BioServices

AIRPREP™ by INNOVAPREP

AIR SAMPLING AND CONCENTRATION SYSTEMS

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

EXCEPTIONALLY EFFICIENT SAMPLE RECOVERY | RAPID SAMPLE TO RESULT

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©

AirPrep™ Cub 210©

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

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 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

WHY 2623 MAJ 2024

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.

BioServices

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For support questions:
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FLUIDPREP™ by INNOVAPREP

EASYELUTE LARGE VOLUME CONCENTRATION SYSTEM

High target recovery from large volumes - FAST

Single-use kit high capacity (5, 10, 100 liters or more)
Fast filtration via ultrafilter
Immediate sample recovery

- Highly efficient for viruses, bacteria, fungal spores and fragments, whole cells, exosomes, parasites and more
- Improve detection of trace microorganisms
- Optimized workflow to stay ahead of contamination and illness threats

TRANSFORMS WORKFLOWS | EFFECTIVE | USER-FRIENDLY OPERATION

EasyElute

LVC KIT

High-flow 30 kD Ultrafilter with 2.5m2 surface area

Easy hook up. Tubing and connectors are provided

Works with a variety of pumps or can be used on taps

Sample recovery using Wet Foam Elution™ takes just seconds

Approx. 70 mL final concentrate volume for improved concentration factor

EasyElute LVC Kit

Wet Foam Elution™

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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.

FluidPrep Elution Buffer

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

Workflow

With InnovaPrep's Wet Foam Elution™ method, extracting particles from liquids goes from complex to simple!

Collect
Using your own pump, collect your targets by filtering your sample through the ultrafilter.

Prep
Efficiently elute the filter by depressing the EasyElute buffer canister into the filter to instantly recover the trapped organisms.

Detect
The eluted sample pairs perfectly for both traditional culture or rapid molecular analysis methods, including PCR and next-generation sequencing.

Prep Details

- Using robust filtration and InnovaPrep's patented Wet Foam Elution™ process, the system delivers a highly concentrated sample that improves sensitivity for detection.
- Use the **CP Select** for optional second stage concentration to further optimize concentration factor.

Effective for

- **Viruses**
- **Bacteria**
- **Fungal spores & fragments**
- **Whole cells**
- **Edna**
- **Parasites**
- **More...**

Applications

ENVIRONMENTAL MONITORING | **EPIDEMIOLOGY** | **FOOD & BEVERAGE SAFETY** | **ANIMAL HEALTH & AQUACULTURE** | **TREATED & UNTREATED WATER (e.g. Recreational, Industrial, Pools & Spas, Drinking, Building and Source Waters)**

Broad Utility

To concentrate targets of Interest from large sample volumes

- Produce rinse water
- Food Safety
- Wastewater
- Aquaculture
- Irrigation
- Source Waters
- Recreational Waters
- Building water systems

CONCENTRATING PIPETTE SYSTEM

FLUIDPREP™ by INNOVAPREP

WHY 2623 MAJ 2024

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

Detecting biological contaminants and pathogens requires effective sample prep and rapid sample-to-result turnaround. Traditional sample preparation is time-consuming and recovery of target organisms is hindered by matrix complexity and sample volume. Our patented sample prep technology simplifies sample preparation and streamlines your ability to detect biological targets with greater sensitivity and speed.

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FLUIDPREP™
by INNOVAPREP

CONCENTRATING PIPETTE SYSTEM

Rapid concentration of microorganisms in liquid samples

SAY GOODBYE TO TEDIOUS AND TIME-CONSUMING SAMPLE PREP!

Sample-to-result in a single shift
Exponential concentration up to 10,000x
Faster, easier workflows

- Highly efficient for viruses, bacteria, fungal spores andfragments, whole cells, exosomes, parasites and more
- Improve detection of trace microorganisms
- Optimized workflow to stay ahead of contamination and illness threats

TRANSFORMS WORKFLOWS | EFFECTIVE | USER-FRIENDLY OPERATION

Concentrating Pipette Select

CP SELECT™

FluidPrep™
Concentrating Pipette Select©

Processes sample volumes up to 5L

No cross contamination between samples

Robust concentration and simultaneous buffer exchange

Customizable protocols and settings to optimize for various matrices

Repeatable results between users

Get rid of cumbersome centrifugations and culture enrichment steps

Simplifies concentration from complex matrices (e.g. carbonated, turbid or clinical specimens)

Concentrated elution volumes as low as 200 ul, irrespective of your starting sample volume

Delivers exceptional Concentration Factors (CF) via the combination of exponential concentration and high efficiency recovery of captured particles

Wet Foam Elution™

PATENTED TECHNOLOGY

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FluidPrep Elution Buffer

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

Workflow

CP SELECT™

Collect
Collect your liquid sample in sample container.

Prep
Capture particles onto a hollow fiber filter (Concentrating Pipette tip). In just five seconds, efficiently elute particles from the filter.

Detect
The eluted samples are perfect for both traditional culture or rapid molecular analysis methods, including PCR and next-generation sequencing.

Prep Details

- Using robust filtration and InnovaPrep's patented Wet Foam Elution™ process, the system delivers a highly concentrated sample that improves sensitivity for detection.
- Use the **CP Select** for optional second stage concentration to further optimize concentration factor. Optimized workflow to stay ahead of contamination and illness threats

Effective for

- **Viruses**
- **Bacteria**
- **Fungal spores & fragments**
- **Whole cells**
- **Exosomes**
- **Parasites**
- **More...**

Applications | DISEASE MONITORING | ENVIRONMENTAL MONITORING | BEVERAGE & BREWING | ANIMAL HEALTH & AQUACULTURE | PHARMA | BIOSURVEILLANCE | DRINKING WATER & WASTEWATER | FOOD SAFETY | CLINICAL RESEARCH

Sample Compatibility of Wet Foam Elution

WITH DOWNSTREAM DETECTION METHODS

Microscopy
- Light
- Fluorescence
- Electron

Immunology
- Serotyping
- FISH
- Flow Cytometry
- ELISA
- Magnetic Beads

Culture
- Single-shift Enrichment (Screening)
- Selective (Identification)

Biochemistry
- ATP
- Biotyping
- Fermentation
- Enzyme Detection
- Mass Spectrometry

Molecularbiology
- Genetic Typing
- 16S DNA
- DNA/RNA including NGS
- PCR, RTPCR, ddPCR

CONCENTRATING PIPETTE SYSTEM

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