Bringing Scientific and Technical Resources to the African Continent

XRF/TXRF/XRD/ELEMENTAL ANALYSIS (5 Days)

Introduction

XRF (X-ray fluorescence) is a non-destructive analytical technique used to determine the elemental composition of materials. XRF analyzers determine the chemistry of a sample by measuring the fluorescent (or secondary) X-ray emitted from a sample when it is excited by a primary X-ray source.

Who should attend?

Quality Assurance Quality Controllers, Laboratory Technologists/Scientists, Instrumentation Technologists, Equipment Engineers, Technicians, other users of laboratory equipment.

Contents

- Introduction to XRF
- Introduction to X-rays
- Excitation and characteristic radiation
- Instrumentation part one
- WDXRF, EDXRF, detectors
- Excitation of x-rays and tube spectra
- What's inside a WDXRF spectrometer?
- What's inside an EDXRF Spectrometer?
- XRD application
- TXRF application
- Instrumentation part 2
- Dispersion
- Crystal fluorescence
- Pulse height analysis
- Introduction to qualitative analysis
- From intensities to concentration
- Introduction to matrix effects part one
- Matrix effects overview
- Mass absorption coefficients
- Calculation of mass attenuation coefficients
- Matrix effects part 2
- Infinite thickness, Compton scattering, determination of MACs using Compton peak intensity
- Quantitative analysis
- Sampling and specimen preparation
- Pressed powder pellets
- Sample preparation for metals and liquids
- Borate fusion technique
- Grinding – rotary swing mill
- Cryogenic mill
- Auto fusion electric fluxer
- Die briquetting apparatus
- Metal surface polishing apparatus and liquid sampling
- Accuracy and repeatability of measurements
- Method maintenance
- Quality control standards
- Monitors
- Quality control charts

- 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
- Selection of instrumental parameters
- Measuring standards
- Defining drift correction
- Getting the right intensities
- Calibration

Course details

Date	Cost	Venue
22nd – 26th October 2018 Registration Deadline 15th October 2018	Kes. 55,680 or USD 696 (VAT Inclusive)	Government Chemist Laboratories - NAIROBI

For reservation contact us on info@chromafrica.co.ke or call us +254 020 2594918