

Knowledge Assessment

Qualification	National Vocational Certificate level 2 to 5, in Agriculture Sector (Soil, water and fertilizer testing lab technician)
Competency Standard(s)	Prepare Reagents for analysis
Candidate Details	Name: _____ Registration/Roll Number: _____ Candidate Signature: _____ _____
Assessment Outcome	<div style="display: flex; justify-content: space-around; align-items: center;"> COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> </div> 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 are Buffer solutions?		
2.	What are types of Buffer Solutions?		
3.	What are indicators?		

4.	Give some examples of indicators used in water analysis?		
5.	Define Colorimetric reagents?		

Key

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

Prepare Reagents for analysis

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		Satisfactory	Not Satisfactory
1.	What are Buffer solutions?		
	A buffer solution is a solution that only changes slightly when an acid or a base is added to it.		
2.	What are types of Buffer Solutions?		
	Types of Buffer Solutions; Buffers are broadly divided into two types – acidic and alkaline buffer solutions. Acidic buffers are solutions that have a pH below 7 and contain a weak acid and one of its salts. For example, a mixture of acetic acid and sodium acetate acts as a buffer solution with a pH of about 4.75		
3.	What are indicators?		
	Indicators are chemical compounds that tell us whether a substance is acidic or basic by changing its colour. When added to an acidic solution or a basic solution, indicators change their colour and this change in colour is different for the acids and bases.		
4.	Give some examples of indicators used in water analysis?		
	Eriochrome black T, Patton & Reader and Murexide		
5.	Define Colorimetric reagents?		
	In chemistry, a colorimetric reagent that is used to transform colorless chemical compounds into colored derivatives which can be detected visually or with the aid of a colorimeter.		