

## VANTA VCR Soil LOD

# VANTA

## Rugged. Revolutionary. Productive.

Olympus is a leader in XRF technology with a reputation for durability, quality, and accuracy. Vanta™ handheld XRF analyzers incorporate Olympus' Axon™ technology to deliver higher X-ray counts per second and fast calculations to screen materials accurately and quickly for restricted elements.

The Vanta model VCR is capable of measuring elements from concentrations as low as several parts per million (ppm) all the way up to 100%.

The limits of detection (LODs) reported here are based on automatically selected beam conditions (kV,  $\mu$ A, and filter settings) and a measurement time of 120 seconds per beam.

- The LODs represent the calculated value using three sigma 99.7% confidence level.
- The LOD for each element is a function of the testing time.
- Certified representative soil standards were used for calculations.
- Actual working samples may contain interfering elements, so the actual working LODs for some 'real-world' 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 times the statistical noise.
- Only commonly occurring elements in soils are listed. Vanta analyzers are capable of measuring many other elements.

Vanta VCR Soil mode	
Element	LOD (ppm)
P	350
S	60
Cl	30
K	20
Ca	15
Ti	5
V	3
Cr	3
Mn	4
Fe	6
Co	3
Ni	4
Cu	3
Zn	1
As	1
Se	1
Rb	1
Sr	1
Y	1
Zr	1
Nb	1
Mo	1
Ag	6
Cd	8
Sn	13
Sb	14
W	4
Hg	2
Pb	2
Bi	4
Th	3
U	2

