

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 available phosphorus in solid, liquid and mixed fertilizer by titrimetric method
Assessment Task	Analysis of the fertilizer sample for phosphorous determination Step 1: Process sample for yellow precipitates for titration for phosphorous determination Step 2: Phase of the prepared precipitates for the analysis of phosphorus using the titrimetric process

I can.....

Performance Criteria	Yes	No
1. Check sample label for the 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 P standard as per requirement.	<input type="checkbox"/>	<input type="checkbox"/>
4. Set up equipment and reagents in accordance with standard work instructions.	<input type="checkbox"/>	<input type="checkbox"/>
5. Conduct pre-use and safety checks.	<input type="checkbox"/>	<input type="checkbox"/>
6. Weigh sample in volumetric flask according to requirement.	<input type="checkbox"/>	<input type="checkbox"/>
7. Add concentrated nitric acid and citric acid solution as per standard procedure.	<input type="checkbox"/>	<input type="checkbox"/>
8. Process sample as per standard testing method.	<input type="checkbox"/>	<input type="checkbox"/>
9. Titrate against standardized sulphuric acid solution as per required SOP.	<input type="checkbox"/>	<input type="checkbox"/>
10. Perform test sample replicates as per requirement.	<input type="checkbox"/>	<input type="checkbox"/>
11. Perform calculations according to standard testing method.	<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. Ensure use of Standardized sulphuric acid as per SOP.	<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 workbook.	<input type="checkbox"/>	<input type="checkbox"/>
20. Submit the results to lab In-charge	<input type="checkbox"/>	<input type="checkbox"/>
21. Clear and restore work area.	<input type="checkbox"/>	<input type="checkbox"/>
22. Ensure calibration of required equipment as per standard testing method.	<input type="checkbox"/>	<input type="checkbox"/>
23. Perform dilutions in case of liquid sample before running any batch sample	<input type="checkbox"/>	<input type="checkbox"/>
24. Critically observe the end point	<input type="checkbox"/>	<input type="checkbox"/>
25. Dispose-off waste as per SOP.	<input type="checkbox"/>	<input type="checkbox"/>
26. Handle acids as per MSDS.	<input type="checkbox"/>	<input type="checkbox"/>
27. 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 available phosphorus in solid, liquid and mixed fertilizer by titrimetric 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>Analysis of the fertilizer sample for phosphorous determination Step 1: Process sample for yellow precipitates for titration for phosphorous determination Step 2: Phase of the prepared precipitates for the analysis of phosphorus using the titrimetric process</p>
Time:240 Mins	<p>During a practical assessment, under observation by an assessor, you are required to</p> <p>Analysis of the fertilizer sample for phosphorous determination Step 1: Process sample for yellow precipitates for titration for phosphorous determination Step 2: Phase of the prepared precipitates for the analysis of phosphorus using the titrimetric process</p>
Minimum Evidence Required	<p>Demonstrate the following criteria:</p> <ol style="list-style-type: none"> 1. Check sample label for the required test. 2. Maintain Laboratory room temperature as per requirement. 3. Check for availability of P standard as per requirement. 4. Set up equipment and reagents in accordance with standard work instructions. 5. Conduct pre-use and safety checks. 6. Weigh sample in volumetric flask according to requirement. 7. Add concentrated nitric acid and citric acid solution as per standard procedure. 8. Process sample as per standard testing method. 9. Titrate against standardized sulphuric acid solution as per required SOP. 10. Perform test sample replicates as per requirement. 11. Perform calculations according to standard testing method. 12. Store unused reagents and dispose of wastes as required by relevant regulations and codes. 13. Clean and store equipment 14. Ensure use of Standardized sulphuric acid as per SOP.

	<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 area.22. Ensure calibration of required equipment as per standard testing method.23. Perform dilutions in case of liquid sample before running any batch sample24. Critically observe the end point25. 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 available phosphorus in solid, liquid and mixed fertilizer by titrimetric 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	
	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Nature of Activity							
Practical Skill Demonstration			✓				
Knowledge Assessment		✓					
Other Requirement							

Observation Checklist

Assessment Task	Analysis of the fertilizer sample for phosphorous determination Step 1: Process sample for yellow precipitates for titration for phosphorous determination Step 2: Phase of the prepared precipitates for the analysis of phosphorus using the titrimetric process				
During the practical assessment, candidate demonstrated the following:			Yes	No	Remarks
1.	Checked sample label for the required test.				
2.	Maintained Laboratory room temperature as per requirement.				
3.	Checked for availability of P standard as per requirement.				
4.	Set up equipment and reagents in accordance with standard work instructions.				
5.	Conducted pre-use and safety checks.				

6.	Weighed sample in volumetric flask according to requirement.			
7.	Added concentrated nitric acid and citric acid solution as per standard procedure.			
8.	Processed sample as per standard testing method.			
9.	Titrated against standardized sulphuric acid solution as per required SOP.			
10	Performed test sample replicates as per requirement.			
11	Performed calculations according to standard testing method.			
12	Stored unused reagents and dispose of wastes as required by relevant regulations and codes.			
13	Cleaned and store equipment			
14	Ensured use of Standardized sulphuric acid as per SOP.			
15	Run blank sample accordingly.			
16	Run Laboratory Control samples as per standard.			
17	Performed replicate/re-testing as per lab standards.			
18	Recorded quality control data as per lab procedure			
19	Calculated and Note down the Results on analyst workbook.			
20	Submitted the results to lab In-charge			
21	Cleared and restored work area.			
22	Ensured calibration of required equipment as per standard testing method.			
23	Performed dilutions in case of liquid sample before running any batch sample			
24	Critically observed the end point			
25	Disposed-off waste as per SOP.			
26	Handled acids as per MSDS.			
27	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 -----