

ICP-MS: ADVANCED TRAINING ON METHOD VALIDATION AND UNCERTAINTY MEASUREMENT

Supporting sustainable agricultural practices, ecosystem health and exports through accurate measurement.

Since the introduction of Inductively Coupled Plasma – Optical Emission Spectroscopy (ICP-OES) in 1974, and Inductively Coupled Plasma Mass Spectrometry (ICP-MS) in 1980, these techniques have revolutionised the simultaneous analysis of major, trace and ultra-trace elements in a wide range of sample matrices.

Currently, these instruments are used extensively in diverse areas such as mining, manufacturing, food, and environmental testing. Through a combination of various digestion techniques, samples ranging from high fat foods (such as processed meat, butter) to refractory materials (such as automotive catalysts, ores, soils), can be dissolved, and their elemental content reliably determined. These measurements can be performed with very high accuracy and precision.

This training will provide an overview of the basic operating principles of both ICP-OES and ICP-MS, focussing on sample preparation, instrument set-up (impact of sample introduction systems), method development, validation as well as quality control aspects. Additionally, an overview will be provided on basic maintenance and trouble shooting. Participants will be introduced to recent developments, such as elemental speciation.

Limited space available,
maximum of ten
participants - register now!

JOIN OUR ICP ANALYSIS
JOURNEY

19th - 23rd
MAY 2026

An informative workshop
aimed at anyone interested in the
analysis of elemental content
in a variety of sample matrices.



Bringing Scientific & Technical
Resources to the Africa Continent



Chrom Africa Instrumentation Services Limited
Buruburu Business Complex Suite No.26, Mumias South Road, Nairobi.
P.O Box 4963-00100, Nairobi, Kenya.
Phone number: (20) 2594918
Email info@chromafrica.co.ke | info@chromafrica.com

Our Training Partners



Friendly, Knowledgeable Facilitators

- The course will be presented by facilitators that strongly encourage interactive training, with a willingness to share.
- The last day of the course will be combined with a virtual workshop to encourage the sharing of information from suppliers to users throughout the continent.
- Technical applications featuring several regional instrument manufactures/ suppliers.

Finding a course that is right for you

Chrom Africa is committed to building measurement capacity in Africa. The centre has a number of courses that may meet your training needs, from personnel at the beginning of their careers to those wanting to develop advanced skills.

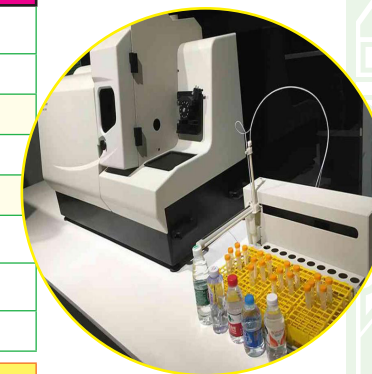
We are with you every step of the way

Chrom Africa provides an extensive suit of products and services to meet your laboratories needs. This includes but is not limited to consultation services that spans the entire lifetime of your laboratory from design to implementation.

- Training in method development; validation and uncertainty.
- Providing calibration, proficiency testing and reference materials to assist your laboratory in meeting quality control and assurance objectives.

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DAY 1	
Fundamentals & Safety	
Time	Activity
09:00 – 09:30	Registration & introduction to training objectives
09:30 – 10:30	Lab tour (BCEU labs)
10:30 – 10:45	Break
10:45 – 12:30	Fundamentals of ICP-MS: Plasma, ionization, mass analysers
12:30 – 13:30	Lunch
13:30 – 14:30	Applications of ICP-MS & laboratory safety (acids, gases, plasma)
14:30 – 16:00	Identification of instrument components (ICP-MS)
16:00 – 16:15	Q&A and recap



DAY 2	
Sample Preparation & Optimization	
Time	Activity
09:00 – 10:30	Sample types + digestion methods (environmental, biological, industrial)
10:30 – 10:45	Break
10:45 – 12:30	Standards, internal standards & contamination control
12:30 – 13:30	Lunch
13:30 – 15:00	Practical: Sample digestion, standards preparation



DAY 3	
Quantification & Interference Management	
Time	Activity
09:00 – 10:30	Quantification strategies: external calibration, standard additions
10:30 – 10:45	Break
10:45 – 12:30	Spectral & non-spectral interferences; collision/reaction cell concepts
12:30 – 13:30	Lunch
13:30 – 15:00	Practical: Building a multi-element method
15:00 – 16:00	Data acquisition workflow & QC procedures

Online Training available at: www.chromafrika.com

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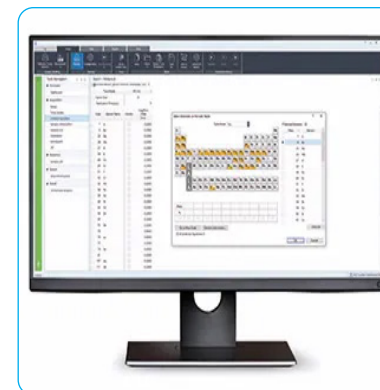
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DAY 4	
Data Acquisition, Interpretation & Troubleshooting	
Time	Activity
09:00 – 10:30	Data reporting and interpretation
10:30 – 10:45	Tea break
10:45 – 12:30	Maintenance: Cleaning cones, spray chamber, nebulizer
12:30 – 13:30	Lunch
13:30 – 15:00	Practical: Running unknown samples & real-time monitoring

DAY 5	
Data Processing, Reporting & Final Assessment	
Time	Activity
09:00 – 10:30	Troubleshooting: cones, nebulizer, plasma stability
10:30 – 10:45	Tea break
10:45 – 12:30	Practical assessment: Complete a mini-analysis workflow
12:30 – 13:30	Lunch
13:30 – 15:00	Review, feedback & closing remarks



Deadline: 10th May 2026

19th – 23rd
MAY 2026

Cost Kes. 125,000.00
or USD 1,200.00

NAIROBI

Note: All prices are
exclusive of taxes

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