

ICTQual AB



Qualification Specification

ICTQual AB Level 5 Diploma in Quality Control Food Industry



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ICTQual AB's

Level 5 Diploma in Quality Control Food Industry

Contents

ICTQual AB Level 5 Diploma in Quality Control Manufacturing..... 1

About ICTQual AB's..... 2

Course Overview..... 2

Certification Framework.....4

Entry Requirements.....4

Qualification Structure 5

Centre Requirements 2

Support for Candidates7

Assessment7

Unit Descriptors 8 to 23

Qualification Specification about

Level 5 Diploma in Quality Control Food Industry

About ICTQual AB's

ICTQual AB is a distinguished awarding body based in the United Kingdom, dedicated to fostering excellence in education, training, and skills development. Committed to global standards, ICTQual AB's provides internationally recognized qualifications that empower individuals and organizations to thrive in an increasingly competitive world. Their offerings span diverse industries, including technical fields, health and safety, management, and more, ensuring relevance and adaptability to modern workforce needs.

ICTQual AB's delivers high-quality educational solutions through a network of Approved Training Centres worldwide. Their robust standards and innovative teaching methodologies equip learners with practical knowledge and skills for personal and professional growth. With a mission to inspire lifelong learning and drive positive change, ICTQual AB's continuously evolves its programs to stay ahead of industry trends and technological advancements.

Course Overview

The ICTQual AB Level 5 Diploma in Quality Control – Food Industry is designed to provide learners with advanced knowledge and practical understanding of quality assurance principles, food safety regulations, and industry-specific quality control standards. This diploma focuses on developing critical skills necessary to ensure compliance with legal, safety, and quality benchmarks across the food production and processing sectors. Emphasis is placed on integrating food quality management systems, conducting inspections and audits, and ensuring continual improvement through risk-based thinking and evidence-driven practices. Learners will gain in-depth expertise in Good Manufacturing Practices (GMP), Hazard Analysis and Critical Control Points (HACCP), food safety management systems, and international quality control frameworks relevant to food supply chains. By completing this qualification, learners will be well-equipped to implement, monitor, and evaluate quality processes that meet consumer expectations and regulatory obligations, ensuring food safety from raw materials to final distribution.

Course Aim:

The aim of this diploma is to prepare professionals with the technical competencies and strategic insight necessary to lead quality assurance and control functions in the food industry. The course is designed to foster strong analytical, supervisory, and compliance-monitoring skills to uphold safety, hygiene, and product quality throughout the food production lifecycle. Learners will also acquire the ability to lead audits, manage corrective actions, and contribute to the development of sustainable food quality systems in line with evolving global standards.

For Whom This Course is For:

This diploma is suitable for:

- Quality control officers and supervisors working in food manufacturing, processing, or packaging.
- Food technologists and quality assurance specialists seeking to enhance their professional standing.
- Production managers responsible for maintaining hygiene and quality compliance.
- Individuals with prior knowledge in food science, safety, or processing who wish to advance to a leadership role.
- Professionals aiming to transition into quality management roles within the food industry.

This programme is also ideal for those aspiring to contribute to the development and implementation of robust quality management systems that ensure food safety, legal compliance, and customer satisfaction.

Standards & Objectives:

The course follows structured standards that align with international practices in food quality control, focusing on:

- Implementation of quality and food safety systems.
- Control of contaminants and critical control points.
- Application of inspection, testing, and documentation techniques.
- Compliance with legal and regulatory frameworks.
- Development of strategies for continual improvement and risk management.

Certification Framework

Qualification title	ICTQual AB Level 5 Diploma in Quality Control Food Industry
Course ID	QC0025
Grading Type	Pass / Fail
Competency Evaluation	Coursework / Assignments / Verifiable Experience
Assessment	<p>The assessment and verification process for ICTQual AB’s qualifications involves two key stages:</p> <p>Internal Assessment and Verification:</p> <ul style="list-style-type: none">✓ Conducted by the staff at the Approved Training Centre (ATC) to ensure learners meet the required standards through continuous assessments.✓ Internal Quality Assurance (IQA) is carried out by the centre’s IQA staff to validate the assessment process. <p>External Quality Assurance:</p> <ul style="list-style-type: none">✓ Managed by ICTQual AB’s verifiers, who periodically review the centre’s assessment and IQA processes. <p>Verifies that assessments are conducted to the required standards and ensures consistency across centres</p>

Entry Requirements

To enrol in the ICTQual AB Level 5 Diploma in Quality Control Food Industry, learners must meet the following requirements:

- **Minimum Age:**

Learners must be at least 19 years old at the time of enrolment. This requirement ensures maturity and readiness for the advanced level of training provided.

- **Educational Background:**

A minimum of a Level 3 qualification in food science, food technology, quality management, or a related discipline is required. Alternatively, equivalent qualifications in science, engineering, or health and safety may be considered.

- **Experience:**

At least one year of relevant work experience in the food industry, preferably in quality control, food production, safety inspection, or compliance-related roles. This experience enables learners to connect theoretical knowledge with real-world applications throughout the course.

These entry standards ensure that all learners have the foundational knowledge and practical insight needed to succeed in this specialised and career-focused diploma programme.

Qualification Structure

This qualification comprises 10 mandatory units. Candidates must successfully complete all mandatory units to achieve the qualification.

Mandatory Units	
Unit Ref#	Unit Title
QC0025-01	Strategic Food Quality Control Planning and Risk Management
QC0025-02	International Food Quality and Safety Standards (ISO 22000, FSSC, etc.)
QC0025-03	Advanced Analytical Methods in Food Testing and Quality Verification
QC0025-04	Supply Chain Quality Management and Supplier Auditing in Food Production
QC0025-05	Food Fraud Prevention and Traceability Systems
QC0025-06	Continuous Improvement and Root Cause Analysis in Food Manufacturing
QC0025-07	Food Safety Culture and Team Leadership in Quality Environments
QC0025-08	Crisis Management and Product Recall Procedures
QC0025-09	Digital Technologies in Food Quality Control and Automation
QC0025-10	Regulatory Documentation, Metrics, and Performance Evaluation

Centre Requirements

To ensure quality training delivery, centres must adhere to the following standards:

1. Centre Approval

- ✓ Centres must be formally approved by ICTQual AB's before delivering this qualification.
- ✓ Approval involves a review of facilities, policies, and staff qualifications.

2. Qualified Staff

- ✓ **Tutors:** Must hold relevant qualifications in food safety, quality control, or food science at Level 6 or above.
- ✓ **Assessors:** Must hold a recognized assessor qualification (e.g., CAVA, AVRA) or equivalent)
- ✓ **Internal Quality Assurers (IQAs):** Must hold a recognized IQA qualification (e.g. Level 4 Award in the IQA and Level 4 Certificate in Leading the IQA) and experience to oversee assessment standards

3. Learning Facilities

Centre must offer:

- ✓ Private study areas and internet-enabled workspaces (for blended or physical delivery)
- ✓ Academic and pastoral support for learners
- ✓ Administrative support must be available to manage enrolment, tracking, and learner queries efficiently

4. Health and Safety Compliance

- ✓ All training facilities must comply with health and safety regulations.
- ✓ Centres must conduct regular risk assessments for practical activities.

5. Learning Resources

- ✓ **Course Materials:** Approved textbooks, study guides, and digital content must align with the qualification standards.
- ✓ **Assessment Tools:** Templates and guidelines must be provided to ensure standardized evaluation processes.
- ✓ **E-Learning Support:** Centres offering online or blended learning must implement an effective Learning Management System (LMS).

6. Assessment and Quality Assurance

- ✓ Centres must ensure assessments meet ICTQual AB's competency standards.
- ✓ Internal quality assurance (IQA) must be conducted to maintain consistency.
- ✓ External verifiers from ICTQual AB's will review assessment and training practices.

7. Learning Support

- ✓ **Qualification Guidance:** Support for coursework and assignments.
- ✓ **Career Pathway Assistance:** Information on progression opportunities in sustainability and energy sectors.
- ✓ **Accessibility Support:** Accommodations for learners with disabilities or language barriers.

8. Policies and Compliance

Centres must uphold the following policies in accordance with ICTQual AB's standards:

- ✓ Equality, Diversity, and Inclusion Policy.
- ✓ Health and Safety Policy.
- ✓ Safeguarding and Learner Protection Policy.
- ✓ Complaints and Appeals Procedure.
- ✓ Data Protection and Confidentiality Policy.

9. Reporting Requirements

- Centres must provide ICTQual AB's with regular reports on learner registrations, progress, and certification outcomes.
- Assessment records must be maintained for external auditing and quality assurance purposes.

Support for Candidates

Centres should ensure that materials developed to support candidates:

- ✓ Facilitate tracking of achievements as candidate's progress through the learning outcomes and assessment criteria.
- ✓ Include information on how and where ICTQual AB's policies and procedures can be accessed.
- ✓ Provide mechanisms for Internal and External Quality Assurance staff to verify and authenticate evidence effectively.

This approach ensures transparency, supports candidates' learning journeys, and upholds quality assurance standards.

Assessment

This qualification is competence-based, requiring candidates to demonstrate proficiency as defined in the qualification units. The assessment evaluates the candidate's skills, knowledge, and understanding against the set standards. Key details include:

1. Assessment Process:

- ✓ Must be conducted by an experienced and qualified assessor.
- ✓ Candidates compile a portfolio of evidence that satisfies all learning outcomes and assessment criteria for each unit.

2. Types of Evidence:

- ✓ Observation reports by the assessor.
- ✓ Assignments, projects, or reports.
- ✓ Professional discussions.
- ✓ Witness testimonies.
- ✓ Candidate-produced work.
- ✓ Worksheets.
- ✓ Records of oral and written questioning.
- ✓ Recognition of Prior Learning (RPL).

3. Learning Outcomes and Assessment Criteria:

- ✓ **Learning Outcomes:** Define what candidates should know, understand, or accomplish upon completing the unit.
- ✓ **Assessment Criteria:** Detail the standards candidates must meet to demonstrate that the learning outcomes have been achieved.

This framework ensures rigorous and consistent evaluation of candidates' competence in line with the qualification's objectives.

Unit Descriptors

QC0025-01- Strategic Food Quality Control Planning and Risk Management

This unit introduces the key principles of strategic quality control planning in the food industry. Learners will explore how to design and implement quality plans that align with food safety goals, legal standards, and business objectives. The unit also focuses on risk identification, assessment, and control using preventive and corrective methods. Learners will learn to evaluate potential hazards in the food production cycle and apply proactive strategies to reduce risk and improve product reliability.

Learning Outcome:	Assessment Criteria:
1. Understand the principles of strategic planning in food quality control.	<div>1.1 Analyse the components of a strategic quality control plan in food manufacturing.</div> <div>1.2 Evaluate how quality control aligns with corporate food safety policies and regulations.</div> <div>1.3 Compare short-term tactical controls with long-term strategic objectives.</div> <div>1.4 Assess the role of stakeholder engagement in strategic food quality planning.</div> <div>1.5 Justify the use of predictive models in food quality decision-making.</div>
2. Apply risk assessment techniques to identify and manage potential food safety hazards.	<div>2.1 Select appropriate food safety risk assessment tools for specific production contexts.</div> <div>2.2 Apply hazard analysis techniques (e.g., HACCP) to map critical control points.</div> <div>2.3 Evaluate the likelihood and severity of identified risks in food handling.</div> <div>2.4 Develop risk mitigation strategies based on evidence and data.</div> <div>2.5 Prioritise hazards using a risk matrix aligned with food safety legislation.</div> <div>2.6 Critically review the effectiveness of existing risk control measures.</div>
3. Develop comprehensive quality plans aligned with organisational objectives.	<div>3.1 Construct food quality plans that integrate preventive, monitoring, and corrective controls.</div> <div>3.2 Align quality planning with business goals, regulatory frameworks, and customer requirements.</div> <div>3.3 Incorporate SMART objectives into food quality documentation.</div> <div>3.4 Design contingency measures for foreseeable food quality disruptions.</div>

- 3.5 Use Gantt charts or similar tools to map implementation timelines.
- 3.6 Conduct a stakeholder impact assessment during plan development.
- 3.7 Evaluate cost-benefit aspects of proposed quality interventions.

QC0025-02- International Food Quality and Safety Standards (ISO 22000, FSSC, etc.)

This unit explains the purpose and application of international food safety and quality standards such as ISO 22000, FSSC 22000, BRCGS, and others. Learners will understand how these standards are structured and how to implement them within a food organisation. Topics include system requirements, certification processes, and compliance monitoring. The unit prepares learners to align their quality systems with global food safety expectations.

Learning Outcome:	Assessment Criteria:
1. Gain in-depth knowledge of global food safety management systems.	<ul style="list-style-type: none">1.1 Compare ISO 22000, FSSC 22000, and BRCGS standards in terms of structure and scope.1.2 Analyse the role of Codex Alimentarius in influencing global standards.1.3 Explain how international certifications enhance brand reputation and trade access.1.4 Evaluate the influence of GFSI benchmarking requirements on standard adoption.1.5 Assess the organisational implications of implementing multiple standards.
2. Interpret and implement ISO 22000 and FSSC requirements in food industry operations.	<ul style="list-style-type: none">2.1 Map the key clauses of ISO 22000 and FSSC 22000 to operational practices.2.2 Apply standard requirements to food safety objectives and documented procedures.2.3 Develop implementation plans for integrating ISO/FSSC within an existing system.2.4 Use internal audits to assess compliance with key requirements.2.5 Validate PRPs (Prerequisite Programmes) in line with ISO 22000 Annex SL.2.6 Assess leadership roles and responsibilities required by ISO standards.
3. Evaluate compliance gaps and prepare for certification audits.	<ul style="list-style-type: none">3.1 Conduct gap analysis using standard-specific audit checklists.3.2 Identify non-conformities and define corrective action pathways.3.3 Plan and coordinate mock audits using ISO 19011 guidance.3.4 Prepare audit documentation, including evidence registers and reports.3.5 Analyse auditor feedback to identify system weaknesses.

- 3.6 Evaluate audit readiness using key performance indicators (KPIs).
- 3.7 Develop a risk-based audit schedule based on process criticality.

QC0025-03- Advanced Analytical Methods in Food Testing and Quality Verification

This unit covers advanced techniques used in food laboratories to test the quality, safety, and authenticity of food products. Learners will study methods such as chromatography, spectroscopy, microbiological testing, and sensory evaluation. The unit focuses on interpreting test results, maintaining equipment accuracy, and validating data. It helps learners to understand the role of scientific testing in making informed decisions about food quality.

Learning Outcome:	Assessment Criteria:
1. Explore advanced laboratory techniques for food testing and analysis.	<div>1.1 Describe the principles behind techniques like HPLC, GC-MS, and ELISA.</div> <div>1.2 Select suitable laboratory tests for detecting microbiological and chemical hazards.</div> <div>1.3 Demonstrate procedures for sample preparation and contamination control.</div> <div>1.4 Evaluate test method sensitivity, specificity, and validation protocols.</div> <div>1.5 Compare traditional and rapid testing technologies for food quality assurance.</div> <div>1.6 Assess laboratory accreditation requirements such as ISO/IEC 17025.</div>
2. Interpret complex analytical results to ensure food quality and safety.	<div>2.1 Analyse quantitative data outputs from advanced food testing methods.</div> <div>2.2 Identify out-of-specification results and determine their implications.</div> <div>2.3 Apply statistical tools to validate the consistency of laboratory results.</div> <div>2.4 Evaluate results against regulatory limits and product specifications.</div> <div>2.5 Prepare analytical reports with clear conclusions and action recommendations.</div> <div>2.6 Communicate complex test outcomes to non-technical stakeholders.</div>
3. Select appropriate methods for verifying product integrity and compliance.	<div>3.1 Match verification methods to specific product types and risk profiles.</div> <div>3.2 Justify method selection based on sensitivity, cost, and turnaround time.</div> <div>3.3 Integrate verification testing into overall food safety management systems.</div> <div>3.4 Evaluate traceability and authenticity verification in high-risk commodities.</div> <div>3.5 Recommend methods to detect allergens, adulterants, or spoilage indicators.</div>

QC0025-04- Supply Chain Quality Management and Supplier Auditing in Food Production

This unit explores the importance of managing quality across the entire food supply chain. Learners will examine how to monitor supplier performance, carry out supplier audits, and ensure raw material quality. Topics include vendor approval, contract requirements, traceability, and corrective action for non-conformance. The unit prepares learners to build strong partnerships with suppliers while maintaining product safety and integrity.

Learning Outcome:	Assessment Criteria:
1. Assess quality risks across the food supply chain.	<div>1.1 Map supply chain stages and identify critical control points.</div> <div>1.2 Evaluate environmental, social, and operational risks in supplier operations.</div> <div>1.3 Conduct risk classification based on supplier location and product type.</div> <div>1.4 Analyse the impact of supplier variability on final product quality.</div> <div>1.5 Recommend mitigation strategies to address supply chain vulnerabilities.</div> <div>1.6 Review historical quality incidents linked to supply chain failures.</div>
2. Conduct effective supplier audits and evaluations.	<div>2.1 Design audit checklists aligned with food safety and legal standards.</div> <div>2.2 Perform on-site or remote audits and document findings.</div> <div>2.3 Assess supplier compliance against agreed specifications and certifications.</div> <div>2.4 Identify opportunities for improvement during supplier performance reviews.</div> <div>2.5 Evaluate supplier risk using a weighted scoring model.</div> <div>2.6 Report audit outcomes using formal audit reporting structures.</div>
3. Develop supplier quality agreements and monitoring frameworks.	<div>3.1 Draft quality agreements defining roles, responsibilities, and quality clauses.</div> <div>3.2 Establish KPIs to monitor supplier performance over time.</div> <div>3.3 Design a supplier scorecard system with escalation criteria.</div> <div>3.4 Review legal and regulatory clauses in supplier contracts.</div>

- 3.5 Recommend processes for supplier requalification and contract renewal.
- 3.6 Implement ongoing data collection tools to track compliance trends.
- 3.7 Evaluate effectiveness of supplier communication and engagement protocols.

QC0025-05- Food Fraud Prevention and Traceability Systems

This unit introduces learners to the risks and types of food fraud, such as adulteration, mislabelling, and substitution. It explains how to identify vulnerabilities within the supply chain and apply systems to detect and prevent fraud. Learners will also explore food traceability tools, including barcoding, blockchain, and tracking software, to ensure product authenticity and consumer trust.

Learning Outcome:	Assessment Criteria:
1. Identify key vulnerabilities in food supply chains related to fraud.	<div>1.1 Conduct vulnerability assessments using VACCP principles.</div> <div>1.2 Classify types of food fraud and their common indicators.</div> <div>1.3 Evaluate fraud risks based on country of origin, product type, and economic drivers.</div> <div>1.4 Use risk profiling tools to assess fraud potential in raw materials.</div> <div>1.5 Review historical fraud cases for lessons learned and system improvements.</div>
2. Design traceability systems that support transparency and accountability.	<div>2.1 Map traceability flow from raw material intake to product dispatch.</div> <div>2.2 Recommend tracking tools such as barcodes, RFID, or blockchain.</div> <div>2.3 Develop protocols for product recall and backward-forward traceability.</div> <div>2.4 Ensure traceability aligns with regulatory and customer requirements.</div> <div>2.5 Test system effectiveness through mock traceability exercises.</div> <div>2.6 Create standard operating procedures for traceability documentation.</div>
3. Implement preventative measures to detect and reduce fraudulent activities.	<div>3.1 Develop internal fraud detection programs and staff training initiatives.</div> <div>3.2 Integrate fraud monitoring into routine quality control processes.</div> <div>3.3 Recommend third-party verification and lab testing regimes.</div> <div>3.4 Apply controls such as supplier vetting and raw material authentication.</div> <div>3.5 Establish whistleblower systems and reporting channels.</div> <div>3.6 Monitor fraud risk indicators using data analytics and trend reports.</div>

QC0025-06- Continuous Improvement and Root Cause Analysis in Food Manufacturing

This unit teaches how to identify, analyse, and solve quality issues in food manufacturing using continuous improvement methods. Learners will be introduced to root cause analysis (RCA) techniques, such as the “5 Whys” and Fishbone Diagrams, to understand why quality problems occur. The unit also explores Lean, Six Sigma, and other improvement models to enhance processes and reduce waste.

Learning Outcome:	Assessment Criteria:
1. Apply continuous improvement models like PDCA and Kaizen in food processing.	<div>1.1 Describe the steps of the PDCA and Kaizen models in a food industry context.</div> <div>1.2 Identify opportunities for incremental improvement in food production lines.</div> <div>1.3 Implement process mapping to visualise and optimise workflows.</div> <div>1.4 Use employee feedback to identify inefficiencies and bottlenecks.</div> <div>1.5 Develop and track small-scale improvement actions using visual management tools.</div> <div>1.6 Evaluate improvement impact through before-and-after performance metrics.</div>
2. Perform detailed root cause analyses to address quality failures.	<div>2.1 Apply structured RCA tools such as 5 Whys and Fishbone Diagrams.</div> <div>2.2 Investigate the underlying causes of specific food quality incidents.</div> <div>2.3 Analyse contributing factors such as human error, equipment failure, or supplier non-compliance.</div> <div>2.4 Validate root cause findings with evidence and stakeholder input.</div> <div>2.5 Recommend system-wide corrective actions based on RCA outcomes.</div> <div>2.6 Assess the effectiveness of previous RCAs using follow-up audits.</div>
3. Develop corrective and preventive actions that drive operational excellence.	<div>3.1 Draft detailed CAPA (Corrective and Preventive Action) plans with defined responsibilities.</div> <div>3.2 Integrate CAPAs into the broader quality management system.</div> <div>3.3 Prioritise actions based on risk severity and recurrence probability.</div> <div>3.4 Monitor CAPA implementation and verify completion.</div>

- 3.5 Use performance data to evaluate CAPA effectiveness and sustainability.
- 3.6 Communicate CAPA outcomes across departments to support knowledge sharing.
- 3.7 Link CAPA results to continuous improvement initiatives.

QC0025-07- Food Safety Culture and Team Leadership in Quality Environments

This unit focuses on promoting a strong food safety culture within a food business. Learners will explore the values, behaviours, and leadership practices that influence how teams approach food safety and quality. Topics include communication skills, team motivation, staff training, and leadership styles that support a positive working environment and shared responsibility for quality outcomes.

Learning Outcome:	Assessment Criteria:
1. Promote a positive food safety culture within the organisation.	<div>1.1 Assess current organisational attitudes towards food safety using maturity models.</div> <div>1.2 Design initiatives that promote employee ownership of food safety practices.</div> <div>1.3 Develop food safety values, policies, and behavioural expectations.</div> <div>1.4 Deliver internal campaigns and workshops to influence positive behaviours.</div> <div>1.5 Monitor cultural progress through surveys, feedback, and observations.</div> <div>1.6 Address cultural resistance using change management techniques.</div>
2. Build and lead high-performing teams focused on quality outcomes.	<div>2.1 Define team roles and responsibilities within food quality functions.</div> <div>2.2 Facilitate goal setting and performance reviews aligned with quality KPIs.</div> <div>2.3 Resolve conflicts using collaborative problem-solving approaches.</div> <div>2.4 Apply coaching techniques to develop team member competencies.</div> <div>2.5 Evaluate team effectiveness using quality performance metrics and feedback.</div>
3. Develop communication and leadership skills tailored to food quality roles.	<div>3.1 Use clear, structured communication when conveying food safety requirements.</div> <div>3.2 Demonstrate active listening and effective feedback strategies.</div> <div>3.3 Adapt communication style to diverse audiences including operators, supervisors, and auditors.</div> <div>3.4 Lead cross-functional meetings with a focus on decision-making and accountability.</div> <div>3.5 Model ethical behaviour and professionalism in quality leadership roles.</div> <div>3.6 Use presentation tools to report food quality performance to senior management.</div>

QC0025-08- Crisis Management and Product Recall Procedures

This unit prepares learners to respond effectively to food safety emergencies and product recalls. It covers the steps involved in building a crisis management plan, conducting mock recall exercises, and coordinating with regulatory bodies. Learners will also examine real-world case studies to understand the impact of poor recall management and the importance of quick, accurate action to protect consumers and brand reputation.

Learning Outcome:	Assessment Criteria:
1. Design effective food product recall strategies.	<div>1.1 Identify triggers that necessitate product recalls and define escalation procedures.</div> <div>1.2 Develop recall flowcharts outlining key decision points and responsibilities.</div> <div>1.3 Create recall checklists and documentation templates for use during emergencies.</div> <div>1.4 Build stakeholder contact lists and response protocols.</div> <div>1.5 Incorporate regulatory and customer notification requirements in recall plans.</div> <div>1.6 Simulate product recall scenarios to test preparedness.</div>
2. Coordinate internal and external communication during quality-related crises.	<div>2.1 Prepare communication scripts tailored to different audiences (e.g. public, regulators, media).</div> <div>2.2 Set up crisis communication teams and assign clear roles.</div> <div>2.3 Use risk communication techniques to maintain trust and transparency.</div> <div>2.4 Monitor communication effectiveness through stakeholder feedback.</div> <div>2.5 Manage media interactions to limit misinformation and brand damage.</div>
3. Evaluate recall outcomes and incorporate lessons into future planning.	<div>3.1 Analyse recall reports to determine recall efficiency and effectiveness.</div> <div>3.2 Conduct root cause analysis to prevent recurrence.</div> <div>3.3 Review regulatory inspection reports for compliance insights.</div> <div>3.4 Update recall procedures based on lessons learned.</div> <div>3.5 Share recall outcomes and corrective actions with internal teams.</div> <div>3.6 Incorporate simulation findings into the crisis management framework.</div>

QC0025-09 Digital Technologies in Food Quality Control and Automation

This unit introduces learners to digital tools used in modern food quality control, including automated inspection systems, smart sensors, artificial intelligence (AI), and cloud-based quality management platforms. Learners will explore how digital transformation improves accuracy, efficiency, and traceability in food manufacturing. The unit also discusses the challenges and opportunities of adopting digital technology in quality control processes.

Learning Outcome:	Assessment Criteria:
1. Explore emerging digital tools in food quality monitoring and control.	<div>1.1 Identify current technologies such as IoT sensors, AI, and machine vision.</div> <div>1.2 Evaluate the role of data logging and real-time monitoring systems.</div> <div>1.3 Compare manual vs digital data collection in quality inspection.</div> <div>1.4 Assess risks and cybersecurity concerns related to digital technologies.</div> <div>1.5 Analyse cost-benefit of digital transformation in quality control functions.</div> <div>1.6 Review industry case studies on successful digital tool adoption.</div>
2. Integrate automation solutions to improve consistency and compliance.	<div>2.1 Map existing manual processes for automation potential.</div> <div>2.2 Recommend equipment and software for automated inspection or packaging.</div> <div>2.3 Validate automated systems using regulatory and operational benchmarks.</div> <div>2.4 Collaborate with engineering teams to ensure alignment with quality needs.</div> <div>2.5 Monitor system outputs for calibration and drift issues.</div> <div>2.6 Report efficiency gains and compliance improvements post-automation.</div>
3. Analyse data-driven insights to support real-time decision-making.	<div>3.1 Use dashboards and analytics platforms to visualise performance data.</div> <div>3.2 Interpret trends and anomalies in food safety or quality metrics.</div> <div>3.3 Develop key metrics for predictive and preventive decision-making.</div> <div>3.4 Set up alerts and thresholds for automated interventions.</div>

- 3.5 Report on decision outcomes supported by data analytics.
- 3.6 Evaluate the return on investment of data-driven decisions.

QC0025-10- Regulatory Documentation, Metrics, and Performance Evaluation

This unit focuses on the role of documentation in supporting compliance and continuous improvement. Learners will study how to create, maintain, and review key records such as standard operating procedures (SOPs), audit reports, and corrective action logs. The unit also introduces quality metrics, key performance indicators (KPIs), and evaluation tools that help track quality performance and support decision-making.

Learning Outcome:	Assessment Criteria:
1. Prepare and maintain essential regulatory and compliance documents	<div>1.1 Compile Standard Operating Procedures (SOPs) aligned with food regulations.</div> <div>1.2 Complete and archive inspection logs, calibration records, and audit reports.</div> <div>1.3 Maintain version control and document access logs.</div> <div>1.4 Ensure documentation complies with legal retention and traceability requirements.</div> <div>1.5 Conduct internal reviews of document accuracy and completeness.</div> <div>1.6 Train staff in proper documentation practices.</div>
2. Track key performance indicators (KPIs) related to food quality.	<div>2.1 Define measurable KPIs aligned with quality objectives.</div> <div>2.2 Use digital tools to record and trend performance data.</div> <div>2.3 Monitor KPIs such as defect rates, complaint frequencies, and rework levels.</div> <div>2.4 Set performance targets and thresholds for each KPI.</div> <div>2.5 Report KPI trends to leadership with recommended actions.</div> <div>2.6 Adjust KPIs based on process or regulatory changes.</div>
3. Use metrics to evaluate system performance and identify improvement areas.	<div>3.1 Analyse quality and safety data to detect performance gaps.</div> <div>3.2 Benchmark internal metrics against industry standards.</div> <div>3.3 Apply statistical tools to evaluate process capability.</div> <div>3.4 Link performance metrics to audit and customer feedback findings.</div>

- 3.5 Propose improvement strategies based on metric outcomes.
- 3.6 Evaluate the long-term impact of improvements on system performance.
- 3.7 Present findings through dashboards and executive reports.

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