



LABORATORY EXCELLENCE, SAFETY AND ACCREDITATION

Sampling Theory and Practice for Laboratories

3 day course

Classroom, online or in-house

Course overview

The largest error in most analytical results is introduced before the sample reaches the laboratory, and no amount of instrument accuracy recovers a sample that did not represent what it came from. This course addresses that. Delegates work through the theory of sampling and the error components it identifies, including the fundamental error set by particle size and sample mass. Sampling plans for lots, consignments and continuous streams are covered, along with increment number and mass. Sample reduction, splitting and the errors introduced by each are addressed practically. Handling, preservation and chain of custody follow. Bias detection and comparison against a reference are covered. The course closes on writing a sampling procedure and on defending a sample in a dispute.

What you will learn

- Apply the theory of sampling and identify its error components
- Calculate fundamental error from particle size and sample mass
- Design sampling plans for lots, consignments and streams
- Determine increment number and mass
- Reduce and split samples without introducing bias
- Detect bias by comparison against a reference
- Write a sampling procedure and defend a sample in a dispute

Who should attend

- Laboratory analysts and sampling officers
- Mineral, food and commodity inspection staff
- Quality control personnel
- Environmental and water samplers
- Laboratory managers and quality officers

Course outline

- 01 Error introduced before the laboratory
- 02 Theory of sampling and error components
- 03 Fundamental error, particle size and mass
- 04 Sampling plans for lots and consignments
- 05 Continuous stream sampling
- 06 Increment number and mass
- 07 Sample reduction and splitting
- 08 Handling, bias detection and defending a sample

Upcoming dates

Dates	Venue	Format	Fee per delegate
30 September to 2 October 2026	Maseru, Lesotho	Classroom	R14,950
9 to 11 November 2026	Online	Online	R6,500
2 to 4 December 2026	Nairobi, Kenya	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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