Laboratory Management and Proficiency Testing in Food Labs Training Course

Professional Development Training Course Outline

Category	Food processing and Technology	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Food laboratories play a critical role in ensuring food safety, quality assurance, and compliance with international standards. As global supply chains expand and consumer demand for safe, traceable, and high-quality food increases, laboratories must adopt efficient laboratory management systems and robust proficiency testing practices. Laboratory Management and Proficiency Testing in Food Labs Training Course is designed to strengthen laboratory professionals with skills in quality management, accreditation requirements, method validation, risk management, and advanced laboratory operations.

This program provides a detailed understanding of ISO/IEC 17025 standards, laboratory information management systems (LIMS), internal audits, data integrity, and inter-laboratory comparison. With case studies and hands-on activities, participants will learn how to implement sustainable systems for laboratory excellence, food safety assurance, and global compliance. The training emphasizes competency development, continual improvement, and the use of digital tools to optimize laboratory performance and proficiency testing.

Programme Curriculum

Laboratory Management and Proficiency Testing in Food Labs Training Course

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Course Objectives

1. Understand principles of laboratory quality management systems
2. Apply ISO/IEC 17025 standards in food testing laboratories
3. Implement effective laboratory documentation and record-keeping
4. Strengthen laboratory risk management and safety practices
5. Enhance laboratory internal auditing and continuous improvement
6. Apply digital laboratory information management systems (LIMS)
7. Conduct accurate method validation and measurement uncertainty assessment
8. Design and evaluate effective proficiency testing schemes
9. Improve laboratory staff competency and training programs
10. Ensure compliance with food safety regulations and accreditation standards
11. Strengthen customer confidence through reliable test results
12. Analyze case studies on laboratory management and proficiency testing
13. Integrate sustainability and innovation into food lab operations

Organizational Benefits

- Improved laboratory efficiency and productivity
- Enhanced accuracy in testing and reporting
- Compliance with international accreditation standards
- Stronger reputation for reliability and quality assurance
- Increased customer confidence and satisfaction
- Reduced operational risks and errors
- Strengthened food safety compliance in global trade
- Cost savings through streamlined processes and digital systems
- Competent and well-trained laboratory personnel
- Long-term laboratory sustainability and competitiveness

Target Audiences

- Laboratory Managers and Supervisors
- Food Scientists and Technologists
- Quality Assurance and Quality Control Officers
- Laboratory Analysts and Technicians
- Regulatory and Compliance Officers
- Accreditation and Certification Professionals
- Food Safety Consultants
- Research and Development Scientists

Course Duration: 5 days

Course Modules

Module 1: Introduction to Laboratory Management in Food Testing

- Overview of laboratory management principles
- Importance of food safety testing and compliance
- Introduction to ISO/IEC 17025 and related standards
- Documentation and record-keeping requirements
- Laboratory leadership and staff roles
- Case study: Managing compliance in a food microbiology lab

Module 2: Quality Management Systems for Food Laboratories

- Elements of a robust laboratory quality system
- Internal quality control procedures
- Continuous improvement strategies
- Document control and version management
- Handling laboratory non-conformities
- Case study: Implementing QMS in a chemical testing lab

Module 3: Risk Management and Laboratory Safety

- Identifying laboratory hazards
- Risk assessment and mitigation plans
- Laboratory safety protocols and procedures
- Waste management and sustainability
- Emergency response planning
- Case study: Risk management during allergen testing

Module 4: Proficiency Testing Principles and Practices

- Introduction to proficiency testing (PT)
- Design and participation in PT programs
- Statistical analysis of PT results
- Improving laboratory performance with PT outcomes
- Common errors in PT and corrective measures
- Case study: PT participation for pesticide residue analysis

Module 5: Method Validation and Measurement Uncertainty

- Basics of method validation in food testing
- Steps in validating analytical methods
- Determining measurement uncertainty
- Use of reference materials and controls
- Ensuring reproducibility and accuracy
- Case study: Validation of heavy metal testing methods

Module 6: Laboratory Internal Audits and Accreditation Readiness

- Purpose of internal audits
- Audit planning and execution
- Reporting and corrective actions
- Preparing for external accreditation audits
- Maintaining accreditation status

- Case study: Internal audit for microbiological analysis

Module 7: Laboratory Information Management Systems (LIMS)

- Introduction to digital laboratory systems
- Functions and features of LIMS
- Data integrity and cybersecurity
- Benefits of automation in laboratory operations
- Integration with quality management systems
- Case study: Adoption of LIMS in a large food testing lab

Module 8: Case Studies and Best Practices in Laboratory Management and PT

- Lessons learned from global laboratories
- Benchmarking laboratory best practices
- Common challenges in proficiency testing
- Strategies for achieving continuous improvement
- Leadership for laboratory excellence
- Case study: Successful PT performance in an international food lab

Training Methodology

- Interactive lectures and expert presentations
- Group discussions and peer learning activities
- Practical exercises and role-playing scenarios
- Analysis of real-world case studies
- Hands-on proficiency testing simulations
- Digital tools and templates for laboratory management

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com