Quality Control, Quality Assurance & R&D Training Program

Course Overview

The Quality Control, Quality Assurance & R&D Training Program is structured to help professionals at all experience levels understand key concepts and best practices for managing product quality, safety, and compliance. The program integrates global standards such as ISO 9001 and ISO 22000, effective testing methods, and continuous improvement strategies. Team members will gain insight into the principles of quality management, laboratory practices, process optimization, and the creation of sustainable improvement initiatives.

Course Summary

- The course starts with foundational principles of quality and food safety, focusing on roles, process flows, and practical hazards.
- Participants learn to implement practical QC methods in production, inspection, and warehouse operations.
- Dedicated sessions strengthen laboratory capability, emphasizing accurate testing and safe practices.
- Advanced modules introduce process monitoring, R&D applications, and problem-solving tools for continuous improvement.
- The final sessions build quality culture, audit readiness, and sustainable improvement mindsets, empowering teams to maintain and enhance standards in daily work.

Key Learning Outcomes:

- Ability to define and implement core quality control and assurance practices in line with ISO and HACCP standards.
- Proficiency in process mapping, laboratory testing, and contamination risk management across operational environments.
- Hands-on experience in structured problem-solving, audit processes, and developing corrective and preventive action plans.
- Confidence to foster a quality-driven culture, teamwork, and effective communication within their organizations.

This course ensures participants are equipped to apply best practices, drive performance improvements, and support compliance with international standards in their organizations.

5-Day Training Schedule

Day 1: Foundations of Quality & Food Safety
Duration: 8 Hours

- Module 1: Welcome & Course Overview
  Introductions, expectations, and learning objectives
- Module 2: Defining Quality and Food Safety
  Key concepts, customer expectations, risk awareness
- Module 3: Roles of QC, QA & R&D
  Functions and interaction among quality, safety, and development teams
- Module 4: Process Flow & Hazard Identification
  Process mapping and contamination risks
- Module 5: ISO Frameworks and Daily Applications
  PDCA, risk-based thinking, integrating ISO 9001 & ISO 22000
- Module 6: Recap & Interactive Discussion
  Key takeaways and Q&A

Day 2: Quality Control in Manufacturing & Inspection
Duration: 8 Hours

- Module 1: QC in Production (Blow & Injection Molding)
  Identifying product defects and controlling contamination
- Module 2: QC in Filling Operations
  Ensuring fill integrity and food safety
- Module 3: Warehouse and Bulk Loading Controls
  Storage, FIFO, traceability best practices
- Module 4: Raw & Packaging Material Inspection
  Supplier evaluation, hygiene, and verification
- Module 5: Sampling and Inspection Records
  Effective sampling and maintaining data integrity
- Module 6: Contamination Prevention Discussion
  Interactive examples and group sharing

Day 3: Laboratory Quality & Food Safety Testing
Duration: 8 Hours

- Module 1: Key Oil Quality Parameters
  FFA, peroxide, moisture, odor checks
- Module 2: Water Testing Procedures
  Utility and potable water assessments

- Module 3: Good Laboratory Practices (GLP)
  Accuracy, calibration, and sample handling
- Module 4: Responding to Out-of-Spec Results
  Communication and corrective measures
- Module 5: Laboratory Safety and Hygiene
  Protective measures and chemical management
- Module 6: Interactive Quiz & Reflection
  Reinforcing daily lessons

Day 4: R&D, Process Control & Improvement
Duration: 8 Hours

- Module 1: R&D in Manufacturing
  Trial batches and new material testing
- Module 2: Process Parameter Monitoring
  Temperature, mixing, and pressure optimization
- Module 3: HACCP Principles Overview
  Hazard analysis and CCP monitoring
- Module 4: Root Cause Analysis & Problem Solving
  Using the 5-Why and Fishbone methods
- Module 5: Group Activity – Process Improvement
  PDCA cycle applied to real scenarios
- Module 6: Team Sharing & Feedback
  Presentation of practical solutions

Day 5: Quality Culture, Auditing & Improvement Sustainability
Duration: 8 Hours

- Module 1: Building a Quality & Safety Culture
  Employee engagement, awareness, teamwork
- Module 2: Internal Audit Best Practices
  Audit planning, execution, and follow-ups
- Module 3: Documentation & Record Control
  Maintaining compliance records effectively
- Module 4: Corrective & Preventive Actions
  CAPA in production and laboratory settings
- Module 5: Management Review & KPIs
  Driving decisions with data and reviews
- Module 6: Closing Session
  Feedback, certification, and key learnings