

MicroPorous Xtraction Technology Guide



A revolutionary technology that incorporates a variety of microporous media options for high efficiency workflows for sample preparation.

What is MicroPorous Xtraction (MPX) Technology?

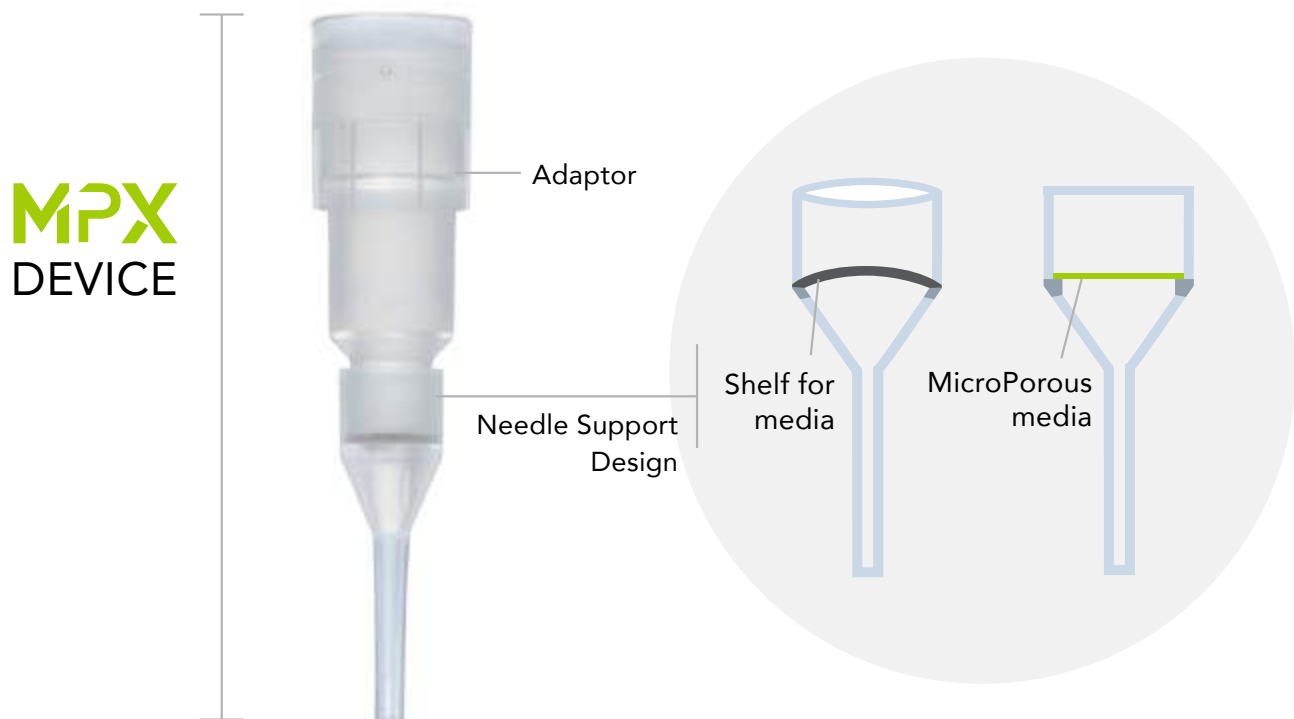
The MPX device utilizes a novel design that combines various microporous media with the benefits of automation for improved sample preparation. The microporous media provides high surface areas required to replace existing large bed SPE, spin column and magnetic bead formats. The device comes as a 3-part unit comprised of an adaptor for Hamilton robotic platforms, a needle support, and the microporous media.

Technology Advantages:

MPX is a versatile technology that facilitates highly reproducible, robust, and fully automated workflows, including:

- DNA purification or cleanup
- Small molecule extraction
- Sub-micron filtration
- Protein isolation or removal**

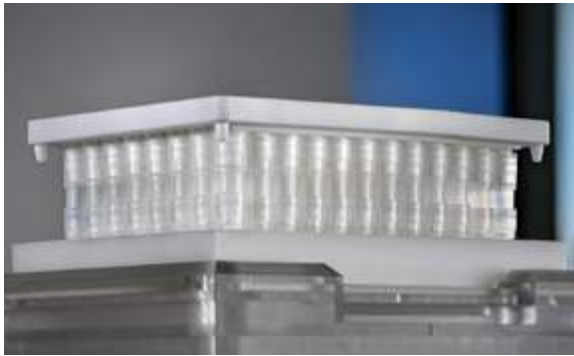
Anatomy:



Patent-pending, innovative workflows that revolutionize and automate a variety of applications

On-Deck Vacuum-Based Workflows

MPX automated workflows incorporate a patent-pending method with a customized on-deck vacuum block. While the MPX device has a reservoir of ~200 μL , the vacuum process and high capacity media allow for multiple loading cycles which results in potential large concentration factors. Unlike most vacuum workflows the MPX device and methods allow for fast vacuum processing while maintaining the use of the automated liquid handler for an on-deck elution step. This prevents the hassle and time of removing a manifold throughout the process like most automated vacuum-based applications as well as eliminates concerns of cross-contamination. Vacuum blocks are custom designed for MPX methods on a Hamilton Nimbus or Hamilton Star system (sold separately).



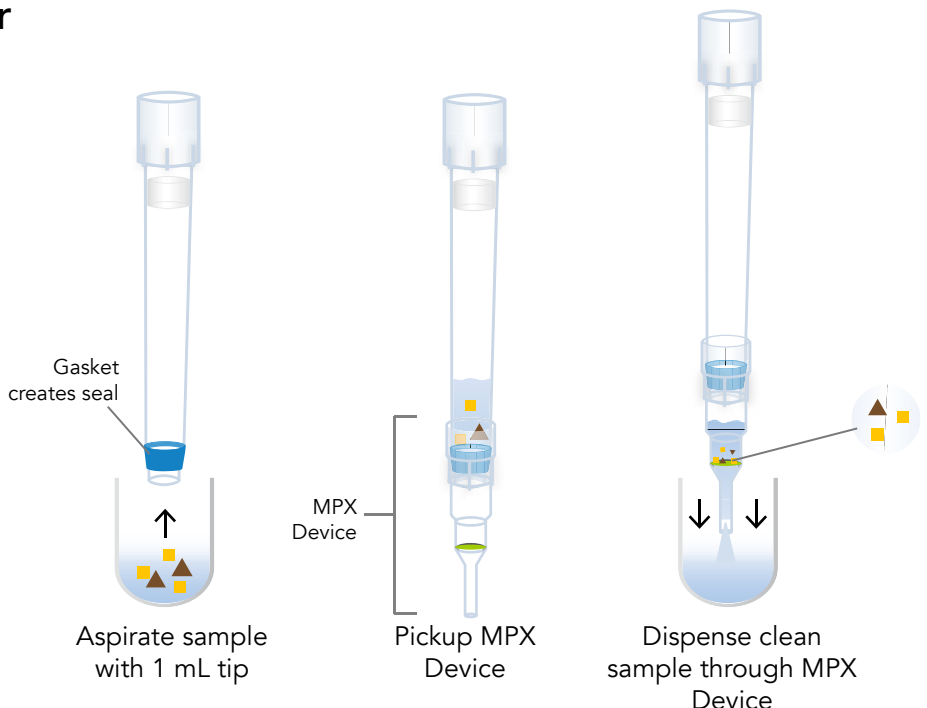
MPX device and funnel plate loaded onto vacuum block. Funnel plate eliminates risk of cross contamination for robot head to engage device. Vacuum pulls solutions through for multiple loading cycles.



Robot head directly engages the MPX devices after the vacuum step. Elution is dispensed directly into the final well plate.

Tip-on-Device Workflows for Filtration Methods

These methods incorporate various media at various porosities for high efficiency filtration. Sample volumes can be up to 1 mL and filtration porosity as low as 0.22 μm .



Chemistry Options and Applications

MPX Kits for DNA Purification

MPX device, funnel plate, and accompanying buffers are sold in a matrix specific kit. Our current genomic methods with the MPX device incorporate a proprietary silica-based media for automated DNA isolation in less than 15 minutes.

- High yield, PCR compatible sample
- Lysis step, only 5 minutes + prep time
- Save time with no magnetic capture incubation steps
- On-deck elution prevents cross-contamination by using the pipetting head of the robotic liquid handler

Product Description	Sample Matrix	Sample Volume
DNA Purification	Whole blood	up to 100 μ L
DNA Cleanup via cell capture	Whole blood	up to 50 μ L

MPX for Small Molecule Applications

MPX methods utilizing the vacuum block allows for drying of SPE media for water-free elutions that are more GC-MS compatible. Current applications include C18 SPE disks to extract small molecules from up to 1 mL of urine for quantitative analysis by mass spectrometry.

- Larger volume sample extractions
- Enables SPE media drying
- Low dead volume for high recovery and low volume elutions

Product Description	Sample Matrix	Sample Volume
Cleanup with C18 SPE	Urine	up to 1 mL
Variety of chemistries	Contact us for more information on a custom solution.	

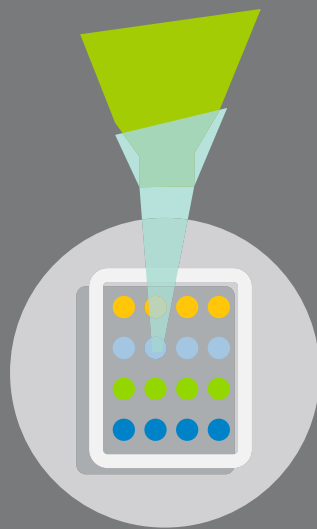
MPX Kits for Filtration

MPX Filtration kits include 1 mL pipette tips with gasket and MPX device. Contact us for more information about how MPX can support your workflow.

Product Description	Sample Matrix	Sample Volume
0.22 μ m filtration	Varies	up to 1 mL
0.45 μ m filtration	Varies	up to 1 mL
1.0 μ m filtration	Varies	up to 1 mL

****Proteomics Applications Coming Soon!**





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