

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 Calcium & Magnesium test of water by Titrimetric Method
Assessment Task	Perform water sample analysis for calcium and magnesium determination utilizing EDTA test.

I can.....

Performance Criteria	Yes	No
1. Check sample label for required test	<input type="checkbox"/>	<input type="checkbox"/>
2. Keep sample at required temperature	<input type="checkbox"/>	<input type="checkbox"/>
3. Ensure availability of standard solutions according to test procedure	<input type="checkbox"/>	<input type="checkbox"/>
4. Set equipment according to test requirement	<input type="checkbox"/>	<input type="checkbox"/>
5. Wash all glassware as per lab procedure	<input type="checkbox"/>	<input type="checkbox"/>
6. Standardize EDTA solution with specified work instructions	<input type="checkbox"/>	<input type="checkbox"/>
7. Conduct pre-use and safety checks	<input type="checkbox"/>	<input type="checkbox"/>
8. Take sample in titration flask according to test procedure	<input type="checkbox"/>	<input type="checkbox"/>
9. Add NaOH normal solution according to test procedure	<input type="checkbox"/>	<input type="checkbox"/>
10. Add indicator according to test procedure	<input type="checkbox"/>	<input type="checkbox"/>
11. Titrate it against EDTA till end point according to prescribed procedure	<input type="checkbox"/>	<input type="checkbox"/>
12. Calculate end results according to defined procedure	<input type="checkbox"/>	<input type="checkbox"/>
13. Take sample in titration flask according to test procedure	<input type="checkbox"/>	<input type="checkbox"/>

14. Add ammonia buffer according to test procedure	<input type="checkbox"/>	<input type="checkbox"/>
15. Add indicator according to test procedure	<input type="checkbox"/>	<input type="checkbox"/>
16. Titrate it against EDTA till end point according to prescribed procedure	<input type="checkbox"/>	<input type="checkbox"/>
17. Calculate end results according to defined procedure	<input type="checkbox"/>	<input type="checkbox"/>
18. Standardize EDTA as per lab quality assurance plan	<input type="checkbox"/>	<input type="checkbox"/>
19. Run blank sample accordingly	<input type="checkbox"/>	<input type="checkbox"/>
20. Run Laboratory Control samples as per standard	<input type="checkbox"/>	<input type="checkbox"/>
21. Perform replicate/re-testing as per lab standards	<input type="checkbox"/>	<input type="checkbox"/>
22. Record quality control data as per lab procedure	<input type="checkbox"/>	<input type="checkbox"/>
23. Note down Results on analyst workbook	<input type="checkbox"/>	<input type="checkbox"/>
24. Record the results on result record form and submit to reporting section	<input type="checkbox"/>	<input type="checkbox"/>
25. Clear and restore work area	<input type="checkbox"/>	<input type="checkbox"/>
26. Maintain pH of sample at required value	<input type="checkbox"/>	<input type="checkbox"/>
27. Store buffer solution according to procedural requirement	<input type="checkbox"/>	<input type="checkbox"/>
28. Use acids as per MSDS	<input type="checkbox"/>	<input type="checkbox"/>
29. Ensure safety protocols for required procedure	<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 Calcium & Magnesium test of water by Titrimetric 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>Perform water sample analysis for calcium and magnesium determination utilizing EDTA test.</p>
Time:240 Mins	<p>During a practical assessment, under observation by an assessor, you are required to</p> <p>Perform water sample analysis for calcium and magnesium determination utilizing EDTA test.</p> <p>Demonstrate the following criteria:</p> <ol style="list-style-type: none"> 1. Check sample label for required test 2. Keep sample at required temperature 3. Ensure availability of standard solutions according to test procedure 4. Set equipment according to test requirement 5. Wash all glassware as per lab procedure 6. Standardize EDTA solution with specified work instructions 7. Conduct pre-use and safety checks 8. Take sample in titration flask according to test procedure 9. Add NaOH normal solution according to test procedure 10. Add indicator according to test procedure

Minimum Evidence Required	<ol style="list-style-type: none"> 11. Titrate it against EDTA till end point according to prescribed procedure 12. Calculate end results according to defined procedure 13. Take sample in titration flask according to test procedure 14. Add ammonia buffer according to test procedure 15. Add indicator according to test procedure 16. Titrate it against EDTA till end point according to prescribed procedure 17. Calculate end results according to defined procedure 18. Standardize EDTA as per lab quality assurance plan 19. Run blank sample accordingly 20. Run Laboratory Control samples as per standard 21. Perform replicate/re-testing as per lab standards 22. Record quality control data as per lab procedure 23. Note down Results on analyst workbook 24. Record the results on result record form and submit to reporting section 25. Clear and restore work area 26. Maintain pH of sample at required value 27. Store buffer solution according to procedural requirement 28. Use acids as per MSDS 29. Ensure safety protocols for required procedure
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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 Calcium & Magnesium test of water by Titrimetric 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 YETCOMPETENT <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		Perform water sample analysis for calcium and magnesium determination utilizing EDTA test.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Checked sample label for required test			
2.	Kept sample at required temperature			
3.	Ensured availability of standard solutions according to test procedure			
4.	Set equipment according to test requirement			
5.	Washed all glassware as per lab procedure			
6.	Standardized EDTA solution with specified work instructions			
7.	Conducted pre-use and safety checks			
8.	Took sample in titration flask according to test procedure			
9.	Added NaOH normal solution according to test procedure			
10	Added indicator according to test procedure			
11	Titrate it against EDTA till end point according to prescribed procedure			
12	Calculated end results according to defined procedure			
13	Took sample in titration flask according to test procedure			
14	Added ammonia buffer according to test procedure			
15	Added indicator according to test procedure			
16	Titrate it against EDTA till end point according to prescribed procedure			
17	Calculated end results according to defined			

	procedure			
18	Standardized EDTA as per lab quality assurance plan			
19	Run blank sample accordingly			
20	Run Laboratory Control samples as per standard			
21	Performed replicate/re-testing as per lab standards			
22	Recorded quality control data as per lab procedure			
23	Noted down Results on analyst workbook			
24	Recorded the results on result record form and submit to reporting section			
25	Cleared and restore work area			
26	Maintained pH of sample at required value			
27	Stored buffer solution according to procedural requirement			
28	Used acids as per MSDS			
29	Ensured safety protocols for required procedure			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Feedback to the Candidate

Candidate's Signature _____ Assessor's Signature _____