



Bringing Scientific & Technical
Resources to the African Continent

Chrom Africa Instrumentation Services Limited
Buruburu Business Complex Suite No.26, Mumias South Road,
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APPLICATION & OPERATION OF XRF/XRD/TXRF TECHNIQUES OF TRAINING 19th- 23rd FEBRUARY 2024

Who should attend?

The training is relevant to all staff in Soil testing laboratories, Geochemists, Forensic Scientists, Mining, Pharmaceutical Chemists, Petrochemicals, Nuclear Science, University researchers, Lecturers, Post graduate students, Testing Laboratories,

D17: XRF /XRD/TXRF

DAY 1	EVENTS
08.30-10.00	<ul style="list-style-type: none"> Registration and Climate setting Introduction to XRF Introduction to X-rays Excitation and characteristic radiation
10.00-10.30	<i>Tea Break</i>
11.00-12.30	<ul style="list-style-type: none"> Instrumentation part one WDXRF, EDXRF, Detectors
12.30-14.00	<i>Lunch Break</i>
14.00 -16.30	<ul style="list-style-type: none"> Sampling and specimen preparation Pressed powder pellets Sample preparation for metals and liquids Borate fusion technique
DAY 2	
9.00-10.30	<ul style="list-style-type: none"> Excitation of x-rays and tube spectra What's inside a WDXRF spectrometer
10.30-11.00	<i>Tea Break</i>
11.00-12.30	<ul style="list-style-type: none"> What's inside an EDXRF spectrometer XRD application TXRF application
12.30-14.00	<i>Lunch Break</i>
14.00 - 16.30	<ul style="list-style-type: none"> Grinding – rotary swing mill Cryogenic mill Auto fusion electric fluxer Die briquetting apparatus Metal surface polishing apparatus and liquid sampling
DAY 3	
9.00-10.30	<ul style="list-style-type: none"> Instrumentation part 2 Dispersion Crystal fluorescence Pulse height analysis

10.30-11.00	<i>Tea Break</i>	
11.00-12.30	<ul style="list-style-type: none"> • Introduction to qualitative analysis • From intensities to concentration 	
12.30-14.00	<i>Lunch Break</i>	
14.00-15.30	<ul style="list-style-type: none"> • Accuracy and repeatability of measurements • Method maintenance • Quality control standards • Monitors • Quality control charts 	
DAY 4		
9.00-10.30	<ul style="list-style-type: none"> • Introduction to matrix effects part one • Matrix effects overview 	
10.30-11.00	<i>Tea Break</i>	
11.00-12.30	<ul style="list-style-type: none"> • Mass absorption coefficients • Calculation of mass attenuation coefficients 	
12.30-14.00	<i>Lunch Break</i>	
14.00-15.30	<ul style="list-style-type: none"> • Basic statistics for XRF users • Statistical process chart • Advantages and disadvantages of XRF/XRD/TXRF • How to choose the right preparation method? • Data interpretation from XRF/XRD/TXRF 	
DAY 5		
9.00-10.30	<ul style="list-style-type: none"> • Matrix effects part 2 • Infinite thickness • Compton scattering, determination of MACs 	
10.30-11.00	<i>Tea Break</i>	
11.00-12.30	<ul style="list-style-type: none"> • Using Compton peak intensity • Selection of instrumental parameters • Measuring standards • Defining drift correction • Getting the right intensities • Calibration 	
12.30-14.00	<i>Lunch Break</i>	
14.00 – 15.00	Directors speech and issue of certificates	
DATES		COST
19th – 23rd February 2024		Cost Kes. 92,800.00 or USD 928.00
Deadline 6th February 2024		NAIROBI