

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	Prepare Solutions
Assessment Task	Prepare working standards and stock solutions to test soil, water and fertilizer samples

I can.....

Performance Criteria	Yes	No
1. Follow safety precautions to handle laboratory equipment and harmful chemicals	<input type="checkbox"/>	<input type="checkbox"/>
2. Use relevant laboratory glassware and equipment as per requirement of specific test	<input type="checkbox"/>	<input type="checkbox"/>
3. Clean and re-place glassware and equipment as per SOPs	<input type="checkbox"/>	<input type="checkbox"/>
4. Arrange apparatus and chemicals required for preparation of standard solutions (Molar or Normal) as per requirement.	<input type="checkbox"/>	<input type="checkbox"/>
5. Perform calculation for preparation of standard solution according to procedure.	<input type="checkbox"/>	<input type="checkbox"/>
6. Make standard solution as per test procedure.	<input type="checkbox"/>	<input type="checkbox"/>
7. Standardize prepared solution as per requirement.	<input type="checkbox"/>	<input type="checkbox"/>
8. Determine concentration of unknown solutions using standard formula	<input type="checkbox"/>	<input type="checkbox"/>
9. Label prepared solution as per protocol.	<input type="checkbox"/>	<input type="checkbox"/>
10. Store prepared solution as per SOP.	<input type="checkbox"/>	<input type="checkbox"/>
11. Maintain records in lab log books as per lab format	<input type="checkbox"/>	<input type="checkbox"/>
12. Arrange apparatus and chemicals required for preparation of stock solutions as per requirement.	<input type="checkbox"/>	<input type="checkbox"/>
13. Perform calculation using formula according to	<input type="checkbox"/>	<input type="checkbox"/>

procedure.		
14. Make stock solution (ppm) as per test procedure.	<input type="text"/>	<input type="text"/>
15. Handle prepared solution as per protocol.	<input type="text"/>	<input type="text"/>
16. Store prepared solution as per SOP.	<input type="text"/>	<input type="text"/>
17. Maintain records in lab log books as per lab format	<input type="text"/>	<input type="text"/>
18. Identify standard protocol for making the solutions as per given procedure	<input type="text"/>	<input type="text"/>
19. Arrange laboratory equipment required for specific test.	<input type="text"/>	<input type="text"/>
20. Arrange reagents for preparation of specific solution as per procedures of different tests.	<input type="text"/>	<input type="text"/>
21. Prepare working solutions of specified dilutions as per test method.	<input type="text"/>	<input type="text"/>
22. Prepare labels and record in laboratory registers as per format.	<input type="text"/>	<input type="text"/>
23. Label and store the solutions as per lab protocol	<input type="text"/>	<input type="text"/>
24. Check shelf life of prepared solutions as per standard method.	<input type="text"/>	<input type="text"/>
25. Conduct analysis for ensuring their concentration as per lab procedure.	<input type="text"/>	<input type="text"/>
26. Label the solution with concentration and date of monitoring using lab protocol.	<input type="text"/>	<input type="text"/>
27. Maintain records as per lab procedure.	<input type="text"/>	<input type="text"/>
28. Discard outdated solutions according to lab-waste disposal description	<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)	Prepare Solutions
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>Prepare working standards and stock solutions to test soil, water and fertilizer samples</p>
Time:240 Mins	<p>During a practical assessment, under observation by an assessor, you are required to</p> <p>Prepare working standards and stock solutions to test soil, water and fertilizer samples</p> <p>Demonstrate the following criteria:</p> <ol style="list-style-type: none"> 1. Follow safety precautions to handle laboratory equipment and harmful chemicals 2. Use relevant laboratory glassware and equipment as per requirement of specific test 3. Clean and re-place glassware and equipment as per SOPs 4. Arrange apparatus and chemicals required for preparation of standard solutions (Molar or Normal) as per requirement. 5. Perform calculation for preparation of standard solution according to procedure. 6. Make standard solution as per test procedure.

Minimum Evidence Required	7. Standardize prepared solution as per requirement. 8. Determine concentration of unknown solutions using standard formula 9. Label prepared solution as per protocol. 10. Store prepared solution as per SOP. 11. Maintain records in lab log books as per lab format 12. Arrange apparatus and chemicals required for preparation of stock solutions as per requirement. 13. Perform calculation using formula according to procedure. 14. Make stock solution (ppm) as per test procedure. 15. Handle prepared solution as per protocol. 16. Store prepared solution as per SOP. 17. Maintain records in lab log books as per lab format 18. Identify standard protocol for making the solutions as per given procedure 19. Arrange laboratory equipment required for specific test. 20. Arrange reagents for preparation of specific solution as per procedures of different tests. 21. Prepare working solutions of specified dilutions as per test method. 22. Prepare labels and record in laboratory registers as per format. 23. Label and store the solutions as per lab protocol 24. Check shelf life of prepared solutions as per standard method. 25. Conduct analysis for ensuring their concentration as per lab procedure. 26. Label the solution with concentration and date of monitoring using lab protocol. 27. Maintain records as per lab procedure. 28. Discard outdated solutions according to lab-waste disposal description
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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)	Prepare Solutions
Candidate Details	Name: _____ Registration/Roll Number: _____ Signature: _____
Assessment Outcome	<div style="display: flex; justify-content: space-between; align-items: center;"> <div> COMPETENT <input type="checkbox"/> </div> <div> NOT YET COMPETENT <input type="checkbox"/> </div> </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	Prepare working standards and stock solutions to test soil, water and fertilizer samples			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Followed safety precautions to handle laboratory equipment and harmful chemicals			
2.	Used relevant laboratory glassware and equipment as per requirement of specific test			
3.	Cleaned and re-place glassware and equipment as per SOPs			
4.	Arranged apparatus and chemicals required for preparation of standard solutions (Molar or Normal) as per requirement.			
5.	Performed calculation for preparation of standard solution according to procedure.			
6.	Made standard solution as per test procedure.			
7.	Standardized prepared solution as per requirement.			
8.	Determined concentration of unknown solutions using standard formula			
9.	Labeled prepared solution as per protocol.			
10.	Stored prepared solution as per SOP.			
11.	Maintained records in lab log books as per lab format			
12.	Arranged apparatus and chemicals required for preparation of stock solutions as per requirement.			

13	Performed calculation using formula according to procedure.			
14	Made stock solution (ppm) as per test procedure.			
15	Handled prepared solution as per protocol.			
16	Stored prepared solution as per SOP.			
17	Maintained records in lab log books as per lab format			
18	Identified standard protocol for making the solutions as per given procedure			
19	Arranged laboratory equipment required for specific test.			
20	Arranged reagents for preparation of specific solution as per procedures of different tests.			
21	Prepared working solutions of specified dilutions as per test method.			
22	Prepared labels and record in laboratory registers as per format.			
23	Labeled and store the solutions as per lab protocol			
24	Checked shelf life of prepared solutions as per standard method.			
25	Conducted analysis for ensuring their concentration as per lab procedure.			
26	Labeled the solution with concentration and date of monitoring using lab protocol.			
27	Maintained records as per lab procedure.			
28	Discarded outdated solutions according to lab-waste disposal description			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Feedback to the Candidate

Candidate's Signature_____	Assessor's Signature_____