

Vanta Element-S Alloy Plus LODs

Vanta™ Element-S Analyzer

Affordable XRF Testing

Evident is a leader in XRF technology with a reputation for durability, quality, and accuracy. Vanta™ handheld XRF analyzers incorporate Axon Technology™ to deliver higher X-ray counts per second and fast calculations to identify alloy grades in as little as 1–2 seconds in even the most challenging environments.

The **Vanta Element-S** model can measure elements from concentrations as low as several parts per million (ppm) all the way up to 100%. The limits of detection (LODs) represent the calculated value using three sigma 99.7% confidence level. The LOD for each element is a function of the testing time. Please contact your local Evident representative for more information.

The LODs reported here are based on automatically selected beam conditions (kV, μ A, and filter settings) and a measurement time of 60 seconds:

- Several certified alloy standards were used for each base material.
- The iron (Fe) category contains both low alloy steels and stainless steels.
- LODs are, in general, lower for low alloy steels than with stainless steel.
- Actual working samples may contain interfering elements, so the actual working LODs for some samples may be higher than those presented here.
- The commonly accepted level for the limit of quantification (LOQ), or ability to quantify the concentration of an element, is 10 sigma.
- Only commonly occurring elements in each base material are listed. Vanta analyzers are capable of measuring many other elements.

Vanta Element-S Alloy Plus LOD (ppm)

Element	Fe base	Cu base	Al base
Mg	–	–	3975
Al	1100	5450	–
Si	380	600	200
P	200	165	–
S	285	5	–
Ti	210	–	230
V	55	–	110
Cr	45	35	38
Mn	60	22	27
Fe	–	45	11
Co	220	35	–
Ni	45	40	11
Cu	35	–	14
Zn	55	100	11
W	50	–	–
Pb	45	22	5
Bi	70	65	5
Zr	16	–	3
Nb	7	–	–
Mo	8	–	–
Sn	45	55	22
Sb	80	65	11