

Knowledge Assessment

Qualification	National Vocational Certificate level 2 to 5, in Agriculture Sector (Soil, Water and Fertilizer Testing Lab Technician)
Competency Standard	Perform Soil Electrical Conductivity (EC) by EC Meter
Purpose of Assessment	
Candidate Details	Name: _____ Registration/Roll Number: _____ Candidate Signature: _____
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: _____ Assessor's code: _____ Signature of the Assessor: _____

Candidate's response is not required to be identical, but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of topic and its application.

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		Satisfactory	Not Satisfactory
1.	What is Electrical Conductivity?		
2.	Things That Affect Electrical Conductivity of Soil are:		
3.	Why You Should Test Soil EC?		
4.	How To Measure the Bulk EC?		

5.	Care & Maintenance of Your Soil EC Electrode includes:		
6.	What is a good EC for soil?		
7.	Electrolytic conductivity (unlike metallic conductivity) increases at a rate of approximately _____ per degree centigrade increase in temperature		
	<ul style="list-style-type: none"> • 0.9% • 1.9% • 2.9% • 3.9% • None of the above 		

Feedback to the Candidate	
Candidate's Signature _____ Assessor's Signature _____	

Key

National Vocational Certificate level 2 to 5, in **Agriculture Sector (Soil, Water and Fertilizer Testing Lab Technician)**

Perform Soil Electrical Conductivity (EC) by EC Meter

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		Satisfactory	Not Satisfactory
1.	<p>What is Electrical Conductivity?</p> <p>Soil electrical conductivity (EC) is a measure of the amount of salts in soil (salinity of soil). It is an excellent indicator of nutrient availability and loss, soil texture, and available water capacity.</p>		
2.	<p>Things That Affect Electrical Conductivity of Soil are:</p> <ul style="list-style-type: none"> • The most common factors are temperature • Soil type • Its moisture level • Salinity, • Irrigation and • Fertilizers • and the depth of the soil 		
3.	<p>Why You Should Test Soil EC?</p> <p>Testing your soil is all about making sure the nutrients are balanced. Soil electrical conductivity (EC) is a measure of the amount of salts in soil (salinity of soil) which is an excellent indicator of nutrient availability and loss, soil texture, and available water capacity. This helps you to select the right crop for your area and track the nutrients that are available to your crop.</p>		
4.	<p>How To Measure the Bulk EC?</p> <ul style="list-style-type: none"> • Pick your testing location. • Rinse the testing probe with deionized water, and make sure it is dry. • Check the soil and ensure that the soil is moist. • Use a ruler or auger to make a hole in the soil. This keeps the testing depth consistent. • Insert your probe directly into the soil, and take your measurement. 		

5.	Care & Maintenance of Your Soil EC Electrode includes:		
	Proper care and maintenance of your conductivity probe is paramount for accurate readings. Cleaning, calibrating, and appropriate storage will extend the useful life of the probe. Be sure to consider probes that measure more than just EC; the pH portion of the probe will also require care.		
6.	What is a good EC for soil?		
	As with most things in the soil, it is important that the EC does not get too high either, as too many of these nutrients, especially Na and Mg, can be detrimental to soil health. Optimal EC levels in the soil therefore range from 110-570 milliSiemens per meter (mS/m).		
7.	Electrolytic conductivity (unlike metallic conductivity) increases at a rate of approximately _____ per degree centigrade increase in temperature		
	<ul style="list-style-type: none"> • 0.9% • 1.9% • 2.9% • 3.9% • None of the above 		