

Vanta™ XRF Analyzer For Wear Metals in Oil



The Vanta XRF Analyzer: Rugged. Revolutionary. Productive.

A robust maintenance program that routinely measures metals in lubricating oils not only reduces the expense of dismantling components for visual inspection but can indicate and identify the worn component before it fails. The Vanta™ analyzer is used to identify the material chemistry of wear metals, such as copper and iron, in oils and lubricants. When the level of these metals changes, having an inspection record enables you to do predictive maintenance and identify small problems before they become costly failures.

The Vanta handheld XRF analyzer provides accurate material chemistry, from trace level to percent level, of wear metals in oils and lubricants to determine the actual elemental concentrations present. When combined with the Vanta Workstation, the analyzer brings the analytical performance of the laboratory to the field.

Rugged

IP65 rated

The Vanta VCR model analyzer is IP65 rated against the intrusion of dust and water. Spills happen, but a little liquid shouldn't damage your analyzer.

Closed beam

Within the Workstation, the Vanta analyzer has a closed beam, interlocked design. When the lid is open, the X-rays cannot turn on, helping ensure the safety of your operators.



Revolutionary

Axon technology

Vanta analyzers incorporate Olympus' Axon™ technology, a breakthrough in XRF signal processing that delivers higher throughput with accurate and repeatable test data. Axon technology provides test-to-test and instrument-to-instrument repeatability.

Fast, stable calibration

Get accurate results in just 60 seconds. The unit does not need to be recalibrated, and the internal system check keeps the analysis on track. Get answers that are accurate down to the ppm level for a wide range of elements.

Productive

Zero sample preparation

Simply place the oil in a sample cup, use the sample tray to ensure proper alignment, and press start. It's that simple to get an accurate analysis. The streamlined user interface makes testing less complicated.

Compact design

The Vanta analyzer and Workstation can fit on a workbench or desk—there's no need for bulky lab equipment. Engineered to be used anywhere, the Vanta analyzer and Workstation thrive in the field, at the production line, or in an inspection area.

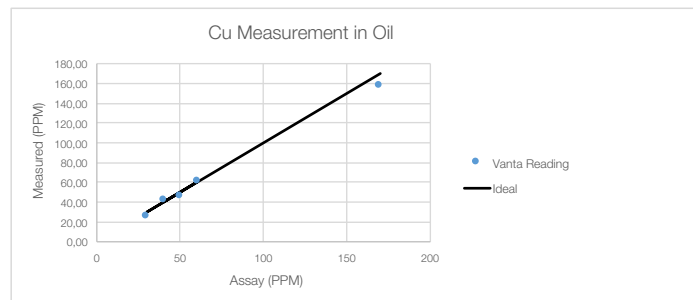
Data handling

The test results are important information that can be easily shared with key decision makers. Data are easily exported via a USB flash drive or optional Wi-Fi. Users can set up the system to auto-export results after every test.

Element detection limits

Limits of detection (LODs) are affected by many parameters including test time, sample homogeneity, sample matrix, and the presence/absence of interfering elements. The effective analysis range extends to the percent level. Analysis of additional elements is possible; please contact your Olympus representative for further details.

Analysis of certified reference oil samples using the Vanta VCR model XRF analyzer Oil Analysis Method with a 60-second analysis time



Cu Assay	Cu Reading	+/-
49.99	46.32	2
40.03	42.52	2
60.28	61.33	2
30	25.50	2
170	157.69	3



Element	Estimated LOD (ppm) (60 second test)
Vanadium	14
Manganese	4
Iron	3
Cobalt	2
Nickel	2
Copper	2
Zinc	2
Molybdenum	2
Bismuth	1
Mercury	1
Arsenic	1
Lead	1



Vanta XRF Analyzer Oil Analysis Method Specifications (VCR Model)

Concentration range	ppm to % levels
Vanta™ analyzer weight	1.7 kg (3.75 lbs)
Workstation weight	8.9 kg (19.6 lbs)
Measurement time	60-second
Operating environment	-10 to 50 °C under continuous duty cycle (with optional fan; fan assembly is IP56 rated)
Power requirements	AC: 100–240 switching adaptor
Vanta analyzer IP rating	65 rated
Vanta analyzer connectivity	USB cable; optional wireless LAN (Wi-Fi)
Tube voltage	40 kV
Tube current	100 µA
User interface	Built-in touch screen or connected tablet
Instrument dimensions	8.3 cm × 28.9 cm × 24.2 cm (3.25 in. × 11.4 in. × 9.5 in.)
Sample chamber	12.4 cm × 24.8 cm × 15.6 cm (4.9 in. × 6.1 in. × 9.75 in.)
Footprint	70 cm (27.5 in.) height, 52 cm (20.5 in.) width, 37.5 cm (14.75 in.) depth

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is certified to ISO 9001, ISO 14001, and OHSAS 18001.

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Vanta_WearMetalsinOil_AppNote_201705