

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 Soil Micronutrient Test
Assessment Task	Analyse sample to determine soil micronutrients Step 1: Prepare micronutrient working standards and calibrate the AAS Step 2: Process soil sample for analysis on AAS and calculation of results as per standard protocol

I can.....

Performance Criteria	Yes	No
1. Check the sample label for the required test.	<input type="checkbox"/>	<input type="checkbox"/>
2. Maintain the Laboratory room temperature as per requirement.	<input type="checkbox"/>	<input type="checkbox"/>
3. Arrange equipment and safety requirements as per standard method.	<input type="checkbox"/>	<input type="checkbox"/>
4. Set up equipment 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. Take required amount of soil as per recommended procedure.	<input type="checkbox"/>	<input type="checkbox"/>
7. Add recommended amount of extracting solution and allow shaking as per standard method.	<input type="checkbox"/>	<input type="checkbox"/>
8. Filter solution to obtain clean filtrate as per standard procedure.	<input type="checkbox"/>	<input type="checkbox"/>
9. Prepare micronutrients (Zn, Cu, Fe, Mn) standards as per requirement.	<input type="checkbox"/>	<input type="checkbox"/>
10. Observe reading separately for each parameter on Atomic Absorption Spectrophotometer as per standard method	<input type="checkbox"/>	<input type="checkbox"/>
11. Turn on instrument as per operating manual.	<input type="checkbox"/>	<input type="checkbox"/>
12. Run blank sample accordingly.	<input type="checkbox"/>	<input type="checkbox"/>
13. Run Laboratory Control samples as per standard.	<input type="checkbox"/>	<input type="checkbox"/>
14. Perform replicate/re-testing as per lab standards.	<input type="checkbox"/>	<input type="checkbox"/>
15. Record quality control data as per lab procedure.	<input type="checkbox"/>	<input type="checkbox"/>
16. Calibrate instrument using metal standards as per procedure	<input type="checkbox"/>	<input type="checkbox"/>

17. Calculate soil micronutrients using standard formula.	<input type="text"/>	<input type="text"/>
18. Submit the results to lab In-charge	<input type="text"/>	<input type="text"/>
19. Clear and restore work area	<input type="text"/>	<input type="text"/>
20. Ensure calibration of equipment as per standard method.	<input type="text"/>	<input type="text"/>
21. Use clean and good quality glassware as per standard method	<input type="text"/>	<input type="text"/>
22. Always prepare fresh working standards for accurate results.	<input type="text"/>	<input type="text"/>
23. Ensure safety protocols as per standard method	<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 Soil Micronutrient Test
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>Analyze sample to determine soil micronutrients Step 1: Prepare micronutrient working standards and calibrate the AAS Step 2: Process soil sample for analysis on AAS and calculation of results as per standard protocol</p>
Time:240 Mins	<p>During a practical assessment, under observation by an assessor, you are required to</p> <p>Analyze sample to determine soil micronutrients Step 1: Prepare micronutrient working standards and calibrate the AAS Step 2: Process soil sample for analysis on AAS and calculation of results as per standard protocol</p>
Minimum Evidence Required	<p>Demonstrate the following criteria:</p> <ol style="list-style-type: none"> 1. Check the sample label for the required test. 2. Maintain the Laboratory room temperature as per requirement. 3. Arrange equipment and safety requirements as per standard method. 4. Set up equipment in accordance with the standard work instructions. 5. Conduct pre-use and safety checks 6. Take required amount of soil as per recommended procedure. 7. Add recommended amount of extracting solution and allow shaking as per standard method. 8. Filter solution to obtain clean filtrate as per standard procedure. 9. Prepare micronutrients (Zn, Cu, Fe, Mn) standards as per requirement. 10. Observe reading separately for each parameter on Atomic Absorption Spectrophotometer as per standard method 11. Turn on instrument as per operating manual. 12. Run blank sample accordingly. 13. Run Laboratory Control samples as per standard. 14. Perform replicate/re-testing as per lab standards.

	<ol style="list-style-type: none">15. Record quality control data as per lab procedure.16. Calibrate instrument using metal standards as per procedure17. Calculate soil micronutrients using standard formula.18. Submit the results to lab In-charge19. Clear and restore work area20. Ensure calibration of equipment as per standard method.21. Use clean and good quality glassware as per standard method22. Always prepare fresh working standards for accurate results.23. Ensure safety protocols as per standard method
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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 Soil Micronutrient Test
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	Analyse sample to determine soil micronutrients Step 1: Prepare micronutrient working standards and calibrate the AAS Step 2: Process soil sample for analysis on AAS and calculation of results as per standard protocol				
During the practical assessment, candidate demonstrated the following:			Yes	No	Remarks
1.	Checked the sample label for the required test.				
2.	Maintained the Laboratory room temperature as per requirement.				
3.	Arranged equipment and safety requirements as per standard method.				
4.	Set up equipment in accordance with the standard work instructions.				
5.	Conducted pre-use and safety checks				

6.	Took required amount of soil as per recommended procedure.			
7.	Added recommended amount of extracting solution and allow shaking as per standard method.			
8.	Filtered solution to obtain clean filtrate as per standard procedure.			
9.	Prepared micronutrients (Zn, Cu, Fe, Mn) standards as per requirement.			
10.	Observed reading separately for each parameter on Atomic Absorption Spectrophotometer as per standard method			
11.	Turned on instrument as per operating manual.			
12.	Run blank sample accordingly.			
13.	Run Laboratory Control samples as per standard.			
14.	Performed replicate/re-testing as per lab standards.			
15.	Recorded quality control data as per lab procedure.			
16.	Calibrated instrument using metal standards as per procedure			
17.	Calculated soil micronutrients using standard formula.			
18.	Submitted the results to lab In-charge			
19.	Cleared and restored work area			
20.	Ensured calibration of equipment as per standard method.			
21.	Used clean and good quality glassware as per standard method			
22.	Always prepared fresh working standards for accurate results.			
23.	Ensured safety protocols as per standard method			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Feedback to the Candidate

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