



MINING AND MINERALS TRAINING

Lithium and Battery Minerals Processing

3 day course

Classroom, online or in-house

Course overview

Lithium projects across the region have moved faster than the technical understanding behind them, and several have shipped concentrate that buyers discounted heavily for iron, mica or simple inconsistency. This course covers producing to specification. Delegates work through lithium mineralogy, spodumene, petalite and lepidolite, and what each implies for recovery and for the converter buying it. Ore characterisation and the deleterious elements that carry penalties are addressed. Dense medium separation is covered as the workhorse route, including medium control and the tramp material that upsets it. Flotation follows for finer fractions, with reagent regimes and mica rejection. Magnetic separation for iron removal is covered. Concentrate specification, sampling and the contract terms that decide payment are addressed honestly. Downstream conversion to carbonate and hydroxide is covered at an awareness level. Tantalum and other by products follow. The course closes on tailings, on water and on the economics that decide whether a project holds up.

What you will learn

- Distinguish spodumene, petalite and lepidolite and their implications
- Identify deleterious elements that carry contract penalties
- Operate dense medium separation with proper medium control
- Apply flotation and mica rejection to fine fractions
- Remove iron by magnetic separation
- Meet concentrate specification and sampling requirements
- Explain downstream conversion and recover by products such as tantalum

Who should attend

- Metallurgists on lithium and pegmatite operations
- Plant supervisors in dense medium and flotation circuits
- Project engineers developing battery mineral projects
- Geologists supporting lithium resource work
- Commercial staff negotiating concentrate offtake

Course outline

- 01 Concentrate the buyer discounts
- 02 Spodumene, petalite and lepidolite
- 03 Deleterious elements and penalties
- 04 Dense medium separation and medium control
- 05 Flotation and mica rejection
- 06 Magnetic iron removal
- 07 Concentrate specification and sampling
- 08 Conversion, by products, tailings and economics

Upcoming dates

Dates	Venue	Format	Fee per delegate
4 to 6 November 2026	Online	Online	R6,500
9 to 11 December 2026	Durban, South Africa	Classroom	R14,950
17 to 19 March 2027	Johannesburg, South Africa	Classroom	R14,950



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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