



## MiSeq<sup>®</sup> system applications

# Choose your application. Load, and go.

Focused power. Speed and simplicity for targeted and small-genome sequencing.

Optimized sample preparation kits, push-button sequencing, and automated data analysis create the first end-to-end sequencing solution. MiSeq delivers a simple workflow and accurate data for access to a wide breadth of applications. And no need for extra hardware—store, analyze, and share data with Illumina's BaseSpace® cloud. Sample to data in a single day. All at the touch of a button.



Targeted  
Resequencing



Amplicon  
Sequencing



RNA-Seq



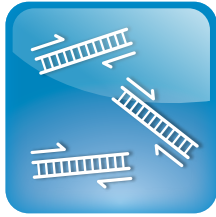
Plasmid



de novo Sequencing



Clone Checking



Custom Amplicon



Custom Enrichment



Small RNA Sequencing



Resequencing



Library QC



ChIP-Seq



Small Genome



16S Metagenomics

# The fastest and easiest sample prep.

## Nextera® XT DNA Sample Prep Kit

Nextera technology combines with the MiSeq system to provide the fastest and easiest solution for amplicon and small-genome sequencing. In one quick step, DNA is simultaneously fragmented and tagged with sequencing adapters to deliver libraries that can be rapidly sequenced with the MiSeq system.

### ***Rapid sample preparation***

Complete sample prep in as little as 90 minutes with only 15 minutes of hands-on time

### ***Fastest time to results***

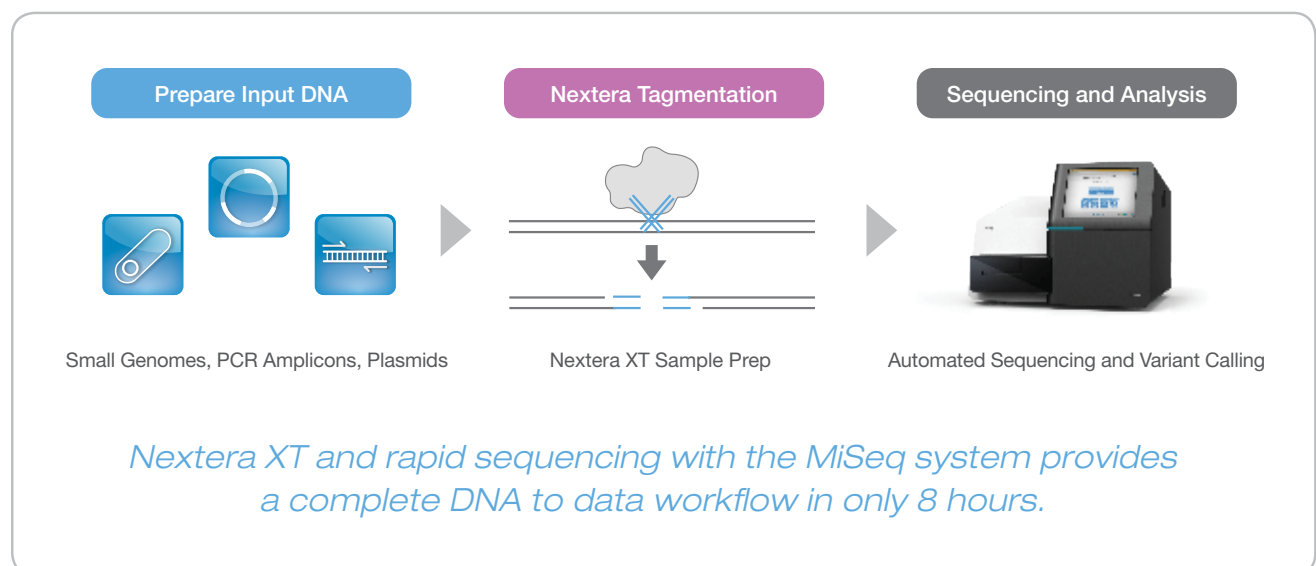
Go from DNA to data in only 8 hours

### ***Optimized for small genomes, PCR amplicons, and plasmids***

One sample prep kit for many applications

### ***Innovative sample normalization***

Eliminates the need for library quantification prior to sample pooling and sequencing



# Amplicon sequencing transformed.

## TruSeq® Custom Amplicon Kit

Optimized for the MiSeq system, TruSeq Custom Amplicon (TSCA) offers a highly multiplexed amplicon and sample assay for powerful, fast, and cost-effective variant identification. Requiring just 150 ng of starting gDNA, TSCA is amenable to a wide range of samples, including non-human samples and samples available in limited quantity. Data analysis is performed directly on the MiSeq system, providing quick, easy-to-interpret results for both germline and somatic variation.

### ***Simplest assay customization***

Easily create projects online with DesignStudio™ for a range of amplicon sizes and target genomes

### ***Fastest sample processing***

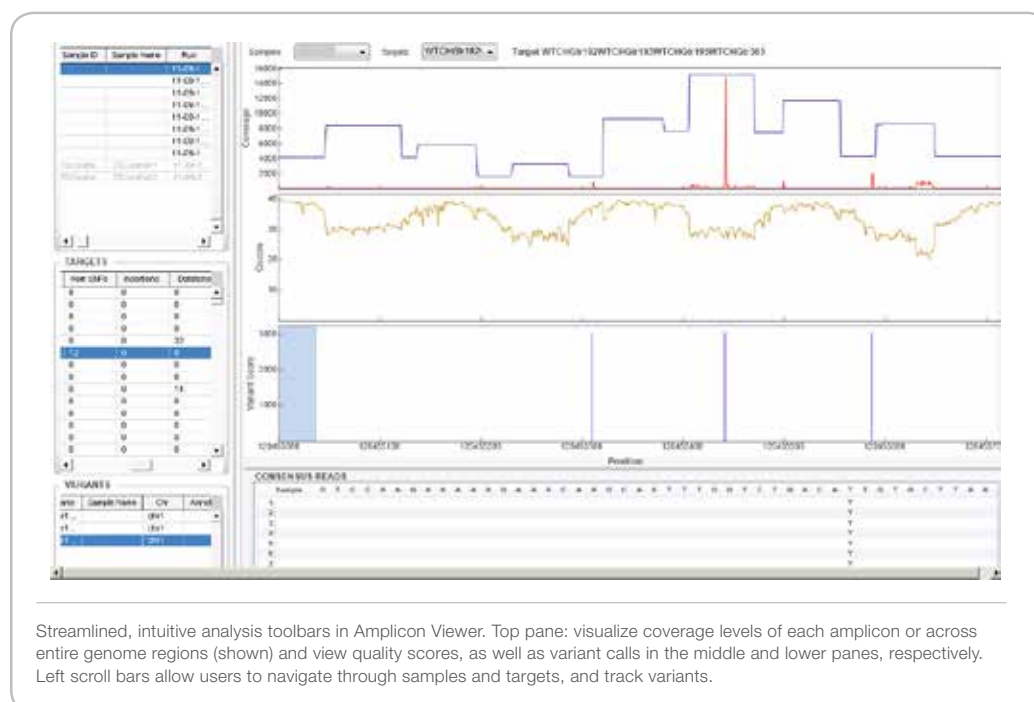
Prepare and enrich up to 1,536 amplicons per reaction and 96 samples per plate simultaneously using standard lab equipment

### ***Shortest time to project completion***

Go from genomic DNA to fully analyzed data in less than 2 days

### ***Easiest analysis***

Access pre-configured, on-instrument software for automated variant calling and data analysis



Streamlined, intuitive analysis toolbars in Amplicon Viewer. Top pane: visualize coverage levels of each amplicon or across entire genome regions (shown) and view quality scores, as well as variant calls in the middle and lower panes, respectively. Left scroll bars allow users to navigate through samples and targets, and track variants.

# The widest breadth of sequencing applications.

MiSeq is capable of automated paired-end reads and up to 15 Gb per run, delivering over 600 bases of sequence information. Sample prep kits are optimized for a variety of applications. Empower your research with the MiSeq system.

Application	Recommended Read Length	Illumina Solution
<b>Targeted Resequencing</b>		
Amplicon Sequencing (tens of targets)	1 × 250	●
Amplicon Sequencing (hundreds of targets)	2 × 300	●
Hybrid Capture (thousands of targets)	2 × 75	● ● ●
16S Metagenomics	2 × 150	● ●
Clone Checking	1 × 36	●
<b>Small-Genome Sequencing</b>		
<i>De novo</i>	1 × 36, 2 × 300	● ●
Resequencing	1 × 36, 2 × 300	● ●
Plasmids	1 × 36, 2 × 300	● ●
<b>RNA Sequencing</b>		
Small RNA Sequencing	1 × 36	◆
RNA-Seq (microbial) <sup>†</sup>	2 × 50–250	◆
<b>Quality Control</b>		
Library QC	2 × 25	● ● ◆ ◆
<b>Regulation</b>		
ChIP-Seq	1 × 36	●

<sup>†</sup>Use with Ribo-Zero™.

DNA		RNA
● TruSeq DNA Sample Prep Kit	● Nextera XT DNA Sample Prep Kit	◆ TruSeq RNA Sample Prep Kit
● TruSeq Custom Enrichment Kit	● Nextera Custom Enrichment Kit	◆ TruSeq Small RNA Sample Prep Kit
● TruSeq Custom Amplicon Kit		

## MiSeq system applications

Focused power. Speed and simplicity for targeted and small-genome sequencing. With the largest applications portfolio at your fingertips. And, access to an entire community of users and tools with BaseSpace. All designed to move your research forward.

The pocket inserts showcase just a few of the applications we've explored with the MiSeq system. And this is just the beginning.

Learn more at [www.illumina.com/miseq](http://www.illumina.com/miseq)



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