

**UNIVERSITY OF
JOHANNESBURG**

**TENDER NUMBER
RFP UJ 97 2022 PROCUREMENT
OF A ZETA POTENTIAL
ANALYZER**

SPECIFICATIONS

Specifications

BACKGROUND

The University of Johannesburg has been encouraging research activities in the field of minerals processing, with a specific focus on enhancing the fourth industrial revolution (Industry 4.0). By doing so, it aligns itself with the national research agenda and national development plan. The University has a well-established research centre within the Faculty of Engineering and the Built Environment (FEBE) that focuses on minerals exploration, processing, and advanced materials development.

Although we have other analytical equipment, there is a huge gap in obtaining information on in situ, non-destructive, chemical analysis and zeta potential measurements of complex ores. An advanced high Zeta Potential Analyzer is required for researchers to fully understand the characteristics of their samples. The proposed equipment is state-of-the-art equipment that will complement our Metallurgy Department research facilities for undergraduate and postgraduate students when doing their practical experiments and assist in the detailed characterization of various ores and alloy samples.

DESCRIPTION OF EQUIPMENT AND JUSTIFICATION FOR PROPOSED EQUIPMENT

Zeta potential analyzer: A light-scattering instrument used for characterizing particles in liquid dispersions. It measures particle sizes, zeta potential, electron mobility, molecular mass and transmittance. It can also provide information on multimodal distributions in surface charge for poly-dispersed samples, measure transmittance continuously and provides direct measure turbidity. Thus, it can measure particle sizes in the size range of diameter 0.3nm to 10µm, zeta potentials in the range of +/- 1000mV and molecular masses in the range of 980Da to 20MDa

SPECIFICATIONS: FUNCTION ZETA POTENTIAL ANALYZER			
General: Equipment must be usable, simple but with good performance. The below are its:			
Standard features		Comply / do not Comply	Comments
	sizes in the size range of diameter 0.3nm to 10µm	comply	
	zeta potentials in the range of +/- 1000mV	comply	
	molecular masses in the range of 980Da to 20MDa	comply	
	Software	comply	
	Dosing system	comply	
	Workstation monitor (LCD	comply	



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	Screen)			
	Training once-off		comply	
		Warranty and Services	Mandatory requirement	
	Warranty	3 years	comply	
	Service	Once per year		
	On site technicians to be available if there are problems experienced with the instrument		Labour is included in the 5 year warranty	
	ZETA POTENTIAL ANALYZER			
	Sub Total			
	VAT			
	Final Total			

NB: Delivery Date: 6 Weeks up receiving the PO

Signature of proposer:	
Name and surname:	
Position of proposer:	
Name of company or proposer:	
Date:	