

Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	National Vocational Certificate level 2 to 5, in Agriculture Sector (Soil, water and fertilizer testing lab technician)
Competency Standards	Perform nitrate-N in solid, liquid and mixed fertilizer by kjeldahl method
Assessment Task	Determine nitrate nitrogen in fertilizer sample Step 1: Process and distillate fertilizer sample for titration Step 2: Titrate and calculate results for the distillates.

I can.....

Performance Criteria	Yes	No
1. Check sample label for required test.	<input type="checkbox"/>	<input type="checkbox"/>
2. Maintain Laboratory room temperature as per requirement.	<input type="checkbox"/>	<input type="checkbox"/>
3. Check for availability of N standard as per requirement.	<input type="checkbox"/>	<input type="checkbox"/>
4. Set up KJELDAHL apparatus and reagents in accordance with the standard work instructions.	<input type="checkbox"/>	<input type="checkbox"/>
5. Conduct pre-use and safety checks.	<input type="checkbox"/>	<input type="checkbox"/>
6. Weigh accurately required amount of sample as required.	<input type="checkbox"/>	<input type="checkbox"/>
7. Digest sample on digestion block and make volume as per standard procedure.	<input type="checkbox"/>	<input type="checkbox"/>
8. Process sample as per standard distillation method.	<input type="checkbox"/>	<input type="checkbox"/>
9. Process sample as per standard titration method.	<input type="checkbox"/>	<input type="checkbox"/>
10. Analyze three replicates as per standard requirement.	<input type="checkbox"/>	<input type="checkbox"/>
11. Perform calculations according to SOP.	<input type="checkbox"/>	<input type="checkbox"/>
12. Store unused reagents and dispose of wastes as required by relevant regulations and codes.	<input type="checkbox"/>	<input type="checkbox"/>
13. Clean and store equipment	<input type="checkbox"/>	<input type="checkbox"/>
14. Calibrate equipment as per lab quality assurance plan.	<input type="checkbox"/>	<input type="checkbox"/>
15. Run blank sample accordingly.	<input type="checkbox"/>	<input type="checkbox"/>
16. Run Laboratory Control samples as per standard.	<input type="checkbox"/>	<input type="checkbox"/>
17. Perform replicate/re-testing as per lab standards.	<input type="checkbox"/>	<input type="checkbox"/>
18. Record quality control data as per lab procedure	<input type="checkbox"/>	<input type="checkbox"/>
19. Calculate and Note down the Results on analyst	<input type="checkbox"/>	<input type="checkbox"/>

workbook.		
20. Submit the results to lab In-charge	<input type="text"/>	<input type="text"/>
21. Clear and restore work area	<input type="text"/>	<input type="text"/>
22. Ensure calibration of equipment as per standard requirement.	<input type="text"/>	<input type="text"/>
23. Handle distillation unit as per SOP.	<input type="text"/>	<input type="text"/>
24. Ensure sample digestion in fume hood as per standard requirement.	<input type="text"/>	<input type="text"/>
25. Dispose-off waste as per SOP.	<input type="text"/>	<input type="text"/>
26. Handle acids as per MSDS.	<input type="text"/>	<input type="text"/>
27. Ensure safety protocols as per standard requirement	<input type="text"/>	<input type="text"/>

Candidate's Signature-----

Assessor's Signature -----

Date: -----

Instruction Sheet for the Candidate

Qualification	National Vocational Certificate level 2 to 5, in Agriculture Sector (Soil, water and fertilizer testing lab technician)
Competency Standard(s)	Perform nitrate-N in solid, liquid and mixed fertilizer by kjeldahl method
Candidate Details	Name ----- Registration/Roll Number -----
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>Determine nitrate nitrogen in fertilizer sample Step 1: Process and distillate fertilizer sample for titration Step 2: Titrate and calculate results for the distillates.</p>
Time:240 Mins	<p>During a practical assessment, under observation by an assessor, you are required to</p> <p>Determine nitrate nitrogen in fertilizer sample Step 1: Process and distillate fertilizer sample for titration Step 2: Titrate and calculate results for the distillates.</p>
Minimum Evidence Required	<p>Demonstrate the following criteria:</p> <ol style="list-style-type: none"> 1. Check sample label for required test. 2. Maintain Laboratory room temperature as per requirement. 3. Check for availability of N standard as per requirement. 4. Set up KJELDAHL apparatus and reagents in accordance with the standard work instructions. 5. Conduct pre-use and safety checks. 6. Weigh accurately required amount of sample as required. 7. Digest sample on digestion block and make volume as per standard procedure. 8. Process sample as per standard distillation method. 9. Process sample as per standard titration method. 10. Analyze three replicates as per standard requirement. 11. Perform calculations according to SOP. 12. Store unused reagents and dispose of wastes as required by relevant regulations and codes. 13. Clean and store equipment 14. Calibrate equipment as per lab quality assurance plan.

	<ol style="list-style-type: none">15. Run blank sample accordingly.16. Run Laboratory Control samples as per standard.17. Perform replicate/re-testing as per lab standards.18. Record quality control data as per lab procedure19. Calculate and Note down the Results on analyst workbook.20. Submit the results to lab In-charge21. Clear and restore work area22. Ensure calibration of equipment as per standard requirement.23. Handle distillation unit as per SOP.24. Ensure sample digestion in fume hood as per standard requirement.25. Dispose-off waste as per SOP.26. Handle acids as per MSDS.27. Ensure safety protocols as per standard requirement
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Assessors Judgment Guide

Qualification	National Vocational Certificate level 2 to 5, in Agriculture Sector (Soil, water and fertilizer testing lab technician)
Competency Standard(s)	Perform nitrate-N in solid, liquid and mixed fertilizer by kjeldahl method
Candidate Details	Name ----- Registration/Roll Number:----- Signature: -----
Assessment Outcome	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

Assessment Task		Determine nitrate nitrogen in fertilizer sample Step 1: Process and distillate fertilizer sample for titration Step 2: Titrate and calculate results for the distillates.			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks	
1.	Checked sample label for required test.				
2.	Maintained Laboratory room temperature as per requirement.				
3.	Checked for availability of N standard as per requirement.				
4.	Set up KJELDAHL apparatus and reagents in accordance with the standard work instructions.				
5.	Conducted pre-used and safety checks.				
6.	Weighed accurately required amount of				

	sample as required.			
7.	Digest sample on digestion block and make volume as per standard procedure.			
8.	Process sample as per standard distillation method.			
9.	Process sample as per standard titration method.			
10.	Analyze three replicates as per standard requirement.			
11.	Perform calculations according to SOP.			
12.	Store unused reagents and dispose of wastes as required by relevant regulations and codes.			
13.	Clean and store equipment			
14.	Calibrate equipment as per lab quality assurance plan.			
15.	Run blank sample accordingly.			
16.	Run Laboratory Control samples as per standard.			
17.	Perform replicate/re-testing as per lab standards.			
18.	Record quality control data as per lab procedure			
19.	Calculate and Note down the Results on analyst workbook.			
20.	Submit the results to lab In-charge			
21.	Clear and restore work area			
22.	Ensure calibration of equipment as per standard requirement.			
23.	Handle distillation unit as per SOP.			
24.	Ensure sample digestion in fume hood as per standard requirement.			
25.	Dispose-off waste as per SOP.			
26.	Handle acids as per MSDS.			
27.	Ensure safety protocols as per standard requirement			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Feedback to the Candidate

Candidate's Signature----- Assessor's Signature -----