



Introducing the InnovaPrep Backpack Surface Extractor(BSE)

The InnovaPrep Backpack Surface Extractor (BSE) is a rapid and efficient collection method developed for sampling and recovery of biological contaminants from surfaces of special importance to the military, first responders, food safety and medical facility monitors. The BSE effectively aids in identifying surface contamination helping you to quickly return facilities and equipment back to work.

The BSE recovers bacteria, viruses, DNA, toxins, protozoa, or other particles of interest from significantly larger surface areas than is possible with standard surface collection methods.



A New Kind of Sampler —

Combines InnovaPrep's novel wet foam elution with high power vacuum and patented SpinCon wet cyclone concentration technology

The primary area of application for the BSE is the collection of samples for subsequent analysis by microbiological methods or with microbiological detection devices.



The InnovaPrep system uses a novel wet foam elution method to recover organisms from surfaces. The wet foam is produced by releasing a carbonated surfactant solution, through the foam valve. Appropriate

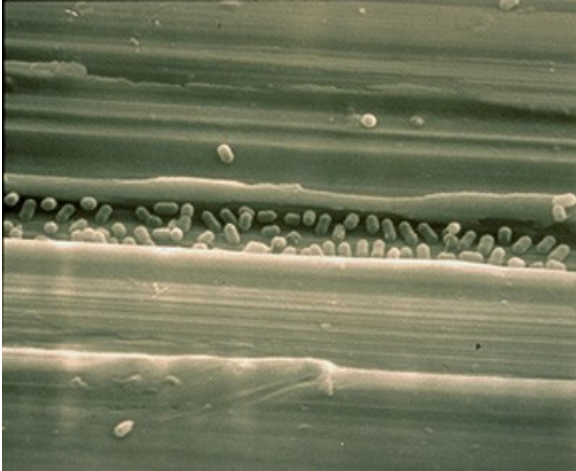
surfactant solutions include 0.05% to 0.25% Tween 20, Triton X-100, or other surfactants. Proteins or growth medias may also be used to replace or supplement the suggested surfactants. Addition of these materials may improve sample culturability when this is advantageous. PBS, Tris, or other buffers can be added to control the solution pH. InnovaPrep can provide additional information and recommendations for extraction solution selection.

Attributes of the BSE

- Highly portable back-pack design
- Sample is conveniently and safely dispensed into a range of sample containers
- Easy to use—operators can be trained in 15 minutes
- Better and faster than traditional methods for large surface areas
- Superior sampling on textured surfaces
- Low-cost consumables
- Easy to clean
- Battery powered, quiet operation
- HEPA filtered exhaust for user safety
- Surfactant solution is user defined for greater compatibility with preferred detection methods

Tested and Proven —

A recent study conducted by the University of Iowa Food Science Program compared the InnovaPrep BSE to common manual sampling methods for recovering bacteria from food preparation surfaces. Pathogens such as *Listeria* and *Salmonella* can easily



***Listeria monocytogenes* Embedded in Stainless Steel Surface**

become trapped in the microscopically rough surfaces of macroscopically smooth stainless steel—ubiquitous in food processing environments. These cells are difficult to dislodge/remove and may persist to contaminate food. In the ISU study, the InnovaPrep Surface Extraction system proved superior ease of use and ability to dislodge cells when compared to tradition methods. You may view the presentation of this study titled: [Extraction, Concentration and Detection of *Salmonella* from Stainless Steel Surfaces](#) on our website downloads page <http://innovaprep.com/downloads/>

Even Lower Limits of Detection Can be Achieved — when paired with the InnovaPrep HSC-40

As with all liquid samples, a secondary concentration step with the InnovaPrep HSC-40 can be used to rapidly concentrate the recovered samples increasing detection by orders of magnitude. Nowhere is this more important than for the preparation of biological samples for trace analysis.



The InnovaPrep HSC-40 bench-top concentrator

Specifications

Fluid capacity:	500 mL
CO ₂ cartridge type:	Disposable 45g food grade (free of oils)
Extraction fluid type	User selected -Examples include: 0.05% to 0.25% Tween 20 or Triton X-100 with PBS or Tris buffer
Weight	34 lbs.
Battery life (Rechargeable)	Up to 3 hrs. continuous

Markets for the Backpack Surface Extractor

- Food safety
- Biodefense
- Forensics
- First responders, remediation
- Healthcare infection control & reduction
- Industrial hygiene monitoring

The Backpack Surface Extractor is manufactured and supported by:

InnovaPrep LLC
132 East Main Street
Drexel, MO 64742
816.619.3375
www.innovaprep.com

