

 **DPX<sup>®</sup> | TECHNOLOGIES**

A part of **Biotage**<sup>®</sup>

# NiXTips<sup>®</sup>

Product Guide

DPX offers innovative technology for fast and effective genomic sample preparation.

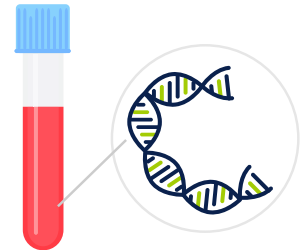
## NiXTips Powered by MicroPorous Xtraction (MPX) Technology

MPX technology for genomic sample preparation utilizes proprietary silica media within functionalized pipette tips (NiXTips) to facilitate methods for DNA extraction from biological samples and for PCR cleanup or size selection.

- Eliminate need for ancillary equipment
- No DNA shearing
- Pure sample ready for RT-PCR, NGS and other downstream applications

### Purification

- Cell Cultures
- Whole Blood
- Saliva



### Cleanup

- PCR cleanup
- Size selection
- Double-sided size selection



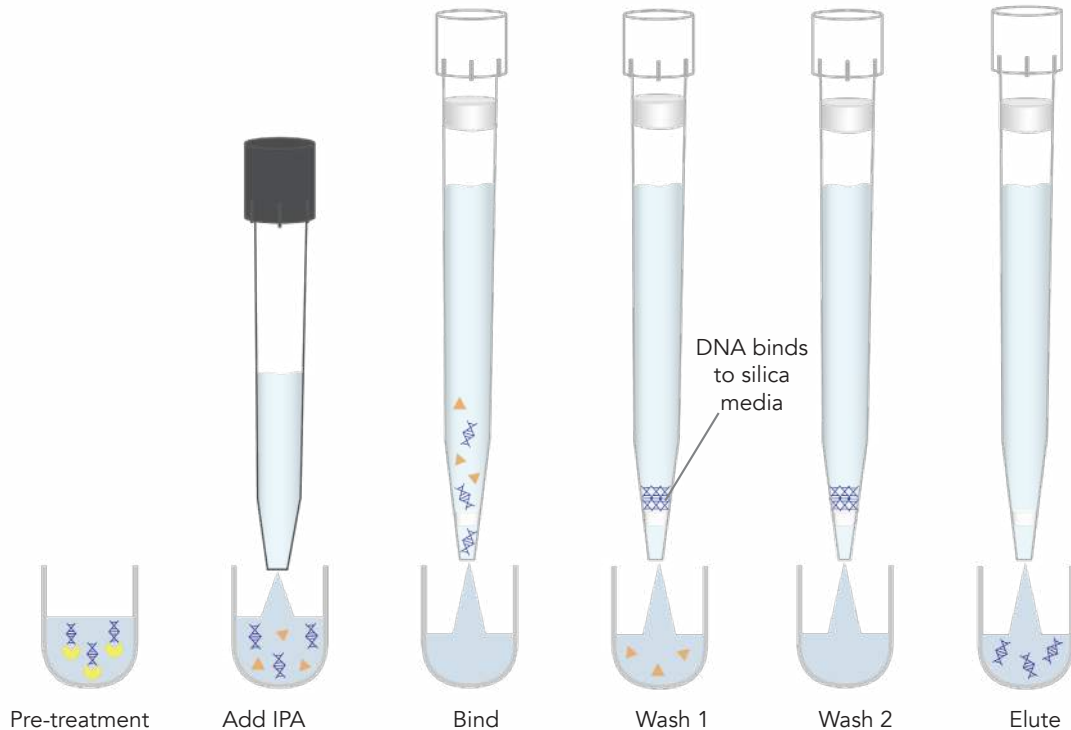
Next Generation Sequencing & Analysis

50  $\mu$ L Hamilton  
CO-RE II format  
NiXTips shown  
here

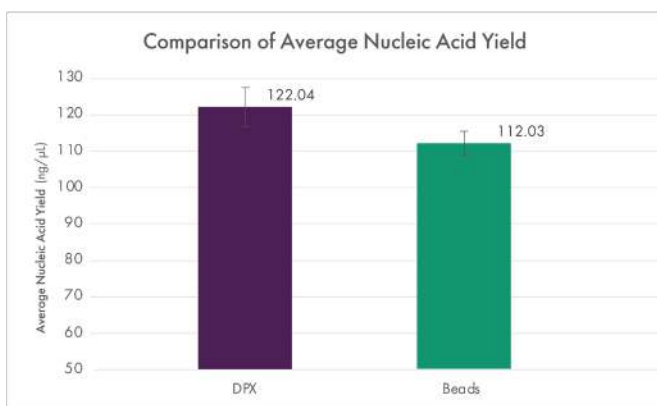


# INTip nucleic acid purification and cleanup methods with simple BIND-WASH-ELUTE protocols.

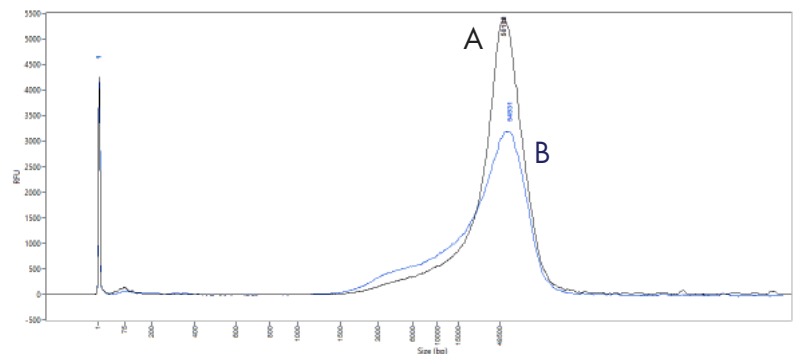
## NiX Methods: Purification



Example protocol for DNA extraction from biological samples. DPX methods result in high yields up to 43  $\mu\text{g}$  genomic DNA depending on sample type, sample volume, and tip format.



Direct comparison of average DNA yields from 250  $\mu\text{L}$  of human whole blood with DPX NiXTips ( $n=4$ ) versus a leading bead-based competitor ( $n=4$ ).

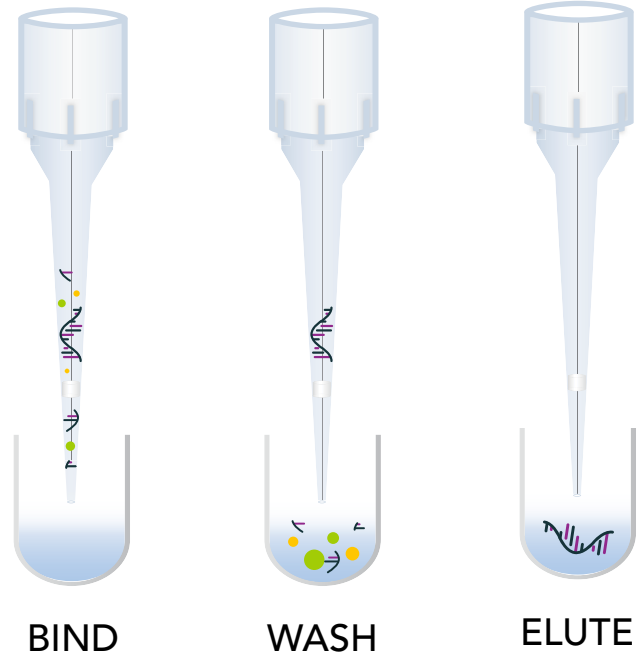


Agilent 5200 Fragment Analyzer traces of genomic DNA (gDNA) isolated using DPX NiXTips compared to bead-based extraction. Analysis was performed with the Genomic DNA 50 kb Kit. (A) gDNA isolated using DPX NiXTips. (B) gDNA isolated using a bead-based method.

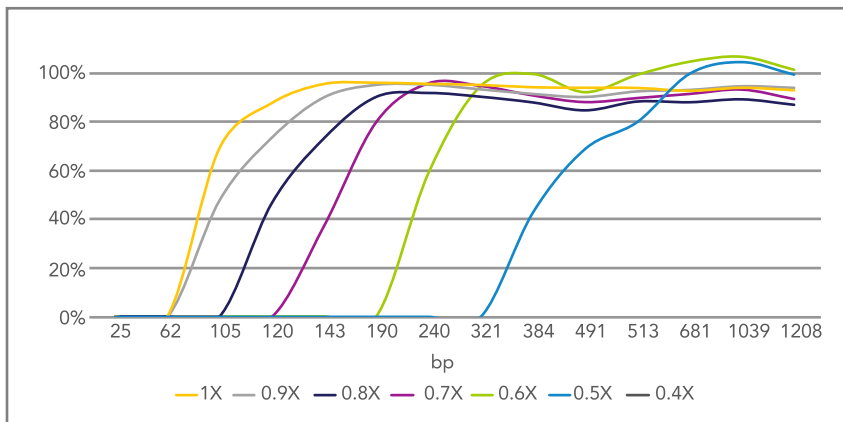
# NiX Methods: Cleanup

## PCR Cleanup & Size Selection

Solid Phase Reversible Immobilization (SPRI) is commonly used for purifying and size selecting nucleic acids. NiXTips' proprietary microporous media and buffer system allows for fast and effective removal of primers, primer-dimers, dNTPs, unincorporated labeled nucleotides, enzymes, and salts from PCR and other reaction mixtures.

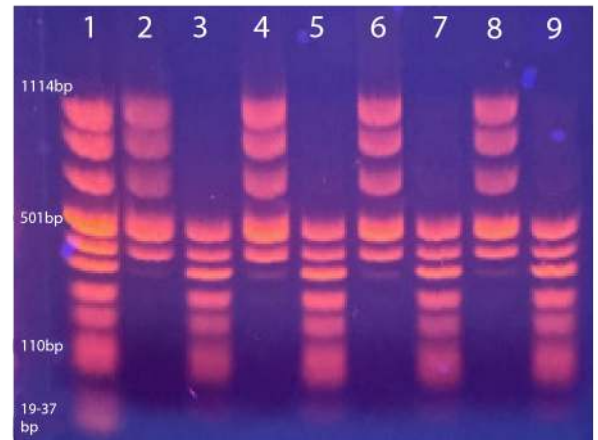


Left Side Size Selection



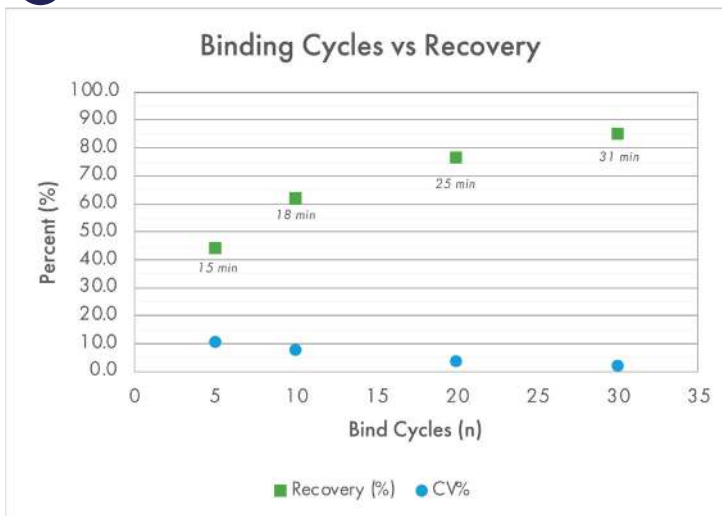
Percent recovery of DNA fragments at different binding buffer to sample ratios using 50 µL NiXTip format. Size selection may be impacted by master mix and tip format.

Quality Assurance

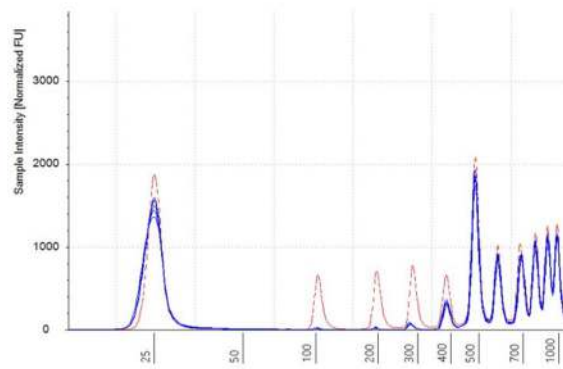


Gel electrophoresis of double-sided size selection using NiXTips. Lane 1 is DNA MWM VIII. Lanes 2, 4, 6, and 8 show DNA fragments bound to the NiXTip at 0.5X binding buffer to sample ratio. Lanes 3, 5, 7, and 9 show DNA fragments bound to a second NiXTip when the same samples are brought up to 0.8X binding buffer to sample ratio.

A



B



NiXTips cleanup and size-selection performance characteristics. a) Recovery is improved and variability is reduced by increasing the number of NiXTips binding cycles. b) NiXTips size-selection will remove the majority of small fragments (<300 bp) at a 0.5:1 binding ratio which is ideal for WGS library preparation.

## How to Order

### NiXTips Applications

NiXTips are compatible with major liquid handling robotic platforms. NiXTips are sold in matrix-specific kits for DNA extraction and prep kits for cleanup methods, including necessary buffers. Contact us for custom method development for applications not listed.

- DNA Isolation from Cell Culture
- DNA Isolation from Whole Blood
- DNA Isolation from Saliva
- PCR Cleanup, Library Prep., Size Selection



Hamilton format kit shown here.

**HAMILTON**

Tip Size	Application
50 µL 96 tips/rack	<span style="color: limegreen;">●</span>
300 µL 96 tips/rack	<span style="color: darkblue;">●</span> <span style="color: limegreen;">●</span> <span style="color: purple;">●</span>
1 mL 96 tips/rack	<span style="color: darkblue;">●</span> <span style="color: purple;">●</span> <span style="color: blue;">●</span>

**INTEGRA**

Tip Size	Application
125 µL 384 tips/box	<span style="color: limegreen;">●</span> <span style="color: purple;">●</span>
300 µL 96 tips/rack	<span style="color: darkblue;">●</span> <span style="color: limegreen;">●</span> <span style="color: purple;">●</span>
1250 µL 96 tips/rack	<span style="color: darkblue;">●</span> <span style="color: purple;">●</span> <span style="color: blue;">●</span>

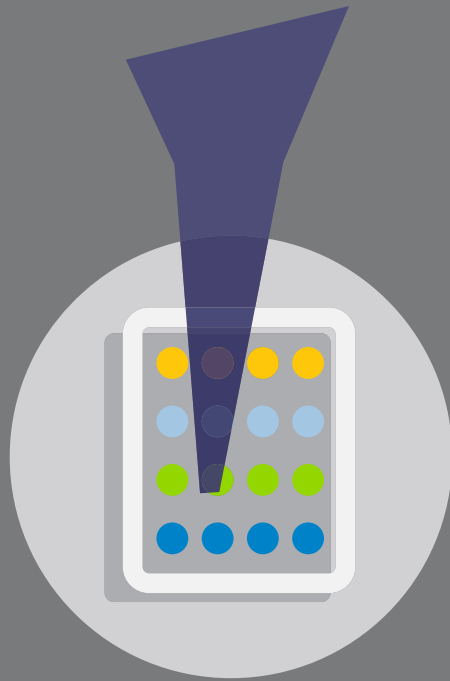
**Agilent Technologies**

Tip Size	Application
70 µL 384 tips/box	<span style="color: limegreen;">●</span>

**TECAN**

Tip Size	Application
200 µL* 96 tips/rack	<span style="color: darkblue;">●</span> <span style="color: limegreen;">●</span> <span style="color: purple;">●</span>

\*Coming Soon!



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