

# Reach new heights in your biomolecule analysis with Nexera XS inert

## Nexera XS inert vs conventional UHPLC

Compared to conventional UHPLC instruments, the Nexera XS inert:

- ✓ Enhances sample recovery
- ✓ Increases sensitivity
- ✓ Improves resolution
- ✓ Elevates efficiency

## Stainless steel-based conventional UHPLC

### Biomolecules adsorb to stainless steel-based UHPLC systems

During conventional UHPLC, adsorption of biomolecules like oligonucleotides leads to:

- Reduced sensitivity
- Lower reproducibility
- Peak tailing
- Carryover effects

Adsorption to internal surface

Sample loss

Poor peak shape  
Peak tailing

## Nexera XS inert

Innovative PEEK material that inhibits adsorption

No sample loss

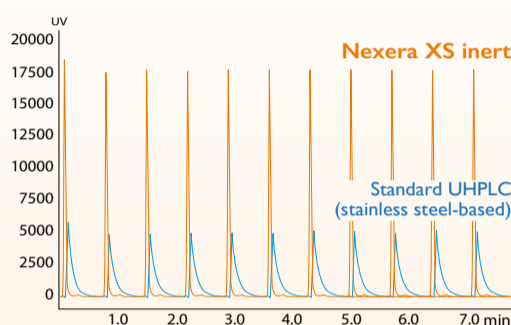
Excellent separation

### Avoiding sample adsorption with Nexera XS inert

Unlike conventional UHPLC instruments, Nexera XS inert has metal-free tubing that inhibits the adsorption of negatively charged biomolecules, preventing sample loss.

### More reliable and efficient MISER chromatography

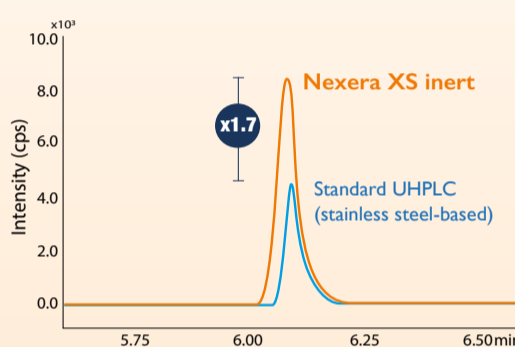
Find high reproducibility from the first injection, lowering sample usage, while streamlining biomolecule analysis.



MISER-gram of AMPcP, run on traditional stainless steel-based UHPLC vs Nexera XS inert system

### Take chromatography peaks to new levels

Achieve higher and sharper peaks for metal-sensitive compounds, elevating resolution and sensitivity.



Analysis of the antisense oligonucleotide mipomersen using standard stainless steel-based UHPLC vs Nexera XS inert

## Nexera XS inert

Elevate your oligonucleotide analysis with our bioinert, biocompatible UHPLC instrument.

- ✓ **Chemical resistance and high durability** with pH stability 1-14
- ✓ **Bio-inertness and enhanced pressure stability** with PEEK Lined Stainless (PLS) tubing
- ✓ **Ultra-high resistance to corrosion** and complete **biocompatibility** with the absence of wetted surfaces in the sample flow path

STEEL REINFORCED  
PEEK

BIO

- pH monitoring capability
- Touchscreen controller SCL-40 GUI
- Inert online de-gasser DGU-405
- Metal-free detector 3D-PDA
- 15,000 psi inert pump
- Automated inert flow switching capability
- Metal-free ceramic autosampler for rapid and reliable analysis
- Diamond-like carbon coated stator and reinforced PEEK rotor for enhanced pressure tolerance



**SHIMADZU**  
Excellence in Science



Transform your biomolecule analysis with our advanced range of UHPLC, LC-MS and Spectroscopy solutions