

## Hydrite Bruker XRF Analyzer

*Are You Aware* that Hydrite has a tool called the Bruker XRF Analyzer that can be used to test the composition of stainless steel and other substrates?

Purchasing new SS equipment and want to verify the grade of stainless used for manufacture?

Are you experiencing any corrosion or discoloration of stainless steel? Is the grade or quality of the stainless in question?

The Bruker Titan S1 800 XRF Analyzer is a device that uses non-destructive X-Ray Fluorescence to determine the chemical composition of various metal alloy surfaces including different grades of stainless steel. The analyzer can also be used to test other surfaces such as aluminum alloys, with the ability to detect atomic elements with weights ranging from Magnesium to Uranium.



304SS				
42 Match 9.6 01-04 22:38				
Time 2.0				
El	Min	%	Max	+/-
Fe	66.35	71.80	74.00	0.37
Cr	18.00	18.05	20.00	0.16
Ni	8.00	8.36	10.50	0.16
Mn	0.00	1.22	2.00	0.09
Cu	0.00	0.17	0.50	0.03
Mo	0.00	0.13	0.50	0.01
Co		0.28		0.03

In the pictures below, you will see a valve body with a discolored section. Using the Bruker XRF Analyzer, we were able to show the customer that the discolored section of the valve had a slightly inferior chemical composition.

### Titan S1 Series Bruker Portable XRF Analyzer: Field Test

- Note the two valves with staining on portions of each body in the photo to the right.
- The Bruker Titan 900 series XRF Analyzer Gun was used to test two sections of the valve.
  - The stained section of the valve showed a 16% chrome composition.
  - The non-stained section of the valve showed an 18% chrome composition



Reach out to the **RITE team** for more information on the Bruker XRF Analyzer.