Basics of Food Adulteration

QP Code: FIC/MCr0009

Version: 1.0

NSQF Level: 1.0

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Training Parameters

Sector	Food Processing
Sub-Sector	Multi-Sectorial
Occupation	Multi-sectorial
Country	India
NSQF Level	1.0
Aligned to NCO/ISCO/ISIC Code	
Minimum Educational Qualification and Experience	No formal education prescribed
Pre-Requisite License or Training	NA
Minimum Job Entry Age	14 Years
Last Reviewed On	7th Oct 2025
Next Review Date	6th Oct 2028
NSQC Approval Date	7th Oct 2025
QP Version	1.0
Model Curriculum Creation Date	7th Oct 2025
Model Curriculum Valid Up to Date	6th Oct 2028
Model Curriculum Version	1.0
Minimum Duration of the Course	7.5 Hours
Maximum Duration of the Course	7.5 Hours

Program Overview

This section summarises the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills to:

- Recognise common adulterants in everyday foods and describe their possible health risks
- Explain the basic concept of food adulteration, its types, and preventive measures in the context of food safety
- Perform simple visual and household-level checks (without reagents)
- Use basic food testing kits under guidance to detect adulterants in selected foods and differentiate between pure and adulterated items
- Follow hygiene, safety, and proper disposal practices while handling food samples and performing tests, and communicate the importance of safe food practices in the household/community

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	Total Duration
Module 1: Recognize Food Adulteration and Its Risks	1.5	2.0	3.5
Module 2: Detect Food Adulteration with Simple Using Kits	1.5	2.5	4.0
Total Duration	**3.0**	**4.5**	**7.5**

Module Details

Module 1: Recognise Food Adulteration and Its Risks

Terminal Outcomes:

- Recognise common adulterants in everyday foods and explain their associated health risks

- Perform simple visual and household-level checks (without reagents)

- Communicate the importance of food safety and preventive measures

Duration: 1.5	Duration: 2.0
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Define food adulteration and explain why it is harmful - Identify different types of food adulteration (intentional, incidental, cross-contamination). - Recognize food items where adulteration is commonly found(milk, grains, spices, fruits, vegetables, and honey) - Describe the health risks caused by adulterated food. - Recall basic food safety laws and regulations governing food adulteration in India (e.g., FSSAI regulations). - List simple ways to prevent adulteration at home and in the community	- Perform sensory/visual checks to spot adulteration indicators (colour, texture, off-odours, extraneous matter) in common foods (Milk, Vegetables,Rice,Spices) (*DART Reference*) - Carry out basic physical household checks without chemicals (e.g. Detection of water in milk, excess bran in flour, ergot in grains , artificial colour in leafy vegetables – *DART Reference*) - Recognise signs of artificial colour by rinsing leafy vegetables in water (*DART reference*). - Practice safe handling and hygiene when checking food at home. - Discuss the idea behind common chemical/reagent-based tests (e.g., iodine test for starch – *DART reference*) as a conceptual awareness exercise, without performing them.
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Basic Food testing kits, Measuring spoons and containers, Litmus Paper, Magnifying glass, Iodine solution, Transparent glass containers, water supply, Handheld UV light, simple weighing scale	

Module 2: Detection of Food Adulteration using Testing Kits

Terminal Outcomes:

- Demonstrate the ability to use simple food testing kits to detect common adulterants in common food items

- Identify and differentiate between adulterated and non-adulterated foods through guided kit-based tests

- Follow safe handling, hygiene, and disposal practices while performing and reporting adulteration tests.

Duration: 1.5	Duration: 2.5
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
- Explain in simple terms how basic food test kits work - Match common foods (milk, oils, spices, salt, honey, fruits, vegetables) with the relevant test - Describe in everyday language what a test result means (e.g., iodine turns blue when starch is present) - Recognise the limits of household checks and the reliability of kit results - Discuss real-life cases of food adulteration and their impact on health	- Use simple kits to test milk and milk products for detergents and starch (*DART reference*) - Test ghee and oils for mashed potato or sweet potato and check acidity (*DART reference*) - Detect adulterants in spices (artificial colours , soapstone / chalk in asafoetida) (*DART reference*) - Carry out tests for honey and salt (added sugar in honey, adulteration in iodized salt) (*DART reference*) - Identify adulteration in fruits and vegetables(wax coating on apples, artificial colours in vegetables (*DART reference*) - Follow hygiene and safety steps (wear gloves/apron, dispose tested food safely)
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
Standard DART kits, small spoons and containers, Measuring spoons/cups, Test tubes and beakers, Dropper, Color charts / Reference sheets, Magnifying Glass, Gloves and Aprons, Litmus Paper, Common Salt, Vinegar, Disposable gloves and aprons, Waste disposal bags etc.	

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	*Specialization*	*Years*	*Specialization*	
Diploma	Food technology, Nutrition	3	Food processing	1	Food processing	
Bachelor's Degree	Food technology, Food Science, Nutrition	2	Food processing	1	Food processing	
Master's Degree	Food technology, Food Science, Nutrition	1	Food processing	1	Food processing	

Trainer Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "Basics of Food Adulteration" mapped to QP: "FIC/MCr0009", v1.0. Minimum accepted score as per SSC guideline is 80%	Recommended that the Trainer is certified for the Job Role: "Trainer" (VET & SKILLS), mapped to the Qualification Pack: "MEP/Q2601", V2. Minimum accepted SCORE IS 80 % as per SSC guidelines.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training/Assessment Experience**		**Remarks**
		Years	*Specialization*	*Years*	*Specialization*	
Diploma	Food technology, Nutrition	4	Food processing	1	Food processing	
Bachelor's Degree	Food technology, Food Science, Food Technology, Nutrition	3	Food processing	1	Food processing	
Master's Degree	Food technology, Food Science, Food Technology, Nutrition	2	Food processing	1	Food processing	

Assessor Certification	
Domain Certification	**Platform Certification**
Certified for Job Role: "Basics of Food Adulteration" mapped to QP: "FIC/MCr0009", v1.0. Minimum accepted score as per SSC guideline is 80%	Recommended that the Assessor is certified for the Job Role: "Assessor" (VET & SKILLS), mapped to the Qualification Pack: "MEP/Q2701", V2. Minimum accepted SCORE IS 80 % as per SSC guidelines.

1. Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on SDSM/SIP or email.
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC.
- The assessment agency deploys the ToA certified Assessor for executing the assessment.
- SSC monitors the assessment process & records.

2. Testing Environment:

- Confirm that the centre is available at the same address as mentioned on SDMS or SIP.
- Check the duration of the training.
- Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
- If the batch size is more than 30, then there should be 2 Assessors.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
- Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
- Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
- Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels / Framework:

- Question papers created by the Subject Matter Experts (SME).
- Question papers created by the SME verified by the other subject Matter Experts.
- Questions are mapped with NOS and PC.
- Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management.
- An assessor must be ToA certified & the trainer must be ToT Certified.
- The assessment agency must follow the assessment guidelines to conduct the assessment.

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location.
- Center photographs with signboards and scheme-specific branding.
- Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period.
- Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos.

5. Method of verification or validation:

- A surprise visit to the assessment location.
- A random audit of the batch.
- Random audit of any candidate.

6. Method for assessment documentation, archiving, and access:

- Hard copies of the documents are stored.

- Soft copies of the documents & photographs of the assessment are uploaded / accessedfrom Cloud Storage.

- Soft copies of the documents & photographs of the assessment are stored in the Hard Drives.

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	A key learning outcome is a statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on-site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on-site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
Terminal Outcome	The terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
NOS	National Occupational Standard (s)
NSQF	National Skills Qualifications Framework
OJT	On-the-job Training
QP	Qualifications Pack
PwD	People with Disability
PPE	Personal Protective Equipment