



LABORATORY EXCELLENCE, SAFETY AND ACCREDITATION

Analytical Chemistry Methods for Quality Control Laboratories

3 day course

Classroom, online or in-house

Course overview

A quality control laboratory is judged on whether its numbers can be defended, not on how sophisticated its instruments are, and most disputes trace back to sampling or method validation rather than to the analysis itself. This course works from that. Delegates work through sampling and the ways a sample stops representing the material before it reaches the bench, sample preparation, digestion and extraction, and the losses each introduces. Method selection against the specification being tested follows. Titrimetric, spectrophotometric and chromatographic techniques are covered on what each is suited to. Method validation is treated properly: specificity, linearity, accuracy, precision, detection and quantitation limits. Calibration curves and the errors hidden in them are addressed. Quality control charts, replicates and reference materials follow. The course closes on reporting results with their uncertainty and on investigating a result that does not fit.

What you will learn

- Sample so that the material tested still represents the batch
- Prepare, digest and extract while controlling losses
- Select a method against the specification being tested
- Apply titrimetric, spectrophotometric and chromatographic techniques
- Validate a method for specificity, linearity, accuracy and precision
- Build calibration curves and recognise the errors within them
- Run quality control charts and investigate results that do not fit

Who should attend

- Quality control chemists in pharmaceutical and food laboratories
- Water and effluent testing analysts
- Mining and minerals assay laboratory technicians
- Recent chemistry graduates entering laboratory roles

Course outline

- 01 Disputes start before the bench
- 02 Sampling and representativeness
- 03 Preparation, digestion and extraction
- 04 Method selection against specification
- 05 Titrimetry and spectrophotometry
- 06 Chromatographic techniques
- 07 Validation and calibration curves
- 08 Control charts, reference materials and investigations

Upcoming dates



Dates	Venue	Format	Fee per delegate
23 to 25 September 2026	Pretoria, South Africa	Classroom	R14,950
30 September to 2 October 2026	Kampala, Uganda	Classroom	USD 995
14 to 16 December 2026	Cape Town, South Africa	Classroom	R14,950
21 to 23 December 2026	Dar es Salaam, Tanzania	Classroom	USD 995

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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