

Dursan® for HPLC Helps Shepard Industries Achieve Inert and Robust Stainless Steel Components



A SILCOTEK® CASE STUDY



Shepard Industries

“The SilcoTek Dursan® coating has opened up a whole new window of opportunities; providing a high quality and problem-solving solution for the industry and our company.”

- Daniel Shepard
Operations Manager (CIO)

SUMMARY:

Modern HPLC systems feature an array of exotic materials, but they are significantly more expensive than instruments constructed with stainless steel flow path components. Shepard Industries manufactures these components and uses the Dursan® coating in their new Hero line of HPLC hardware. This game-changing story explains how SilcoTek coatings have enabled Shepard Industries to solve complex problems and create a more valuable product.

CHALLENGES:

Shepard Industries manufactures a variety of hardware for the chromatography industry. Currently the only materials that could sustain bio-inert capabilities in this field were titanium and PEEK. Both of these materials being either expensive or inconsistent were only *just* getting the results needed to achieve customer goals. Shepard Industries needed to use stainless steel, which is less expensive, more stable and can handle the surprisingly tough environment of chromatography applications.

HOW SILCOTEK HELPED:

Shepard Industries now has the ability to offer bio-compatible stainless steel products. The Dursan coating has solved an issue that has been in the HPLC and UHPLC industry for many years. They now offer a product that is bio-compatible, can withstand high pressure, and provide repeatable high quality results.

GAME-CHANGING BENEFITS:

Shepard Industries has acquired multiple new customers and helped existing customers **solve complex issues** within the field. They now have a new product series, the Hero line, that they can offer to customers that solves a gap in the industry. The Dursan coating has **added thousands of dollars to their bottom line**, in just the first quarter of releasing the products.



Fig. 1: Shepard Industries' logo for their Dursan-coated, bio-inert, Hero line.

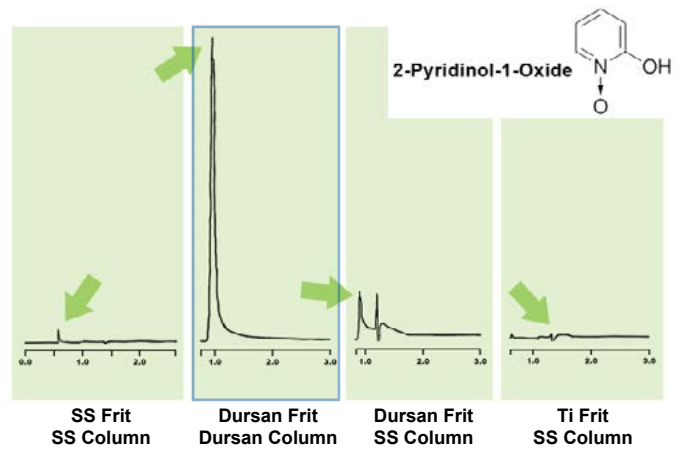
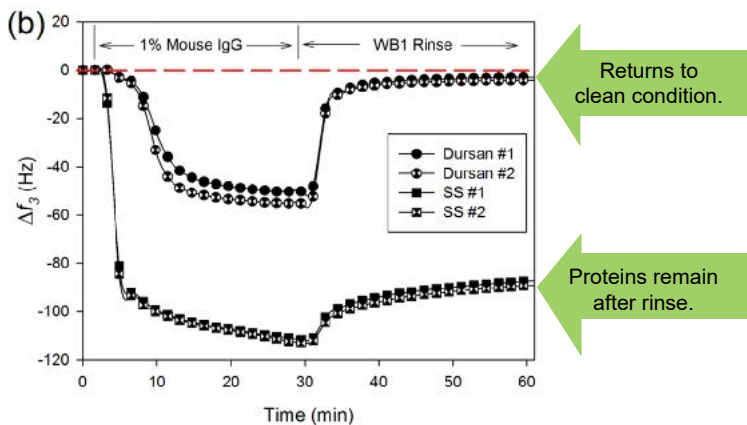


Fig. 2: A comparative study that shows a powerful metal chelating agent that can only be analyzed with a Dursan-coated flow path.



Vaidya, S.V.; Yuan, M.; Narvaez, A.R.; Daghfal, D.; Mattzela, J.; Smith, D. Appl. Surf. Sci. 2016, 364, 896-908

Fig. 3: Dursan will reduce surface fouling from proteins and other biomedica to increase time between maintenance cycles.



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