

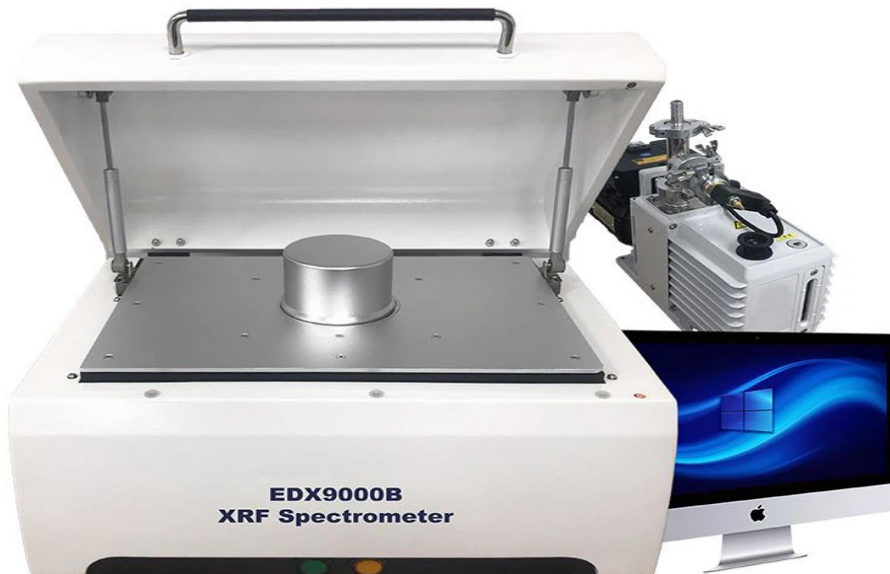
# XRF/XRD/TXRF INSTRUMENTATION TRAINING

22nd - 26th  
SEPTEMBER 2025

## 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,

DI7: XRF /XRD/TXRF



Day 1	22-09-25	EVENTS
8.00 – 10.00 am		<b>Registration and Climate Setting</b>
		<ul style="list-style-type: none"> <li>• Introduction to XRF</li> <li>• Introduction to X-rays</li> <li>• Excitation and characteristic radiation</li> </ul>
10.00 – 10.30 am		<b>TEA- BREAK</b>
10.30 – 12.30 p.m		<ul style="list-style-type: none"> <li>• Instrumentation part one</li> <li>• WDXRF, EDXRF, Detectors</li> </ul>
12-30 – 14.00 p.m		<b>LUNCH - BREAK</b>
14.00 – 16.00 p.m		<ul style="list-style-type: none"> <li>• Sampling and specimen preparation</li> <li>• Pressed powder pellets</li> <li>• Sample preparation for metals and liquids</li> <li>• Borate fusion technique</li> </ul>

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Day 2	23-09-25	EVENTS
9.00 – 10.30 am		<ul style="list-style-type: none"> <li>Excitation of x-rays and tube spectra</li> <li>What's inside a WDXRF spectrometer</li> </ul>
10.30 – 11.00 am		<b>TEA- BREAK</b>
11.00 – 12.30 p.m		<ul style="list-style-type: none"> <li>What's inside an EDXRF spectrometer</li> <li>XRD application</li> <li>TXRF application</li> </ul>
12-30 – 14.00 p.m		<b>LUNCH - BREAK</b>
14.00 – 16.30 p.m		<ul style="list-style-type: none"> <li>Grinding – rotary swing mill</li> <li>Cryogenic mill</li> <li>Auto fusion electric fluxer</li> <li>Die briquetting apparatus</li> <li>Metal surface polishing apparatus and liquid sampling</li> </ul>

Day 3	25-09-24	EVENTS
9.00 – 10.30 am		<ul style="list-style-type: none"> <li>Instrumentation part 2</li> <li>Dispersion</li> <li>Crystal fluorescence</li> <li>Pulse height analysis</li> </ul>
10.30 – 11.00 am		<b>TEA- BREAK</b>
11.00 – 12.30 p.m		<ul style="list-style-type: none"> <li>Introduction to qualitative analysis</li> <li>From intensities to concentration</li> </ul>
12-30 – 14.00 p.m		<b>LUNCH - BREAK</b>
14.00 – 15.00 p.m		<ul style="list-style-type: none"> <li>Accuracy and repeatability of measurements</li> <li>Method maintenance</li> <li>Quality control standards</li> <li>Monitors</li> <li>Quality control charts</li> </ul>

Day 4	24-09-25	EVENTS
9.00 – 10.30 am		<ul style="list-style-type: none"> <li>Introduction to matrix effects part one</li> <li>Matrix effects overview</li> </ul>
10.30 – 11.10 am		<b>TEA- BREAK</b>
11.00 – 12.30 p.m		<ul style="list-style-type: none"> <li>Mass absorption coefficients</li> <li>Calculation of mass attenuation coefficients</li> </ul>
12-30 – 14.00 p.m		<b>LUNCH - BREAK</b>
14.00 – 15.00 p.m		<ul style="list-style-type: none"> <li>Basic statistics for XRF users</li> <li>Statistical process chart</li> <li>Advantages and disadvantages of XRF/XRD/TXRF</li> <li>How to choose the right preparation method?</li> <li>Data interpretation from XRF/XRD/TXRF</li> </ul>

Day 5	27-09-24	EVENTS
9.00 – 10.30 am		<ul style="list-style-type: none"> <li>Matrix effects part 2</li> <li>Infinite thickness</li> <li>Compton scattering, determination of MACs</li> </ul>
10.30 – 11.10 am		<b>TEA- BREAK</b>
11.00 – 12.30 p.m		<ul style="list-style-type: none"> <li>Using Compton peak intensity</li> <li>Selection of instrumental parameters</li> <li>Measuring standards</li> <li>Defining drift correction</li> <li>Getting the right intensities</li> <li>Calibration</li> </ul>
12-30 – 14.00 p.m		<b>LUNCH - BREAK</b>
14.00 – 15.00 p.m		Directors speech and issue of certificates

Deadline: 11 September 2025

22nd – 26th  
SEPTEMBER 2025

Cost Kes. 92,800.00  
or USD 928.00

NAIROBI

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