

Instruction Sheet for the Candidate

Qualification	National Vocational Certificate in Metal Forming & Processing Level 5
Competency Standard	Perform Handheld XRF Analysis
Purpose of Assessment	Formative Assessment
Candidate Details	Name _____ Registration/Roll Number _____
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within 04 Hrs. time frame (for practical demonstration & assessment):</p> <ul style="list-style-type: none"> • CU1. Prepare the Sample • CU2. Perform Calibration and standardization • CU3. Perform the Test on XRF Machine
Time: 04 Hrs.	During a practical assessment, under observation by an assessor, you are required to
Minimum Evidence Required	<p>CU1. Prepare the Sample</p> <p>P1. Clean the surface of sample with emery paper to remove rust</p> <p>P2. Make the surface of sample smooth and flat</p> <p>P3. Resin the sample with water</p> <p>P4. Clean with alcohol</p> <p>CU2. Perform Calibration and standardization</p> <p>P1. Charge the external battery</p> <p>P2. Energize the XRF gun</p> <p>P3. Open the analytical software of the XRF gun</p> <p>P4. Clean calibration block with alcohol</p> <p>P5. Apply the lubricant on the calibration block</p> <p>P6. Place XRF gun on calibration block</p> <p>P7. Press the XRF gun trigger to start calibration</p> <p>P8. Record and compare the results with calibration certificate</p> <p>CU3. Perform the Test on XRF Machine</p> <p>P1. Charge the extra batteries of gun</p> <p>P2. Energized the XRF gun</p>

	<p>P3. Open the analytical software of the XRF gun</p> <p>P4. Apply the lubricant on the sample surface</p> <p>P5. Place the XRF gun on the sample surface</p> <p>P6. Press the XRF gun trigger to start analysis</p> <p>P7. Evaluate and record the results</p> <p>P8. Print the results</p> <p>P9. Shut down the software</p> <p>P10. Place the XRF gun at designated station after the test</p>
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Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	National Vocational Certificate in Metal Forming & Processing Level 5
Competency Standard	Perform Handheld XRF Analysis
Purpose of Assessment	Formative Assessment
Assessment Task	<ul style="list-style-type: none"> • CU1. Prepare the Sample • CU2. Perform Calibration and standardization • CU3. Perform the Test on XRF Machine

I can.....

Performance Criteria	Yes	No
P1. Clean the surface of sample with emery paper to remove rust	<input type="checkbox"/>	<input type="checkbox"/>
P2. Make the surface of sample smooth and flat	<input type="checkbox"/>	<input type="checkbox"/>
P3. Resin the sample with water	<input type="checkbox"/>	<input type="checkbox"/>
P4. Clean with alcohol	<input type="checkbox"/>	<input type="checkbox"/>
P5. Charge the external battery	<input type="checkbox"/>	<input type="checkbox"/>
P6. Energize the XRF gun	<input type="checkbox"/>	<input type="checkbox"/>
P7. Open the analytical software of the XRF gun	<input type="checkbox"/>	<input type="checkbox"/>
P8. Clean calibration block with alcohol	<input type="checkbox"/>	<input type="checkbox"/>
P9. Apply the lubricant on the calibration block	<input type="checkbox"/>	<input type="checkbox"/>
P10. Place XRF gun on calibration block	<input type="checkbox"/>	<input type="checkbox"/>
P11. Press the XRF gun trigger to start calibration	<input type="checkbox"/>	<input type="checkbox"/>
P12. Record and compare the results with calibration certificate	<input type="checkbox"/>	<input type="checkbox"/>
P13. Charge the extra batteries of gun	<input type="checkbox"/>	<input type="checkbox"/>
P14. Energized the XRF gun	<input type="checkbox"/>	<input type="checkbox"/>
P15. Open the analytical software of the XRF gun	<input type="checkbox"/>	<input type="checkbox"/>
P16. Apply the lubricant on the sample surface	<input type="checkbox"/>	<input type="checkbox"/>
P17. Place the XRF gun on the sample surface	<input type="checkbox"/>	<input type="checkbox"/>
P18. Press the XRF gun trigger to start analysis	<input type="checkbox"/>	<input type="checkbox"/>
P19. Evaluate and record the results	<input type="checkbox"/>	<input type="checkbox"/>

P20. Print the results	<input type="text"/>	<input type="text"/>
P21. Shut down the software	<input type="text"/>	<input type="text"/>
P22. Place the XRF gun at designated station after the test	<input type="text"/>	<input type="text"/>

Candidate's Signature_____ Assessor's Signature_____

Date: _____

Assessors Judgment Guide

Qualification	National Vocational Certificate in Metal Forming & Processing Level 5
Competency Standard	Perform Handheld XRF Analysis
Purpose of Assessment	Formative Assessment
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		<ul style="list-style-type: none"> • CU1. Prepare the Sample • CU2. Perform Calibration and standardization • CU3. Perform the Test on XRF Machine 		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Clean the surface of sample with emery paper to remove rust			
2.	Make the surface of sample smooth and flat			
3.	Resin the sample with water			
4.	Clean with alcohol			
5.	Charge the external battery			
6.	Energize the XRF gun			
7.	Open the analytical software of the XRF gun			
8.	Clean calibration block with alcohol			
9.	Apply the lubricant on the calibration block			
10.	Place XRF gun on calibration block			
11.	Press the XRF gun trigger to start calibration			
12.	Record and compare the results with calibration certificate			
13.	Charge the extra batteries of gun			
14.	Energized the XRF gun			
15.	Open the analytical software of the XRF gun			
16.	Apply the lubricant on the sample surface			
17.	Place the XRF gun on the sample surface			
18.	Press the XRF gun trigger to start analysis			

19.	Evaluate and record the results			
20.	Print the results			
21.	Shut down the software			
22.	Place the XRF gun at designated station after the test			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Knowledge Assessment

Qualification	National Vocational Certificate in Metal Forming & Processing Level 5
Competency Standard	Perform Handheld XRF Analysis
Purpose of Assessment	Formative Assessment
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 elements can Handheld XRF detect?		
2.	What elements can XRF detect?		
3.	How accurate is XRF?		

4.	Can XRF detect all elements?		
5.	What are the benefits of using a portable XRF machine?		
6.	Can XRF detect carbon?		

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