Bringing Scientific & Technical Resources to the African Continent

Chrom Africa Instrumentation Services Limited
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HANDS ON PRACTICAL TRAINING ON ADVANCES IN ATOMIC ABSORPTION SPECTROSCOPY 3rd – 7th JUNE 2024

Course Overview
A comprehensive 5 days' course designed to increase expertise and optimize results for all users of AAS Understanding sample introduction and optimization of instrument performance are important subject areas within this 5 days' course. Interactive Training sessions and practical exercises are used to reinforce key learning points.

Who is this course for?
The training is useful for those who are working industries like Oil Industries, Cosmetics, Chemicals, Food & Agriculture, Water Testing, Pharmaceuticals as well as the Analytical Testing Laboratories and various others.

Previous knowledge
Background knowledge of AAS Spectrometry may be useful but not necessary, as all the essentials are covered in the course. Previous experience using AAS equipment is very important.

What you will learn & Why

1. Why have calibration schedule
2. Why AAS is particularly suitable for Analysis
3. How AAS can be used for the analysis of ultra-trace metal elements (0.0005-1000ppm)

Application of AAS to non-metallic elements (e.g. S, P)

DAY 1	EVENTS
09.00-09.30	• Registration and Climate setting
09.30-10.00	• Objectives of the training, expected outcomes and review of the agenda
10.00-10.30	***Tea Break***
11.00-12.30	Introduction • Principles of spectroscopy • Principles & operation of AAS
12.30-14.00	***Lunch Break***
14.00 -16.30	**Laboratory session** • Learning components of AAS, i.e. Assembling the sample introduction system • AAS gas requirements • Consumables and spares • Introduction to AAS technique, Basic Principle, its Applications and Uses in various fields
DAY 2	
9.00-10.30	**Sample preparation techniques** • Wet digestion • Dry ashing Fusion
10.30-11.00	***Tea Break***
11.00-12.30	• Microwave assisted digestion

12.30-14.00	***Lunch Break***
14.00-16.30	**Laboratory session** • Preparation of organic sample • Preparation of inorganic samples • Preparation of difficult samples • Software basic and instrument set-up
DAY 3	
9.00-10.30	**Calibration methods** • Calibration curve, • Use of quality controls
10.30-11.00	***Tea Break***
11.00-12.30	• Internal QCs – spiking, HRM, replicate testing • External QCs – CRM, PTs, ILC
12.30-14.00	***Lunch Break***
14.00-15.30	**Laboratory session** • Preparation of standards • Preparation of QCs • Method development • Sample analysis using AAS • Introduction and Hands-on practice on preparation of different types of samples for determination of heavy metals
DAY 4	
9.00-10.30	• Hands-on practice on preparation of different types of samples for determination of heavy metals • Analysis of different types of food samples
10.30-11.00	***Tea Break***
11.00-12.30	• Laboratory session • Analysis of different types of food samples
12.30-14.00	***Lunch Break***
14.00-15.30	• Analysis of different types of water samples
DAY 5	
9.00-10.30	• Analysis of data & uncertainty measurements • Maintenance of AAS and Trouble-shooting covering all the possible problems
10.30-11.00	***Tea Break***
11.00-12.30	• Course overview • Conclusion
12.30-14.00	***Lunch Break***
14.00 – 15.00	• Directors speech and issue of certificates

DATES	COST	VENUE
3rd – 7th June 2024 **Deadline 22nd May 2024**	**Cost Kes. 92,800.00 or USD 928.00**	**KISUMU**