



The  
Macro to Micro  
Interface™

The *InnovaPrep Large Volume Concentrator (LVC)* is a new kit that allows you to concentrate bacteria and viruses from large liquid volumes (up to 40+ liters) very rapidly using existing head pressure or with the use of a basic pump, no other device is needed. The kit works much like InnovaPrep's automated concentration instruments which use membrane filtration and a patented wet foam elution technology to rapidly concentrate micro organisms into a small final volume (<85 mL) for rapid detection.

The one-pass method improves your limit of detection by several orders of magnitude, enabling detection at previously undetectable levels. Nowhere is this more important than for the preparation of biological samples for trace analysis.

**An Effective Concentration Method for Large Liquid Volumes** — *Fast and easy filter elution with InnovaPrep's Wet Foam Elution Method*

The LVC kit contains everything needed for sampling and extraction including a large filter cell, tubing, clamps, and a hand-held elutor (HHE) containing InnovaPrep's elution fluid, your choice between 0.075% Tween 20 PBS or 0.075% Tween 20 Tris .

Using existing head pressure or your own pump, fluid for sampling is forced through the filter cell's membranes in a dead-end configuration. The particles are trapped as the fluid is forced out of the filter cell to waste. To recover the captured particles from the concentration module, the user presses the HHE to the supplied fitting in the top of the filter cell to release the elution foam. Foam is released from the HHE and is swiftly forced through the bore of the hollow fibers and dispensed into a collection container placed under the opposite end of the filter cell.

The elution fluid, is conveniently packaged in a single-use HHE canister pressurized by carbon dioxide gas dissolved into the fluid. During the extraction process, the fluid passes from a high-pressure environment, to a low-pressure environment causing the dissolved CO2 to expand and come out of solution to form into a high

The InnovaPrep  
Large Volume  
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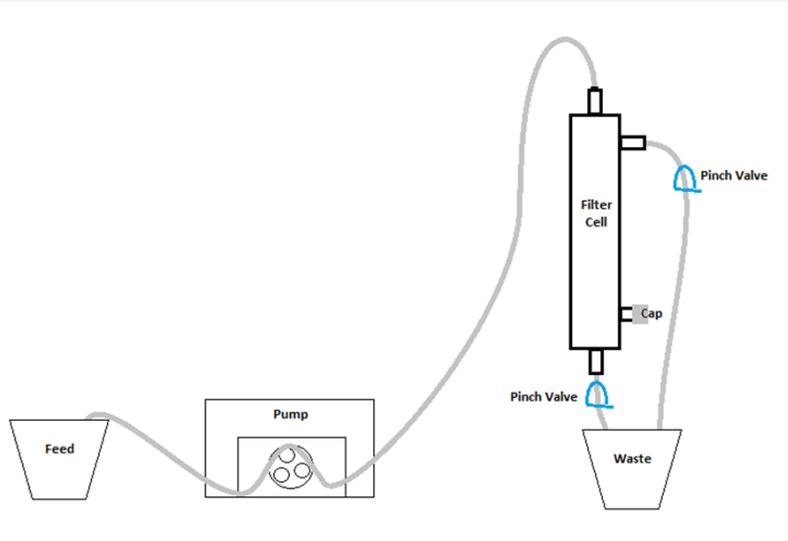


quality foam of microbubbles. These microbubbles increase the volume of the fluid sevenfold or more, moving as a ridged body down the inner bore of the hollow fibers creating uniform flow without channeling. The process gently exfoliates and lifts the particles that were adhering to the filter cell wall into the concentrate. The elution process is instant and the foam collapses into a liquid in seconds—ready for analysis.

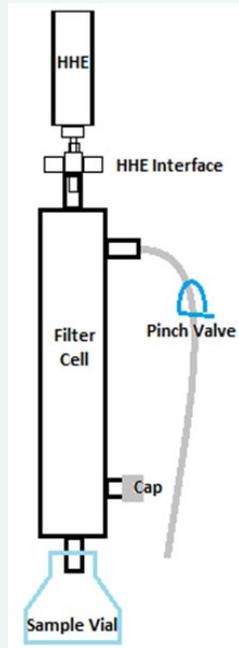
An additional benefit of Wet Foam Elution is the buffer exchange. In many situations the starting sample matrix is not the most desirable for the chosen analysis method. This method provides a clean buffer exchange, which maximizes the chances of detection.

The LVC kit provides a fast and simple 1st stage concentration step prior to a 2nd stage step with the Concentrating Pipette. The InnovaPrep Concentrating Pipette will allow you to process the 50 mL concentrate further to about 250 µL in minutes.

### Collecting a Sample:



Recovering a sample is fast and easy with the InnovaPrep Wet Foam Elution Process



### Hollow Fiber Module Specifications

Concentration Module	Polysulfone Hollow fiber dialyzer module with 2 Meters square surface area for virus and bacteria capture.
Final concentrated sample volume	<85 mL
Flow rate (high range)	1 Liter /min.
Input sample volume - sample dependent (high range)	Up to 40+ L

### Elution Fluid Specifications

The extraction fluid comes in single-use cans and are compatible with most rapid analytical methods including immunoassay or PCR. Biological samples remain viable.

elution fluid	0.075% Tween 20 /Tris
Fluid volume per can	50 mL
Pressure rating	135 psi

