

# Advanced Accuracy Training

## Minerals Slurry Analysers with a Product Support Agreement



### Course Overview

Accuracy Training for Minerals analysers and sampling equipment is a course that you should attend if you need to know how to understand, optimise and troubleshoot Thermo Scientific sampling and online analysis equipment accuracy in your plant. Your significant equipment investment in Minerals sampling and on line analysis already has good availability but needs to be more accurate so it can confidently be used as a process control tool.

The course is delivered at your site in two sessions by our trainer, and requires you to apply learned techniques in a practical assignment. Up to four trainees can attend. The first session is five days duration and the second, after you have completed your assignment work, is four days duration. Classroom and practical assignment syllabus elements are strongly focused on your people and your sampling and analysis system.

The course is only available to sites that have a current Product Support Agreement because we know that once people complete the course they are always energised and keen to apply their new-found knowledge. They need

mentor support to implement changes and improve the accuracy of the equipment to the next level of performance.

### Who Should Attend

Plant Metallurgists, Metallurgical technicians, Operations or Process Control supervisors and Laboratory supervisors who are actioning the maintenance of the Thermo Scientific analyser calibration accuracy. You will have been involved in the calibration maintenance of the analyser already, and plan on being directly involved in optimising analyser accuracy for at least one more year.

Since most maintenance, including calibration maintenance, is able to be done by the end-users, this allows the Thermo Fisher service engineers to focus on mentoring the next level of training and on supporting your personnel to optimise accuracy. This service and support focus is provided under the Product Support Agreement (PSA).

## Minerals Slurry Analysis & Sampling Training Course Selection Guide

### TRAINING COURSE

<i>Trainees Who Attend</i>	Operation & Maintenance (at Commissioning)	Operation & Maintenance (with a Product Support Agreement)	Factory Operation & Maintenance Training	Accuracy Maintenance (with a Product Support Agreement)	Advanced Accuracy (with a Product Support Agreement)
Location	Your Site	Your Site	Factory	Your Site	Your Site
Duration	2 to 3 days	4 days	4 days	5 days	5 + 4 days
Maintenance Operators	1	2	2		
Metallurgical Technicians	1	2	2	3	4
Instrumentation / Electrical	1	2	2		
Plant Metallurgist, Lab or Operations Supervisors	1	1	2	2	3
Plant/Operations Managers or Senior Managers	1			1	

**1 = Start here first**

**2 = Second training to attend**

**3 = Third training to attend**

**4 = Fourth training to attend**

### Learning Outcomes

Attendees who complete the course will be able to monitor, critically review, amend and manage calibration with high integrity of Thermo Scientific sampling and analysis equipment. They will be able to understand, control and match the calibration of the Thermo Scientific online analysis and sampling equipment with the level of accuracy required to run the plant processes. They will have a clear understanding of how the Thermo Scientific sampling and analysis equipment is able to be used to optimise the process, and the knowledge to interpret and confidently communicate the current analyser accuracy status to stakeholders.

### Trainee Prerequisites

- Attended Operation & Maintenance training during system commissioning or PSA Operation & Maintenance training or Factory Operation & Maintenance training
- Be involved in the calibration maintenance of the analyser
- Familiarity with the RARP Regression program in WinISA
- Numeracy skills and knowledge of statistics

### Requirements

- Current Product Support Agreement with at least one year validity after training is completed
- Training room with projector or large screen
- Remote connection to the WinISA server computer over Ethernet/VPN

### Your Business Benefits

Operations will see these immediate and ongoing benefits from investing in Advanced Accuracy Training:

- Robust, optimised sampling and analysis system accuracy and repeatability
- Greater confidence in the data provided by the sampling and analysis equipment
- Able to rely on the assay data for crucial process control applications
- Improvements in recovery and grade consistency, and off-spec reduction
- Able to realise the full value of your investment in sampling and analysis equipment

## Training Course Syllabus

### Session One (5 days)

1. Overview of the multi-element probe, sample presentation, measurement, analysis and reporting techniques.
2. Multi-Element Probe & Signal Analysis
  - a. Aspects that affect accuracy
3. Standardisation & long-Term Stability
4. Sample presentation system
  - a. Primary sampling
  - b. The Measurement Zone
  - c. Calibration and Shift Sampling, Collection, Processing & Analysis
5. Calibration
  - a. Review the basics
  - b. Advanced techniques
6. Accuracy Maintenance and Performance

### Assignment (agreed time period, typically 2 to 3 months)

Incorporating actual equipment calibration issues identified during Session One, the trainer assigns a project to the trainee. Trainee applies techniques and submits reports to the trainer for assessment. Remote login and interactive online meetings by trainer for mentoring and assistance.

### Session Two (4 days)

1. Review assignment results
2. Reinforce concepts
3. Set up ongoing plan to continue to improve accuracy with support under the PSA



## About Thermo Fisher Scientific

Thermo Fisher Scientific is the original equipment manufacturer for all the Minerals Analysers and sampling equipment including AnStat, SamStat, MSA, WinISA software and all the related process samplers.

Thermo Fisher Scientific is the world leader in serving science, with revenues of more than \$20 billion and approximately 70,000 employees globally. Our mission is to enable our customers to make the world healthier, cleaner and safer. We help our customers accelerate life sciences research, solve complex analytical challenges, improve patient diagnostics, deliver medicines to market and increase laboratory productivity. Through our premier brands – Thermo Scientific, Applied Biosystems, Invitrogen, Fisher Scientific and Unity Lab Services – we offer an unmatched combination of innovative technologies, purchasing convenience and comprehensive services

## About the Trainers

All Thermo Fisher Scientific Accuracy trainers for Minerals Analysers and sampling equipment have a high level of competency-tested experience in commissioning, maintenance and support of the equipment and its users. The training material has been designed and created by a team led by our qualified training coordinator, and the trainers have been trained and continue to have their training maintained by the training coordinator to ensure you always receive a consistently high standard of training.

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## Contact Us

To find out more about training you and your team who look after the Minerals Analysers and sampling equipment, and other ways Thermo Fisher Scientific can help your business:

- Go to [www.thermofisher.com/mineralservice](http://www.thermofisher.com/mineralservice)
- Contact your local Thermo Fisher Scientific sales or service person or office



Find out more at [thermofisher.com/mineralservice](http://thermofisher.com/mineralservice)