

# Air Sampling and Concentration Systems

STEP INTO THE FUTURE OF BIOLOGICAL THREAT MITIGATION!



*Sample-to-result in a single shift*

*Efficient collection & recovery of airborne particulates, bacteria, pollen, molds, fungal spores, viruses and more*

*Rugged design for indoor and outdoor applications*

- Faster, easier workflows
- High flow rate collection
- Trusted by researchers and the U.S. military since 2012

# AirPrep Sampler Systems

INCLUDED FEATURES

Efficiently captures smicron, and submicron particles — optimized for 0.01 µm to 10.0 µm that can be immediately recovered with InnovaPrep's Wet Foam Elution™ method

Originally designed for "tactical" military biosurveillance applications, the Bobcat's rugged design can handle nearly any environment

Field ready with long-life battery and tripod

Variable run modes to balance sample duration and battery conservation



AirPrep™ Bobcat©

## Additional Features

Flow rates up to 200 LPM

Dry filter collection media is suitable for extreme temperatures — unlike wet cyclonic or agar-type air samplers

Compatible with virtually any analysis method, including PCR, sequencing and more



AirPrep™ Cub 210©

## Wet Foam Elution™

PATENTED TECHNOLOGY

InnovaPrep® products use a patented technology for exceptionally fast and efficient concentration based on:

- Capture of microorganisms or particles from large volumes of liquid or air using robust filtration
- Instant recovery using Wet Foam Elution™ (WFE)

WFE uses a weak surfactant as a foaming agent and dissolved gas packaged in quick release canisters to dispense a powerful, yet gentle elution.

During elution, a small volume of buffer is quickly dispensed — expanding 6x into a viscous wet foam that lifts the trapped particles from the filter. Within seconds, the foam returns to a liquid, ready for downstream culture, molecular, sequencing or other advanced detection methods. The exceptional characteristics of the wet foam enable concentration factors, up to 10,000x.

## AirPrep Elution Buffer Formulations

- Two standard elution buffers: PBS & Tris
- Extremely gentle for optimal results
- Custom formulations are available

## Workflow

InnovaPrep's rapid filter elution kit provides the ultimate solution for rapidly releasing particles into liquid with maximum efficiency.

Using robust filtration and InnovaPrep's patented Wet Foam Elution™ process, the system delivers a highly concentrated sample ready for analysis.



### Collect

Use AirPrep sampler to capture particles onto a dry electret filter.

### Prep

Assemble filter elution kit as shown in Figure 1 - right. Depress canister of Elution Buffer to create Wet Foam and efficiently extract particles from the filter — in just seconds!

### Detect

The liquid sample is now ready for downstream analysis via traditional or rapid methods.

## Prep Details



Figure 1  
Filter Elution Kit

1. Elution buffer
2. Elutor adapter
3. Filter
4. Sample cup

Applications

DISEASE & HYGIENE  
MONITORING

ENVIRONMENTAL  
BIOSURVEILLANCE

METAGENOMICS

ANIMAL HEALTH

PHARMA

CLINICAL RESEARCH

BIODEFENSE

# AirPrep Aerosol Sampling Systems

InnovaPrep's secret weapon for capturing even the tiniest of particles lies in its 52mm dry electret filter. Unlike traditional filters, electret filters are made of special polymer fibers that become electrically charged as air passes through them. This means that even the smallest viruses are efficiently collected. Paired with Wet Foam Elution, samples can be swiftly processed for immediate downstream analysis.



CONCENTRATING PIPETTE SYSTEM

**FLUIDPREP™**  
by INNOVAPREP

## Transform your workflow to reduce sample-to-result time.

Tired of dealing with sample enrichment methods that hinder your ability to rapidly detect biological contaminants and pathogens? Our cutting-edge approach simplifies sample prep and boosts sensitivity and speed, giving you a distinct advantage in staying ahead of contamination and illness threats.



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