

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 Ammonical Nitrogen In <i>Solid, Liquid</i> and Mixed Fertilizer By Kjeldahl Method
Assessment Task	Determine the Ammonical nitrogen in the fertilizer sample a) Process and prepare fertilizer sample for distillation b) Titrate the obtained distillates and calculate the results

I can.....

Performance Criteria	Yes	No
1. Check sample label for required test.	<input type="checkbox"/>	<input type="checkbox"/>
2. Maintain the 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 as per standard procedure.	<input type="checkbox"/>	<input type="checkbox"/>
8. Make up volume after digestion as per standard protocol.	<input type="checkbox"/>	<input type="checkbox"/>
9. Place volumetric flask on receiver containing boric acid and bromocresol green indicator	<input type="checkbox"/>	<input type="checkbox"/>
10. Collect distillate using digested sample through standard distillation process.	<input type="checkbox"/>	<input type="checkbox"/>
11. Titrate against standardized acid solution as per standard testing method.	<input type="checkbox"/>	<input type="checkbox"/>
12. Analyze three replicates.	<input type="checkbox"/>	<input type="checkbox"/>

13. Calibrate equipment as per lab quality assurance plan.	<input type="checkbox"/>	<input type="checkbox"/>
14. Run blank sample accordingly.	<input type="checkbox"/>	<input type="checkbox"/>
15. Run Laboratory Control samples as per standard.	<input type="checkbox"/>	<input type="checkbox"/>
16. Perform replicate/re-testing as per lab standards.	<input type="checkbox"/>	<input type="checkbox"/>
17. Record quality control data as per lab procedure.	<input type="checkbox"/>	<input type="checkbox"/>
18. Calculate and Note down the Results on analyst workbook.	<input type="checkbox"/>	<input type="checkbox"/>
19. Submit the results to lab In-charge	<input type="checkbox"/>	<input type="checkbox"/>
20. Clear and restore work area.	<input type="checkbox"/>	<input type="checkbox"/>
21. Ensure calibration of equipment as per standard requirement.	<input type="checkbox"/>	<input type="checkbox"/>
22. Handle distillation unit as per SOP.	<input type="checkbox"/>	<input type="checkbox"/>
23. Ensure sample digestion in fume hood as per standard requirement.	<input type="checkbox"/>	<input type="checkbox"/>
24. Dispose-off waste as per SOP.	<input type="checkbox"/>	<input type="checkbox"/>
25. Handle acids as per MSDS.	<input type="checkbox"/>	<input type="checkbox"/>
26. Ensure safety protocols as per standard requirement.	<input type="checkbox"/>	<input type="checkbox"/>

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 Ammonical Nitrogen In <i>Solid, Liquid</i> and Mixed Fertilizer By Kjeldahl Method
Candidate Details	
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 soil Ammonical nitrogen in fertilizer sample</p> <ol style="list-style-type: none"> a) Process and prepare fertilizer sample for distillation b) Titrate the obtained distillates and calculate the results
Time:240 Mins	<p>During a practical assessment, under observation by an assessor, you are required to</p> <p>Determine soil Ammonical nitrogen in fertilizer sample</p> <ol style="list-style-type: none"> 1. Process and prepare fertilizer sample for distillation 2. Titrate the obtained distillates and calculate the results.
Minimum Evidence Required	<p>Demonstrate the following criteria:</p> <p>Process and prepare fertilizer sample for distillation</p> <ol style="list-style-type: none"> 1. Check sample label for required test. 2. Maintain the 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 as per standard procedure. 8. Make up volume after digestion as per standard protocol. 9. Place volumetric flask on receiver containing boric acid and bromocresol green indicator

	<p>Titrate the obtained distillates and calculate the results.</p> <ol style="list-style-type: none"> 10. Collect distillate using digested sample through standard distillation process. 11. Titrate against standardized acid solution as per standard testing method. 12. Analyze three replicates. 13. Calibrate equipment as per lab quality assurance plan. 14. Run blank sample accordingly. 15. Run Laboratory Control samples as per standard. 16. Perform replicate/re-testing as per lab standards. 17. Record quality control data as per lab procedure. 18. Calculate and Note down the Results on analyst workbook. 19. Submit the results to lab In-charge 20. Clear and restore work area. 21. Ensure calibration of equipment as per standard requirement. 22. Handle distillation unit as per SOP. 23. Ensure sample digestion in fume hood as per standard requirement. 24. Dispose-off waste as per SOP. 25. Handle acids as per MSDS. 26. 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 Ammonical Nitrogen In <i>Soild, Liquid</i> and Mixed Fertilizer By Kjeldahl Method
Candidate Details	Name: _____ Registration/Roll Number: _____ Signature: _____
Assessment Outcome	<div style="display: flex; justify-content: space-around; align-items: center;"> COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> </div> 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 soil Ammonical nitrogen in fertilizer sample a) Process and prepare fertilizer sample for distillation b) Titrate the obtained distillates and calculate the results			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Checked sample label for required test.			
2.	Maintained the 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-use and safety checks.			
6.	Weigh accurately required amount of sample as required.			
7.	Digested sample on digestion block as per standard procedure.			
8.	Made up volume after digestion as per standard protocol.			
9.	Placed volumetric flask on receiver containing boric acid and bromocresol green indicator			
10	Collected distillate using digested sample through standard distillation process.			
11	Titrated against standardized acid solution as per standard testing method.			
12	Analyzed three replicates.			
13	Calibrated equipment as per lab quality assurance plan.			

14	Run blank sample accordingly.			
15	Run Laboratory Control samples as per standard.			
16	Performed replicate/re-testing as per lab standards.			
17	Recorded quality control data as per lab procedure.			
18	Calculated and Note down the Results on analyst workbook.			
19	Submitted the results to lab In-charge			
20	Cleared and restore work area.			
21	Ensured calibration of equipment as per standard requirement.			
22	Handled distillation unit as per SOP.			
23	Ensured sample digestion in fume hood as per standard requirement.			
24	Disposed-off waste as per SOP.			
25	Handled acids as per MSDS.			
26	Ensured 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 _____