

# Metal-Free LC with Dursan® Bio-Inert Coating

Surface Solutions for Reliable and Repeatable Liquid Chromatography



## Overview

A bio-inert flow path is required to manage the complex and reactive sample profiles that are common in today's fast-paced analytical world. Modern LC systems feature an array of exotic materials to achieve bio-inertness, but they are significantly more expensive than instruments constructed with stainless steel flow path components.

Dursan® is a coating for stainless steel that provides equal or better bio-inertness than PEEK along with the durability of titanium. Dursan® is a simple and cost-effective solution for parts requiring bio-inert properties throughout the lab.

## Dursan® Specifications

Coating structure:	Functionalized silica-like coating ( $\alpha\text{-SiO}_x\text{:CH}_Y$ )	
Deposition process:	Thermal chemical vapor deposition (not plasma-enhanced)	
Temperature:	Deposition	300° - 450°C
	Use	-210°C to 450°C
Substrate:	Compatibility	Stainless steel, titanium, aluminum, more
	Size	Up to 80" (203 cm)
	Geometry	Any shape, including complex geometries
Coating thickness:	400-1600 nm	
Allowable pH exposure:	0-14	
Ideal for:	Frits, columns, end fittings, pump heads, valves, tubing, vessels, and more	

## Key Features

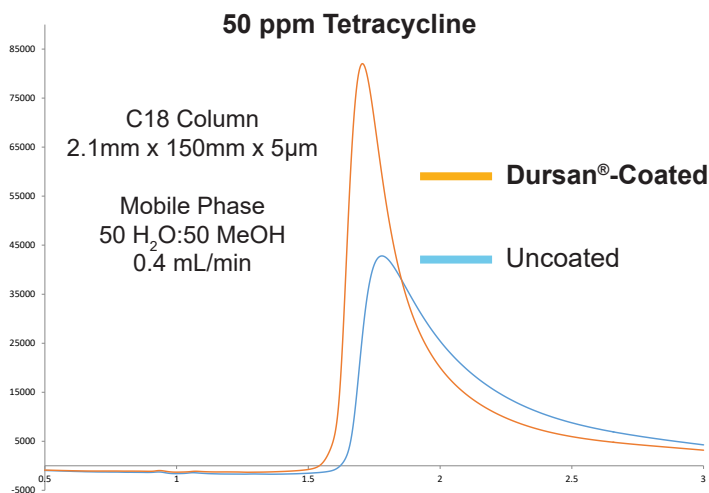
- Creates an iron-free bio-inert flow path to minimize unwanted protein interactions and maximize uptime
- Increases system robustness under extreme salt and pH conditions
- Improves bio-inertness of frits and other difficult components that cannot be treated by other methods
- Enhances chemical compatibility, even with media like tetrahydrofuran (THF) that challenge PEEK

*"The Dursan®-coated columns have so far passed all tests bravely... The results were, as expected, much better than steel columns, but also better than pure PEEK columns."*

# Performance Data & Benefits

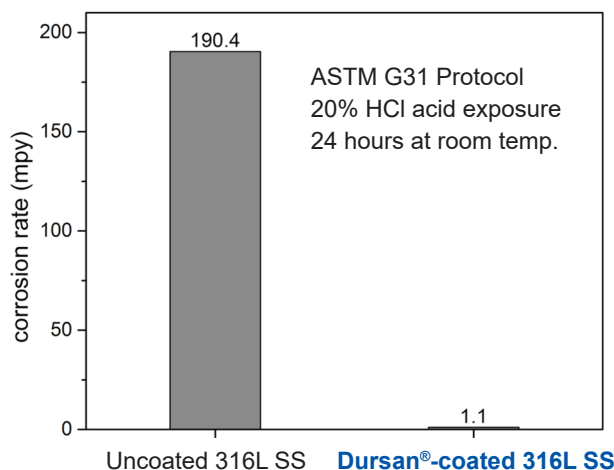
## Improve Peak Shape

Increase chromatographic accuracy and reliability.



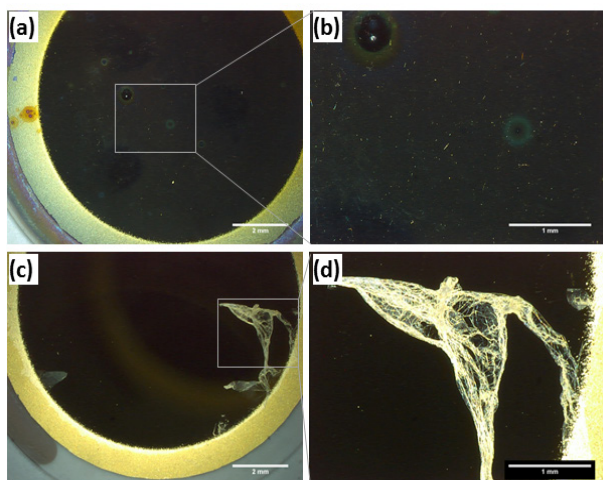
## Increase Corrosion Resistance

Extend system lifetime and reduce costs.



## More Durable than Fluoropolymers

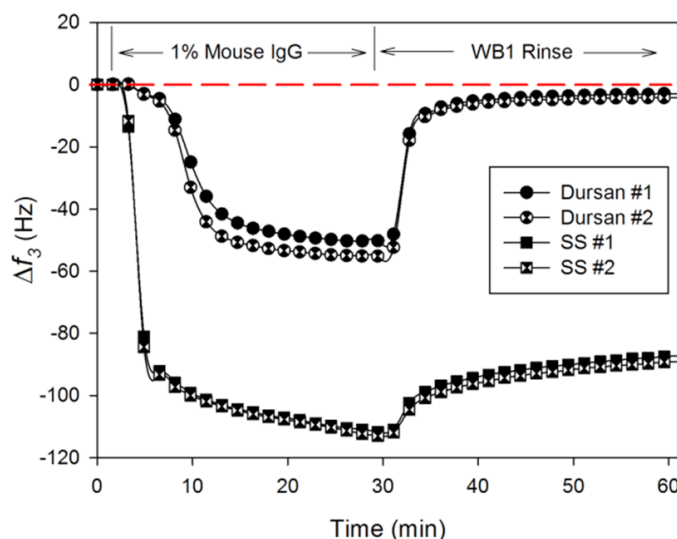
Improve component lifetime in addition to non-stick properties.



SilcoTek®-coated parts (top) withstand medical-grade cleaning procedures, while fluoropolymers (bottom) crack and flake.

## Reduces Surface Fouling from Biomedica

Increase time between maintenance cycles.



## Resources

Visit [www.SilcoTek.com/learning-center](http://www.SilcoTek.com/learning-center) for literature, data, and more.

## How to Buy

Go to [www.SilcoTek.com/ordering/quote-request](http://www.SilcoTek.com/ordering/quote-request) for a custom quote or [www.SilcoTek.com/buy-coated-products](http://www.SilcoTek.com/buy-coated-products) for stock items.

## Contact SilcoTek

Find a global representative: [www.SilcoTek.com/ordering/international](http://www.SilcoTek.com/ordering/international)

For customer or technical service: [SilcoD@SilcoTek.com](mailto:SilcoD@SilcoTek.com)

By phone: +1 (814) 353-1778



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