

# **Assessment Evidence Guide**

**For**

**Food Technology**

**Level-3**

**(Summative)**



**National Vocational & Technical Training  
Commission Islamabad**

## Instruction Sheet for the Candidate

<b>Qualification</b>	<b>National Vocational Qualification Level-3 in Food Technology</b>
<b>Competency Standards</b>	<ol style="list-style-type: none"> <li>1. Adopt Basic Good Manufacturing Practices (GMP) in Food Industry</li> <li>2. Apply Food Processing Techniques</li> <li>3. Perform Carbonated Beverage Processing</li> <li>4. Perform Meat Processing</li> <li>5. Perform Fruits and Vegetables Processing</li> <li>6. Perform Processing of Edible Oils And Fats</li> <li>7. Perform Milling of Grains</li> <li>8. Perform Butter Making Process</li> <li>9. Digital Skills</li> </ol>
<b>Purpose of Assessment</b>	<b>Summative Assessment – Level-3 Food Technology</b>
<b>Candidate Details</b>	Name _____ Registration Number _____
<b>Guidance for Candidate</b>	<b>To meet this qualification level, you are required to perform and demonstrate the carbonation, drying of Fruits &amp; Vegetables, analysis of Fats &amp; Oils, milling of rice and making butter from fermented cream within 05:00 Hrs. time frame by following GMPs.</b>
<b>Time: 05:00 Hrs</b>	To meet this qualification level, you are required to perform the following tasks by following GMPs during practical assessment, under observation by an assessor. <ol style="list-style-type: none"> <li>1. Perform Carbonation of water</li> <li>2. Perform Drying Process of Fruits &amp; Vegetables</li> <li>3. Perform Fats &amp; Oils Analysis</li> <li>4. Perform Milling of Rice</li> <li>5. Perform butter processing from fermented cream</li> </ol>
<b>Minimum Evidence Required</b>	<ol style="list-style-type: none"> <li><b>1. Perform Carbonation of Water</b> <ol style="list-style-type: none"> <li>i. Check quality of CO<sub>2</sub> gas as per specifications</li> <li>ii. Check the working of carbon cooler condenser and temperature gauges</li> <li>iii. Check CO<sub>2</sub> gas volume in the final product after certain intervals as per sampling plan</li> </ol> </li> <li><b>2. Perform drying Process of Fruits &amp; Vegetables</b> <ol style="list-style-type: none"> <li>i. Perform Preparatory Operations</li> <li>ii. Operate dryer for fruit products</li> <li>iii. Perform routine analysis to check the quality of the final product</li> </ol> </li> <li><b>3. Perform Fats &amp; Oils Analysis</b> <ol style="list-style-type: none"> <li>i. Prepare all required reagents and solutions for analysis</li> <li>ii. Perform all Physico-chemical analysis of oils and fats</li> </ol> </li> <li><b>4. Perform Milling of Rice</b> <ol style="list-style-type: none"> <li>i. Perform cleaning of paddy</li> <li>ii. Operate polisher after de-husking</li> </ol> </li> </ol>

	<ul style="list-style-type: none"> <li>iii. Perform sorting to remove broken rice kernels</li> </ul> <p><b>5. Perform butter processing from fermented cream</b></p> <ul style="list-style-type: none"> <li>i. Mix ingredients and additives properly</li> <li>ii. Determine fat percentage</li> <li>iii. Prepare moulds / blocks of butter</li> </ul>
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## Self-Assessment Checklist

<b>Candidate Name</b>	
<b>Registration No.</b>	
<b>Qualification</b>	National Vocational Qualification Level-3 in Food Technology
<b>Purpose of Assessment</b>	<b>Summative Assessment – Level-3 Food Technology</b>
<b>Assessment Tasks</b>	1. Perform Carbonation of water 2. Perform Drying Process of Fruits & Vegetables 3. Perform Fats & Oils Analysis 4. Perform Milling of Rice 5. Perform butter processing from fermented cream

I can.....

Performance Criteria	Yes	No
1. Check quality of CO <sub>2</sub> gas as per specifications	<input type="checkbox"/>	<input type="checkbox"/>
2. Check the working of carbon cooler condenser and temperature gauges	<input type="checkbox"/>	<input type="checkbox"/>
3. Check CO <sub>2</sub> gas volume in the final product after certain intervals as per sampling plan	<input type="checkbox"/>	<input type="checkbox"/>
4. Perform Preparatory Operations	<input type="checkbox"/>	<input type="checkbox"/>
5. Operate dryer for fruit products	<input type="checkbox"/>	<input type="checkbox"/>
6. Perform routine analysis to check the quality of the final product	<input type="checkbox"/>	<input type="checkbox"/>
7. Prepare all required reagents and solutions for analysis	<input type="checkbox"/>	<input type="checkbox"/>
8. Perform all Physico-chemical analysis of oils and fats	<input type="checkbox"/>	<input type="checkbox"/>
9. Perform cleaning of paddy	<input type="checkbox"/>	<input type="checkbox"/>
10. Operate polisher after de-husking	<input type="checkbox"/>	<input type="checkbox"/>
11. Perform sorting to remove broken rice kernels	<input type="checkbox"/>	<input type="checkbox"/>
12. Mix ingredients and additives properly	<input type="checkbox"/>	<input type="checkbox"/>
13. Determine fat percentage	<input type="checkbox"/>	<input type="checkbox"/>
14. Prepare moulds / blocks of butter	<input type="checkbox"/>	<input type="checkbox"/>

Candidate's Signature\_\_\_\_\_ Assessor's Signature\_\_\_\_\_

Date: \_\_\_\_\_

## Assessors Judgment Guide

<b>Qualification</b>	National Vocational Qualification Level-3 in Food Technology
<b>Purpose of Assessment</b>	<b>Summative Assessment – Level-3 Food Technology</b>
<b>Candidate Details</b>	Name: _____ Registration Number: _____ Signature: _____
<b>Assessment Outcome</b>	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor _____ Assessor's code: _____ Signature: _____

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment		✓					
Other Requirement							

## Observation Checklist

<b>Assessment Tasks</b>	1. Perform Carbonation of water 2. Perform Drying Process of Fruits & Vegetables 3. Perform Fats & Oils Analysis 4. Perform Milling of Rice 5. Perform butter processing from fermented cream			
<b>During the practical assessment, candidate demonstrated the following:</b>		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1.	Checked quality of CO <sub>2</sub> gas as per specifications			
2.	Checked the working of carbon cooler condenser and temperature gauges			
3.	Checked CO <sub>2</sub> gas volume in the final product after certain intervals as per sampling plan			
4.	Performed Preparatory Operations			
5.	Operated dryer for fruit products			
6.	Performed routine analysis to check the quality of the final product			
7.	Prepared all required reagents and solutions for analysis			
8.	Performed all Physico-chemical analysis of oils and fats			
9.	Performed cleaning of paddy			
10.	Operated polisher after de-husking			
11.	Performed sorting to remove broken rice kernels			
12.	Mixed ingredients and additives properly			
13.	Determined fat percentage			
14.	Prepared moulds / blocks of butter			
<b>Competent</b> <input type="checkbox"/>		<b>Not Yet Competent</b> <input type="checkbox"/>		

# Knowledge Assessment

<b>Qualification</b>	National Vocational Qualification Level-3 in Food Technology
<b>Purpose of Assessment</b>	<b>Summative Assessment – Level-3 Food Technology</b>
<b>Candidate Details</b>	Name: _____ Registration Number: _____ Candidate Signature: _____
<b>Assessment Outcome</b>	<b>COMPETENT</b> <input type="checkbox"/> <b>NOT YET COMPETENT</b> <input type="checkbox"/> Name of the Assessor: _____ Assessor's code: _____ Signature of the Assessor: _____

Candidate's response is not required to be identical, but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of topic and its application.

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		Satisfactory	Not Satisfactory
1.	What does GMP stand for?		
2.	Enlist any two GMP		
3.	What does PPE Stand for?		
4.	Enlist PPE		
5.	What is disinfection		
6.	What does SOP Stand for?		
7.	What is Calibration?		
8.	Define Homogenization		

9.	Enlist impurities in CO <sub>2</sub>		
10.	What are the equipment involve in beverage preparation?		
11.	What is Refractometer		
12.	What is CO <sub>2</sub> Tester		
13.	Name the vein being cut during halal slaughtering		
14.	Define Chilling		
15.	What is Temperature of Chilling		
16.	Define blast freezing		
17.	What is cold storage temperature of frozen meat		
18.	What is pH		
19.	Define Meat spoilage		
20.	Enlist Preparatory operations for fruits & vegetable drying		
21.	Define Sorting		
22.	What is grading		



23.	Define pulping		
24.	What is blanching		
25.	Define slicing and dicing		
26.	Enlist quality parameters of Syruping		
27.	Define Freezing		
28.	Define Syruping		
29.	Define brining		
30.	What is the function of choppers		
31.	Define CCP		
32.	What is neutralization in fats & oil?		
33.	Enlist physico-chemical analysis of fats & oil		
34.	What does FFA stand for?		
35.	Define bleaching		
36.	Enlist waste materials of poultry slaughtering		
37.	Enlist waste materials of fruits and vegetable processing		

38.	Define Deodorization		
39.	What is hydrogenation?		
40.	Enlist steps involved in hydrogenation process		
41.	What is interesterification?		
42.	What is fractionation process?		
43.	Enlist quality parameters of loading/unloading fats & oil		
44.	What is purpose of hydrogenation?		
45.	Define rancidity		
46.	What are the parameters to determine the rancidity?		
47.	What is the function of tintometer?		
48.	What is pycnometer?		
49.	Define Tempering in of wheat grains		
50.	What is conditioning of wheat grains?		
51.	What is the purpose of rice polishing?		

52.	Enlist steps involved in wheat milling		
53.	What are the nutritional benefits of bran		
54.	What is the function of sifter?		
55.	What is the function of de-husker?		
56.	Enlist the microbes involve in butter processing		
57.	What is inoculation in butter making?		
58.	Define churning		
59.	Enlist butter additives		
60.	Enlist testing parameters of butter		
61.	What is fat content percentage in butter?		
62.	What is water content percentage in butter?		
63.	What is the temperature of butter storage?		
64.	What is butyrometer?		
65.	What is the function of Gerber machine?		



Feedback to the Candidate	
Candidate's Signature_____Assessor's Signature _____	

## Consumables, Tools and Equipment

Sr. no.	Name of Items	Quantity (25 Candidates)
<b>Consumables</b>		
1.	Safety Shoes	25 Pair
2.	Gloves	25 Pair
3.	Goggles	25
4.	Helmet	25
5.	Masks	25
6.	Head Cover/Caps	25
7.	Ear plug	25 pair
8.	Bags	As produced
9.	Bins	5
10.	Vessels	As production requires
11.	Boxes	As production requires
12.	Measuring scale	1 for each student
13.	Labeler	1 for each student
14.	Stove	1 for each group
15.	Trolleys	As production requires
16.	Cooking Pan	As production requires
17.	Knives	As production requires
18.	Cutter	As production requires
19.	Cutting Boards	As production requires
20.	Measuring pipette	25
21.	Burner	10
<b>Tools</b>		
22.	Air Vents	1
23.	Safety Siren	1
24.	Drill Machine, grinder	1
25.	Cleaning Trolleys	As production type
26.	Cleaning hose pips,	As production type
27.	Disinfection liquid	2
28.	Air Blowers	1
<b>Equipment</b>		
29.	Washer (made of 304 stainless steel, 500kg/h)	1
30.	Peeler	5
31.	Blancher	5
32.	Slicer	3
33.	Pasteurizer	1
34.	Homogenizer	3
35.	Mixer	2
36.	Grinder	5
37.	Dryer	1
38.	Evaporator	1
39.	Carbo Cooler	1
40.	Filler	1
41.	Concentrator	1
42.	Boiler	1
43.	Sifter	1
44.	Husker	1
45.	Length grader	5
46.	Color sortex	1

<b>47.</b>	Paddy separator	1
<b>48.</b>	Metal detector	1
<b>49.</b>	Lactometer	1
<b>50.</b>	pH meter	1
<b>51.</b>	Gerber machine	1
<b>52.</b>	Oven	1
<b>53.</b>	Balance	1
<b>54.</b>	Capper	1
<b>55.</b>	CO <sub>2</sub> tester	1
<b>56.</b>	Refractometer	1
<b>57.</b>	Pasteurizer	1
<b>58.</b>	Freezer	1
<b>59.</b>	Dryer	1
<b>60.</b>	Pycnometer	1
<b>61.</b>	Tintometer	1
<b>62.</b>	Butyrometer	1
<b>63.</b>	Churning Machine	1