



苏州英飞思科学仪器有限公司

Efficiency Scientific Instrument Co.,Ltd



COMPASS 200

Portable XRF Soil Analyzer

Your Field Lab

Simply the Best

- > Your field elemental analysis Lab that goes anywhere
- > Nondestructive with accurate, consistent analysis in minutes or less
- > Easy to use, with little operator training required
- > Bench-top design delivers more stable and precise test performance



Background and Introduction

Compass 200 X-ray fluorescent (XRF) analyzer has the capability to non-destructively quantify or qualify nearly any element in soil or mineral samples, depending on specific instrument configurations. It has already shown to successfully estimate a whole suite of soil parameters in a number of disciplines, including archaeology, geology, agronomy, and soil pollution. The analysis of soil elemental concentrations aids the assessment of soil mineralogy, fertility, salinity, acidity, and cation exchange capacity (CEC), alongside metal uptake by plants and soil heavy metal contamination. Compared to conventional laboratory analysis, the determination of soil elemental concentrations by XRF is much faster, less expensive, and non-destructive. The best results are obtained when samples are homogenized, dried, finely ground, and sieved, but sample preparation is not always necessary as Compass 200 can be directly employed in the field.

The Compass 200 makes it possible to perform efficient quantitative element analysis of soils with a minimum of sample preparation



Compass 200



Compass spares and suitcase

Features:

- > Strong software with standard-less fundamental parameters (FP) algorithm, or use its empirical calibrations when results traceability and superior accuracy are needed
- > Extremely easy to use with Load-and-Start for sample analysis
- > Minimal Sample Preparation: great for in-situ testing
- > Fast Qualitative and Quantitative Analysis
- > Advanced data management system with flexible multiple data transport methods including USB cable connection, storage card, Wi-Fi and Bluetooth
- > No PC required, alleviating the worry of a computer crash and loss of data

Typical Applications:

- > In-Situ Soil Screening/ soil surveys
- > Waste effluent monitoring
- > Contaminated land assessment/Hazardous and toxic metals in soil complied with EPA Method 6200
- > Site remediation and validation/Ex-Situ Soil Analysis
- > Pt, Pd and Rh in the catalyst
- > Consumer goods testing: more precise testing for Pb, Cd in toys, jewelry, packaging, and food etc.

High precision results without daily calibration needed

Test Performance of the Soil Samples

Instrument Model :		Compass 200									
Unit: PPM		Test Time: 200 seconds					Test Sample: Soil Standard Sample				
No.of Reading	Calibrati on Curve	V	Cr	Co	Ni	Cu	Zn	As	Pb	Cd	
1	Soil	96.2	64.6	16.0	20.5	26.0	695.1	54.3	116.3	5.0	
2	Soil	96.0	67.5	16.3	25.4	28.1	688.8	52.1	118.4	4.4	
3	Soil	99.0	69.3	16.3	23.6	29.2	683.7	55.5	116.7	4.9	
4	Soil	96.1	63.6	16.4	21.7	28.1	692.1	54.5	119.1	4.7	
5	Soil	98.6	66.4	16.3	28.0	25.2	689.8	51.5	118.8	4.5	
6	Soil	93.8	66.1	16.3	29.0	22.5	683.6	55.1	117.4	3.7	
7	Soil	96.0	70.4	16.7	23.7	30.5	692.5	56.6	120.0	4.4	
8	Soil	97.7	63.5	16.5	27.3	26.0	685.9	52.5	116.4	3.9	
9	Soil	97.4	65.9	16.6	24.9	31.3	697.7	54.3	118.7	3.4	
10	Soil	99.8	74.4	16.6	22.1	26.6	686.8	55.3	118.2	3.6	
11	Soil	97.3	66.9	16.5	22.0	26.5	682.2	56.4	116.9	5.7	
Certified Value of Sample		96.0	62.0	14.2	20.4	21.0	680.0	55.5	109.0	4.3	
Average		97.1	67.2	16.4	24.4	27.3	688.9	54.4	117.9	4.4	
Standard Deviation-Sn		1.61	3.07	0.18	2.67	2.39	4.79	1.62	1.18	0.64	
RSD		1.655%	4.567 %	1.082 %	10.961 %	8.754 %	0.695 %	2.972 %	0.997 %	14.655 %	

Specifications	
Detector	Silicon Detector
Excitation Source	4 watts high efficiency micro tube 50kv Max, 200uA Max
Working temperature	-20 to 50 ° C
Measuring time per sample	30-200 seconds
Element Range	S(16)-U(92)
Sample Type	Liquid, powders and solids
Factory Calibration	Metals in Soil
Instrument Dimension	270mm*320mm*230mm(L*W*H)
Sample Chamber Dimension	170mm*110mm*17mm(L*W*H)
Weight	9.4 kg
Operation touch Screen(1280*800)	8 inches Windows 10 based OS
External Connection	USB Port, Blue-tooth, Wi-Fi, GPS
Test Report	Excel, PDF
Consumables	Sample test Mylar Soil sample cup Sampling spoon Test window film



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