a portable battery operated system that effectively collects airborne biological particles when present in persistent but very low concentration levels. Similar in size to a cellular phone, the BioBadge is small and lightweight enough to be worn by an individual for monitoring exposure to biological organisms or placed discreetly in an area suspect of contamination.

The BioBadge allows mobile operators to continuously sample the air while performing other duties. The system provides an effective means to monitor the air in multiple points outside the hot zone. The BioBadge can help answer the question, "Was the operator exposed during the mission?" This information enables early treatment prior to the onset of symptoms.



FEATURES

- Dry collection of airborne bacterial, viral and fungal bio-hazards
- 8 hours continuous sampling
- Quiet and unobtrusive
- Single button operation with safety interlock
- Water resistant
- Single use disposable collection disk
- Highly operable in cold, hot, humid and arid environments
- Easy to maintain and decontaminate
- Sample is compatible with various analytical methods

The BioBadge pulls the aerosolized particulate through the air inlet and impacts the dry sample onto the collection disk. Coatings and impeller geometry optimize collection efficiency.

Optional BioBadge configurations in development include augmenting the unit with carbon-based adsorbents to produce a CBR (chemical, biological and radioactive) handheld air sampler. This enables the BioBadge to capture radioactive, explosive and toxic chemical particulates in addition to biological threats.

SPECIFICATIONS

Height	5.5 in (13.97 cm)
Width	2.5 in (6.35 cm)
Depth	2 in (5.08 cm)
Weight	0.5 lbs (250 g)
Sampling Flow Rate	40 liters per minute
Particle Size Collection	1 to 10 microns
Collection Efficiency	57% average
Collection Media	Single-use disk
Power Supply	Lithium Ion battery
Sampling Time	8 hours continuous sampling
Operating Temperature	32°F to 104°F (0° to 40°C)
Operating Humidity	0 to 95%, non-condensing



A simple field extraction kit provides a wet sample within seconds. This “rinse kit” includes a sterile buffer in a sealed container. The operator places the sample collection disk into the solution for immediate or later analysis. Sample deposition into solution maintains the viability of live samples. Compatible analysis methods include PCR, immunoassay, culture, GC/MS, flow cytometry and microscopy.

