



• 4119 White Bear Parkway, St. Paul, MN 55110 USA
• Phone: (651) 429-1100, Fax: (651) 429-1122
• Toll Free: (800) 4-CORTEC, E-mail: info@corotecvci.com
corotecvci.com • corteclaboratories.com

Evaluating Corrosion Protection of Cleaner

From: Cortec Corporation Laboratories
4119 White Bear Parkway
St. Paul, MN 55110

cc: Boris Miksic
Anna Vignetti
Cliff Cracauer
Bob Boyle

Project #: 11-163-1825.supplemental(bis)

Test conducted by:

Eric Uutala
Technical Service Engineer

Approved by:

Margarita Kharshan
Laboratory Director

Date: August 25, 2011



Background: Customer sent three small tube sections to Cortec for evaluation. They would like the corrosion protection of their current cleaner tested and compared to a similar Cortec product.

Sample Received: Three metal tube sections

Method: ASTM D-1748 Humidity (modified)

Materials: Tube sections
VpCI-416
Deionized water
Laboratory grade methanol
3"x5" plain polyethylene (PE) Ziploc bags

Procedure: The following procedure was used:

- 1) Upon receipt, two of the three tube sections were cleaned with methanol.
- 2) After cleaning, one of the tubes was dipped in a 10% solution of VpCI-416 (by volume, diluted in deionized water) and allowed to air dry.
 - a. The second tube was not treated after being cleaned with methanol.
 - b. The third tube was tested as received, having the current cleaner already applied. The current cleaner is manufactured by ChemStation.
- 3) All three tubes were packaged in individual plain PE Ziploc bags.
- 4) After packaging, tubes were hung in ASTM D-1748 humidity cabinet.
- 5) Tubes were visually inspected periodically.
- 6) After 168 hours, all tubes were removed from ASTM D-1748 humidity cabinet.
- 7) Tubes were removed from packaging, visually inspected, and photographed.

Results: The following results were found:

Treatment	Time to Corrosion (Hours)
None (control)	<24
Current cleaner	48
VpCI-416 (10%)	168

Photos:



Figure 1: Tube sections after 168 hours of humidity testing. From left to right: Control, current cleaner, VpCI-416.

Interpretations: VpCI-416 provided the best corrosion protection in this test, when compared to the cleaner currently being used.