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## FOREWORD

These specifications have been prepared by Rural Electrification & Renewable Energy Corporation (REREC) in collaboration with experts in the sector. The specifications spell out the Minimum Technical requirements for the equipment.

It is the responsibility of the supplier to ensure that the offered design is of the highest quality and guarantees excellent service to REREC. The supplier shall submit information which confirms satisfactory service experience with products which fall within this scope of specification.

## 1.0 SCOPE

This specification is for a XRF bench top spectrometer analyser to be used for determining the CCA (Copper, Chrome and Arsenic) retentions in CCA treated wooden poles to be supplied to and used by Rural Electrification and Renewable Energy Corporation.

## 2.0 APPLICATION

The type of preservatives the instrument should be calibrated and used for should be suitable for measuring AWPA (American Wood Protection Agency (AWPA) Type 'C' CCA Oxide preservative and None Chrome timber preservatives in sawdust samples.

## 3.0 GENERAL REQUIREMENTS

- 3.0.1 **Type:** XRF Spectrometer analyser for analysing CCA treated wooden samples.
- 3.0.2 **Operating Conditions;** Tropical, temperatures of 40°C and humidity of up to 90%.

### 3.1 Features

- Palladium target X-Ray tube.
- High resolution Silicon Drift detector.
- Helium free operation.
- 1 touch operation.
- Internal sample carousel.
- Pre-calibrated for retention of CCA in treated timber and analysis of related solutions.
- Easy to replace secondary safety window.
- Standardizing Unit Samples (SUS's) included for easy and simple instrument drift correction over time without the need for recalibrating.

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- Instrument casing and touch screen chemical and solvent resistant.
- Max 30kV X-Ray tube.
- 3w max power.

### 3.2 Program and Menu

- On-board printer
- Cloud data storage (ExTOPE)
- Data logging and transfer via USB
- 7 inch touch screen and integrated on board processor

### 3.3 Display Language

- English

### 3.4 Manuals and Brochures

- Equipment manual/specification sheets, user guides, operating guide and brochures (all printed in English) shall accompany the offer.

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#### 4. REQUIREMENTS (Guaranteed Technical Particulars)

	<b>Description</b>	<b>Minimum Requirements</b>	<b>Bidders Offer</b>
4.1	Type	Spectrometer Analyzer for analysing CCA treated wooden samples.	Type no..... Manufacturer: .....
4.2	Operating Conditions	Tropical, temperatures of 40°C and humidity of up to 90%.	
4.3	Features	<p>The spectrometer Analyzer shall be supplied complete with all relevant software and accessories and shall provide the following minimum features:</p> <ul style="list-style-type: none"> <li>• Palladium target X-Ray tube (30kV) – 3watt Pmax.</li> <li>• High resolution Silicon Drift detector.</li> <li>• Helium free operation</li> <li>• 1 touch operation</li> <li>• Internal sample carousel</li> <li>• Pre-calibrated for retention of CCA in treated timber and analysis of related solutions</li> <li>• Easy to replace secondary safety window</li> <li>• Standardizing Unit Samples (SUS's) included</li> <li>• USB port</li> <li>• Ethernet Port</li> <li>• External Monitor port</li> <li>• Complete with windows XP computer</li> <li>• Hinged, spring actuated, safety interlocked door.</li> <li>• Large compartment that allows sample spinner and other sampling options.</li> </ul>	

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**TITLE:**  
TECHNICAL SPECIFICATIONS  
FOR SPECTROMETRIC  
ANALYZER - CCA

<b>Doc No.</b>	REREC/RS/TSP/SA01
<b>Issue No.</b>	01
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4.4	Program	Runs all programs such as Internet Explorer for remote control diagnostics	
4.5	Screen/Menu	<ul style="list-style-type: none"><li>• High resolution touch screen</li><li>• Dynamic &amp; Intuitive soft button menu interface</li><li>• Extensive on-screen graphical displays and diagnostics</li></ul>	
4.6	Display Language	English	
4.7	Manuals and Brochures	Equipment manual/specification sheets, user guides, operating guide and brochures (all printed in English) shall accompany the offer.	
4.8	Power Supply	The equipment shall be complete with power supply, connection cables and relevant accessories. The power supply shall be suitable for 230V ac 50Hz.	
4.9	Installation and demonstration	Bidders to offer free installation/demonstration when delivering the package.	
4.10	Warranty	18 Months minimum	
4.11	Certificates	Required with Bid.	

**NB: THE EQUIPMENT SHOULD HAVE COMPLETE SET OF REQUIRED ACCESSORIES, USER MANUAL AND INSTALLATION GUIDE**

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## 5.0 DOCUMENTATION AND TECHNICAL SUPPORT.

### 5.1 TESTING AND INSPECTION

- Copies of previous certificates by the relevant international or national Testing/Standards Authority of the country of manufacture (or ISO/IEC 17025 accredited independent laboratory) shall be submitted with the offer for evaluation (All in English language)

Certificates for the equipment manufactured for REREC shall be submitted to REREC for approval before shipment/delivery.

- On receipt of the Spectrometric Analysers, REREC will inspect them and may perform or have performed any of the relevant tests in order to verify compliance with the specification. The supplier shall replace without charge to REREC, any Spectrometric Analyser which upon examination/Inspection, test of use fail to meet any or all of the requirements in the specification.

### 5.2 MARKING

The following information shall be marked legibly and in a permanent manner on the equipment:

- The manufacturer's name
- The type reference number
- The serial number
- Power supply ratings

All menu keys and other operating keys shall be marked legibly and permanently.

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**Rural**  
Electrification Authority

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Manufacturer should complete the table below and attach the completed form with the bid

ITEM NO	DESCRIPTION	SUPPLIERS RESPONSE
1.	Manufacturer's Name	
2.	Manufacturer's Address	
3	Location of manufacturing Plant and Address, where the Offered Spectrometric Analyzer is to be manufactured	
4	Type/Model of the Spectrometric Analyzer	
5	Numbers of Years that the Manufacturer has been manufacturing the Spectrometric Analyzer	
6	List of at least 5 export customers with contact references	

APPROVED BY: SIGN-----

NAME-----

DESIGNATION-----

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