



LABORATORY EXCELLENCE, SAFETY AND ACCREDITATION

Atomic Absorption Spectroscopy

3 day course

Classroom, online or in-house

Course overview

Atomic absorption remains the workhorse for trace metal determination in many laboratories, and most of its problems are interferences that a careless operator will never notice. This course covers running it reliably. Delegates work through the principle, instrument components and the difference between flame and graphite furnace atomisation, and calibration including standard addition where the matrix demands it. Interferences are the core: spectral, chemical, ionisation and physical, with the correction techniques for each. Sample preparation and digestion receive detailed treatment, alongside quality control, detection limits and the troubleshooting of drift and poor sensitivity.

What you will learn

- Explain the principle and the instrument's components
- Choose between flame and graphite furnace atomisation
- Calibrate correctly and apply standard addition where required
- Identify and correct spectral, chemical, ionisation and physical interferences
- Prepare and digest samples appropriately for the matrix
- Establish detection limits and run effective quality control
- Troubleshoot drift, poor sensitivity and precision problems

Who should attend

- Laboratory analysts and technicians
- Analytical chemists in quality control
- Environmental and water laboratory staff
- Mining and metallurgical laboratory personnel
- Method development scientists

Course outline

- 01 Principle and instrument components
- 02 Flame atomisation
- 03 Graphite furnace atomisation
- 04 Calibration and standard addition
- 05 Spectral and chemical interferences
- 06 Ionisation and physical interferences
- 07 Sample preparation and digestion
- 08 Detection limits, quality control and troubleshooting

Upcoming dates

Dates	Venue	Format	Fee per delegate
14 to 16 October 2026	Nairobi, Kenya	Classroom	USD 995
3 to 5 February 2027	Lusaka, Zambia	Classroom	USD 995
8 to 10 March 2027	Johannesburg, South Africa	Classroom	R14,950
15 to 17 March 2027	Online	Online	R6,500



Fees and how to register

This 3 day course is **R6,500** per delegate online, **R14,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 995** in the classroom elsewhere in Africa. In-house training is quotation on request. Book 2 or more delegates on this course and save 10%.

To register or request an in-house proposal, visit www.afrisciencegroup.com, email info@afriscience.co.za, or WhatsApp us on **+27 63 479 1136**.

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