

National Occupational Standards



Concepts of Food Safety in Food Processing Unit

Unit Code: FIC/N7632

Version: 1.0

NSQF Level: 4

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Description

This course provides participants with a thorough understanding of food safety fundamentals specific to food processing units. It covers core food safety principles, regulatory requirements of a food processing facility, and effective risk management strategies, enabling professionals to implement protocols that maintain hygiene, prevent contamination, and comply with industry standards for safe food production.

Scope

The scope covers the following :

- Hazard identification and risk assessment
- Food safety policy and procedure development
- Training and documentation
- Monitoring and compliance
- Testing and traceability
- Auditing and verification

Elements and Performance Criteria

Hazard identification and risk assessment

To be competent, the user/individual on the job must be able to:

- PC1.** develop the food safety team
- PC2.** create the process flow for the identification and analysis of hazards associated with food products
- PC3.** identify potential hazards on the basis of the process flow, including biological (e.g. bacteria, parasites and fungi), chemical (e.g. allergens, pesticides and mycotoxins), and physical hazards (metal fragment, glass pieces, plastic and rubber)
- PC4.** evaluate the potential impact of each hazard
- PC5.** conduct risk assessments to identify and mitigate potential hazards

Food safety policy and procedure development

To be competent, the user/individual on the job must be able to:

- PC6.** set clear, measurable objectives for food safety
- PC7.** develop a food safety policy outlining your commitment to food safety
- PC8.** develop a pest management system to prevent, control, and eliminate pests in food production, processing, and storage facilities
- PC9.** implement procedures for hazard control, including critical control points (CCPs), monitoring, and corrective actions
- PC10.** set the critical control point limits
- PC11.** implement appropriate control measures for identified hazards and CCPs
- PC12.** establish and follow Standard Operating Procedures (SOPs) for cleaning and sanitation

Training and documentation

To be competent, the user/individual on the job must be able to:

- PC13.** provide training to the personnel on food safety practices and procedures, including Good Hygiene Practices (GHP), Good Manufacturing Practices (GMP), etc.

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PC14. ensure all procedures, policies, and processes are well-documented and accessible

PC15. train the personnel on hygiene practices and the importance of sanitation

Monitoring and compliance

To be competent, the user/individual on the job must be able to:

PC16. develop and implement the food safety processes and HACCPs to ensure compliance

PC17. enforce SOPs for cleaning and sanitation

PC18. monitor Hazard Analysis and Critical Control Point (HACCPs) and document accurately

PC19. check for compliance with the applicable regulations and GMPs, including personnel hygiene, equipment maintenance, and sanitary facilities

PC20. check the applicable SOPs are followed for cleaning and sanitizing equipment and facilities

PC21. monitor and document sanitation activities

Testing and traceability

To be competent, the user/individual on the job must be able to:

PC22. implement a traceability system that can track the movement of ingredients and finished products through all stages of production, processing, and distribution

PC23. ensure that each batch of product is assigned a unique identifier that links to all relevant production data

PC24. maintain accurate and up-to-date records of all ingredients used, including their source, batch numbers, and any test results

PC25. monitor the traceability system regularly to ensure its effectiveness and identify any gaps or inefficiencies

PC26. develop and document procedures for product recalls in case of safety concerns

PC27. ensure that the traceability system complies with local, national, and international food safety regulations

PC28. stay updated on changes in food safety legislation and adjust traceability practices accordingly

PC29. participate in audits and inspections, providing traceability records as required

Auditing and verification

To be competent, the user/individual on the job must be able to:

PC30. monitor product quality throughout the processing stages

PC31. perform internal audits to verify the effectiveness of the FSMS

PC32. develop a comprehensive audit plan outlining the scope, objectives, schedule, and audit checklist

PC33. inspect the physical facilities, including storage, processing, and packaging areas, to ensure compliance with food safety standards

PC34. check for compliance with the FSSAI-prescribed food manufacturing requirements

PC35. check food handling, processing, and sanitation practices to identify potential hazards or non-compliance

PC36. check for compliance with the Schedule IV requirements set by FSSAI for food businesses

PC37. check customer complaints are acknowledged and resolved within the applicable timescales

PC38. examine records such as temperature logs, cleaning schedules, pest control logs, and training records to verify adherence to procedures

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- PC39.** assess the knowledge of personnel on food safety practices
- PC40.** check for adherence to the applicable SOPs by personnel
- PC41.** assess the effectiveness of corrective actions taken in response to deviations from critical limits
- PC42.** record all observations, non-conformities, and areas of improvement during the audit
- PC43.** develop and implement a corrective action plan to address identified non-compliances
- PC44.** prepare a detailed audit report summarizing findings, non-compliances, and recommendations for corrective actions

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the food safety fundamentals, including hazard identification and risk assessment
- KU2.** the biological (e.g. bacteria, parasites and fungi), chemical (e.g. allergens, pesticides and mycotoxins), and physical hazards (metal fragment, glass pieces, plastic and rubber) hazards associated with food processing
- KU3.** the applicable food safety regulations and standards, such as ISO 22000, HACCP, Hazard Analysis and Risk-Based Preventive Controls (HARPC), relevant Good Manufacturing Practices (GMPs), etc.
- KU4.** the process of designing, implementing, and maintaining Food Safety Management Systems (FSMS)
- KU5.** the process of conducting hazard analysis and identifying critical control points
- KU6.** the process of developing, implementing, and monitoring HACCP plans
- KU7.** the difference between Pre-requisite Programs (PRPs), Operational Pre-requisite Programs (OPRPs) and CCPs
- KU8.** the appropriate prevention measures specific to food processing environments
- KU9.** the impact of processing techniques and equipment on food safety
- KU10.** the application of quality management principles in food safety
- KU11.** the FSSAI-prescribed manufacturing requirements for food product manufacturers
- KU12.** the appropriate sanitation practices and disinfection methods
- KU13.** the personal hygiene requirements for food handlers
- KU14.** the audit principles, procedures, and techniques, including internal and external food safety audits and inspections
- KU15.** different food contamination sources, foodborne pathogens, and microbial growth
- KU16.** different food preservation methods and the impact of processing on food safety
- KU17.** process of conducting food safety risk assessments
- KU18.** the crisis management principles, recall procedures, and preventive measures
- KU19.** the microbiological, chemical, and physical testing methods for food safety
- KU20.** how to interpret food test results and implement corrective actions
- KU21.** the relevant traceability systems and technologies
- KU22.** the supply chain risks, controls, and supplier quality management
- KU23.** how to develop and deliver effective food safety training programs

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- KU24.** the adult learning principles and training evaluation techniques
- KU25.** the applicable documentation, record-keeping, and reporting requirements
- KU26.** the document control systems and regulatory documentation requirements
- KU27.** the use of relevant food safety management software and digital tools
- KU28.** the data analysis and reporting tools used in food safety

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** maintain work-related notes and records
- GS2.** read the relevant guides and literature to get the latest information about the field of work
- GS3.** communicate clearly and politely
- GS4.** perform basic calculations
- GS5.** listen attentively to understand the instructions being given
- GS6.** identify solutions to work-related issues
- GS7.** plan and prioritize tasks to ensure timely completion
- GS8.** make quick decisions in case of emergencies

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Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Hazard identification and risk assessment</i>	4	9	-	2
PC1. develop the food safety team	0.5	1	-	0.5
PC2. create the process flow for the identification and analysis of hazards associated with food products	0.5	2	-	0.5
PC3. identify potential hazards on the basis of the process flow, including biological (e.g. bacteria, parasites and fungi), chemical (e.g. allergens, pesticides and mycotoxins), and physical hazards (metal fragment, glass pieces, plastic and rubber)	1	3	-	0.5
PC4. evaluate the potential impact of each hazard	1	1	-	0.5
PC5. conduct risk assessments to identify and mitigate potential hazards	1	2	-	-
<i>Food safety policy and procedure development</i>	5	10	-	3
PC6. set clear, measurable objectives for food safety	1	1	-	0.5
PC7. develop a food safety policy outlining your commitment to food safety	1	2	-	0.5
PC8. develop a pest management system to prevent, control, and eliminate pests in food production, processing, and storage facilities	1	1	-	0.5
PC9. implement procedures for hazard control, including critical control points (CCPs), monitoring, and corrective actions	0.5	1	-	0.5
PC10. set the critical control point limits	0.5	2	-	0.5
PC11. implement appropriate control measures for identified hazards and CCPs	0.5	2	-	0.5
PC12. establish and follow Standard Operating Procedures (SOPs) for cleaning and sanitation	0.5	1	-	-
<i>Training and documentation</i>	4	3	-	2

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. provide training to the personnel on food safety practices and procedures, including Good Hygiene Practices (GHP), Good Manufacturing Practices (GMP), etc.	1	1	-	1
PC14. ensure all procedures, policies, and processes are well-documented and accessible	1	1	-	-
PC15. train the personnel on hygiene practices and the importance of sanitation	2	1	-	1
<i>Monitoring and compliance</i>	5	6	-	2
PC16. develop and implement the food safety processes and HACCPs to ensure compliance	1	1	-	0.5
PC17. enforce SOPs for cleaning and sanitation	1	1	-	0.5
PC18. monitor Hazard Analysis and Critical Control Point (HACCPs) and document accurately	1	1	-	-
PC19. check for compliance with the applicable regulations and GMPs, including personnel hygiene, equipment maintenance, and sanitary facilities	1	1	-	-
PC20. check the applicable SOPs are followed for cleaning and sanitizing equipment and facilities	0.5	1	-	0.5
PC21. monitor and document sanitation activities	0.5	1	-	0.5
<i>Testing and traceability</i>	4	8	-	3
PC22. implement a traceability system that can track the movement of ingredients and finished products through all stages of production, processing, and distribution	0.5	1	-	0.5
PC23. ensure that each batch of product is assigned a unique identifier that links to all relevant production data	0.5	1	-	0.5
PC24. maintain accurate and up-to-date records of all ingredients used, including their source, batch numbers, and any test results	0.5	1	-	0.5

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC25. monitor the traceability system regularly to ensure its effectiveness and identify any gaps or inefficiencies	0.5	1	-	0.5
PC26. develop and document procedures for product recalls in case of safety concerns	0.5	1	-	0.5
PC27. ensure that the traceability system complies with local, national, and international food safety regulations	0.5	1	-	0.5
PC28. stay updated on changes in food safety legislation and adjust traceability practices accordingly	0.5	1	-	-
PC29. participate in audits and inspections, providing traceability records as required	0.5	1	-	-
<i>Auditing and verification</i>	8	14	-	8
PC30. monitor product quality throughout the processing stages	0.5	1	-	0.5
PC31. perform internal audits to verify the effectiveness of the FSMS	0.5	1	-	0.5
PC32. develop a comprehensive audit plan outlining the scope, objectives, schedule, and audit checklist	0.5	1	-	0.5
PC33. inspect the physical facilities, including storage, processing, and packaging areas, to ensure compliance with food safety standards	0.5	1	-	0.5
PC34. check for compliance with the FSSAI-prescribed food manufacturing requirements	0.5	1	-	0.5
PC35. check food handling, processing, and sanitation practices to identify potential hazards or non-compliance	0.5	1	-	0.5
PC36. check for compliance with the Schedule IV requirements set by FSSAI for food businesses	0.5	1	-	0.5
PC37. check customer complaints are acknowledged and resolved within the applicable timescales	0.5	1	-	0.5

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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC38. examine records such as temperature logs, cleaning schedules, pest control logs, and training records to verify adherence to procedures	0.5	1	-	0.5
PC39. assess the knowledge of personnel on food safety practices	0.5	1	-	0.5
PC40. check for adherence to the applicable SOPs by personnel	0.5	1	-	0.5
PC41. assess the effectiveness of corrective actions taken in response to deviations from critical limits	0.5	1	-	0.5
PC42. record all observations, non-conformities, and areas of improvement during the audit	0.5	0.5	-	0.5
PC43. develop and implement a corrective action plan to address identified non-compliances	0.5	0.5	-	0.5
PC44. prepare a detailed audit report summarizing findings, non-compliances, and recommendations for corrective actions	1	1	-	1
NOS Total	30	50	-	20

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National Occupational Standards (NOS) Parameters

NOS Code	FIC/N7632
NOS Name	Concepts of Food Safety in Food Processing Unit
Sector	Food Processing
Sub-Sector	
Occupation	Quality Analysis/ Assurance
NSQF Level	4
Credits	2
Minimum Job Entry Age	16
Minimum Educational Qualification & Experience	<p>12th grade Pass (or Equivalent) OR 10th grade pass with 3 Years of experience in Food Processing Industry OR Previous relevant Qualification of NSQF Level (3) with 3 Years of experience in Food Processing Industry OR Previous relevant Qualification of NSQF Level (3.5) with 1.5 years of experience in Food Processing Industry</p>
Version	1.0
Last Reviewed Date	08/05/2025
Next Review Date	08/05/2028
NSQC Clearance Date	08/05/2025
Reference code on NQR	NG-04-FI-04212-2025-V1-FICSI
NQR Version	1.0
CCN Category	1