

## SCOPE OF WORK AND TECHNICAL EVALUATION

### 1. Scope of work/supply

A term service contract (short) is required. The following tasks will be done as part of the contract:

Provision of service, maintenance and repairs as well as supply of spares and consumables for Metrohm analytical instruments to all Petroleum and Flow Sciences laboratories as and when required for the period of three (3) years.

- 1.1 Provide Service/Maintenance and calibration on Metrohm analytical instruments for all P&FS Laboratories annually, see list of instruments on table 1 below. Repairs on these instruments will be done as and when required.

Table 1 List of Instruments

Laboratory	Instrument Model	Serial number	Frequency
Seshego	Metrohm 899 Coulometer	1899001011102	3
Bloemfontein	Metrohm 899 Coulometer	1899001002251	3
Bloemfontein	Metrohm 899 Coulometer	1899001011116	3
Brackenfell	Metrohm 899 Coulometer	1899001004173	3
Witbank	Metrohm 831 Coulometer	1831001034239	3
Witbank	Metrohm 684 KF Coulometer	IE9/297	3
Pietermaritzburg	Metrohm 831 Coulometer	1831001016196	3
Pietermaritzburg	Metrohm 899 Coulometer	1899001005201	3
Rotek	Metrohm 831 Coulometer	1831001040389	3
Seshego	Metrohm 785 DMP Titrino	1785001011110	3
Rosherville	Metrohm 899 Coulometer	1899001005206	3

#### 1.1.1 Requirements:

- a. Supplier to provide a report after each service/maintenance/repairs done in each laboratory.
- b. Service/repair agent must respond to the request within 48hrs of purchase order being issued.
- c. Calibration certificate/report must contain minimum information as follows:
  - ✓ Name of the requester,
  - ✓ unique number for the certificate,
  - ✓ address of requester and supplier,
  - ✓ supplier company name,
  - ✓ accreditation number (if accredited),
  - ✓ Serial number of instrument being calibrated,
  - ✓ Summary of status,
  - ✓ Results,
  - ✓ Uncertainty of measurements,
  - ✓ Environmental conditions at the time of calibration,
  - ✓ Date calibrated,
  - ✓ Name and signature of the technician calibrated the instrument
- d. Supplier to provide proof that the instrument used to calibrate Metrohm equipment is calibrated and calibration is traceable to NIST.
- e. If the supplier is not accredited according to ISO 17025 or any other equivalent standard, the following **documents as per SANAS TR 25 section 3.3 in house calibration must be provided:**
  - ✓ A documented and validated calibrated procedure or method;
  - ✓ A calibration certificate or report, or some other suitable method of recording the calibration and measurement data;

- ✓ Appropriate educational and training records to demonstrate the competence of the personnel performing the calibration;
- ✓ Copies of certificates and reports to demonstrate traceability to the SI system of units or RMs;
- ✓ All reference standards and measuring instruments shall be calibrated at appropriate intervals, the facility shall have and apply a documented procedure for establishing these calibration intervals;
- ✓ A documented procedure for the estimation of the measurement uncertainty, which shall be applied for at least each type of calibration. The uncertainty of measurement shall be taken into account when making a statement of compliance;
- ✓ Records to demonstrate the assurance of the calibration results i.e. participation in Inter-Laboratory Comparisons or Proficiency Testing;
- ✓ Documented requirements for environmental conditions, and records where applicable; and
- ✓ Evidence of internal audits of all activities that could influence the quality of calibration results.

## 1.2 Supply of spares and consumables as and when required for a period of three (3) years.

Table 2 List of spares and consumables

Item Number	Item	Description	Dimensions	Estimated quantities in a 3yr period
60229010	Solvotrode Easy clean	Metrohm glass electrode for non-aqueous titrations. pH Scale: 0-14	<b>Type</b> 125mm <b>Length:</b> 12mm <b>Diameter:</b> <b>Measurement range:</b> 0-14 <b>Cable Length:</b> 1m <b>Application:</b> Acid/Base titration and pH measurements <b>Specification:</b> Glass pH probe with <b>Standard:</b>	3
62320000	Electrolyte solution TEABr (tetraethylammonium bromide in ethylene glycol)	Electrolyte solution used to fill glass electrode used for Total acid number application.	<b>Type:</b> <b>Trade name:</b> Tetraethylammonium bromide in ethylene glycol <b>Physical form:</b> Liquid <b>Colour:</b> Clear/colourless <b>Composition:</b> <b>Application:</b> Non-aqueous Acid base titration <b>Container:</b> Plastic <b>Container capacity:</b> 250mL <b>Purity:</b> Analytical grade	18
63026220	Complete 20ml Exchange unit	Plastic unit that holds titrant solution and is mounted on the metrohm titrino series of titrators.	<b>Type:</b> Metrohm type accessory <b>Material:</b> glass & PTFE <b>Capacity:</b> 20mL <b>Power range:</b> 220-240v <b>Power source:</b> Powered by Metrohm titrinos	1

61542020	Flat Stop Cock	Two channel device for filling of burette and dispensing of the solution during titration.	<b>Type:</b> Stop cock <b>Valve type:</b> Switch type <b>Valve size:</b> <b>Pressure rating:</b> <b>Dimensions:</b> <b>Material:</b> <b>Material grade:</b> PTCFE <b>Material specification:</b> <b>Application:</b> <b>Specification:</b> <b>Standard:</b>	1
61543060	TIP/M6 thread tubing	Burette tip for dosing out titrant solution into titration beaker/cell.	<b>Size:</b> 400mm length 2mm inner diameter <b>Connection:</b> treaded ends <b>Material:</b> fluorinated ethylene propylene <b>Grade:</b> Not specified	1
61805010	FEP tubing	Siphon tubing for delivery of titrant solution.	<b>Size:</b> 400mm length 2mm inner diameter <b>Connection:</b> treaded ends <b>Material:</b> fluorinated ethylene propylene <b>Grade:</b> Not specified	1
61805080	FEP tubing	Siphon tubing for delivery of titrant solution.	<b>Size:</b> 130mm length 2mm inner diameter <b>Connection:</b> treaded ends <b>Material:</b> fluorinated ethylene propylene <b>Grade:</b> Not specified	1
61805100	FEP tubing	Siphon tubing for delivery of titrant solution.	<b>Size:</b> 400mm length 2mm inner diameter <b>Connection:</b> treaded ends <b>Material:</b> fluorinated ethylene propylene <b>Grade:</b> Not specified	1
2.802.0020	Overhead Rod Stirrer for 804	Device used to homogenise solutions	<b>Type:</b> Metrohm <b>Stirring positions:</b> Clock-wise <b>Power source:</b> Metrohm sample changers/Titrinos/Titrandos <b>Application:</b> Titration & sample measurement	1
60344100	Gen Electrode with diaphragm WOC for 756/831	Generator electrode for coulometric Karl Fisher titration application for water determination.	<b>Type:</b> generator electrode <b>Material:</b> Glass <b>Dimensions:</b> length 108mm Diameter 24mm <b>Temperature range:</b> 0 0 100 DEGREE <b>pH range:</b> 1-14 <b>Application:</b> Coulometric Karl Fischer	66

62104020	Electrode Cable for 60344100-Standard Metrohm probe cable	Standard metrohm probe/Electrode cable.	<b>Type:</b> Metrohm plug-in head G <b>Diameter:</b> Not specified <b>Length:</b> 1m <b>Material:</b> Metallic ends and rubber insulation and rubber <b>Specification:</b> Fits into Metrohm F sockets	33
62104120	Electrode cable for 60344100	Standard metrohm probe/Electrode cable for generator electrodes.	<b>Type:</b> Metrohm plug-in head G <b>Diameter:</b> Not specified <b>Length:</b> 1m <b>Material:</b> Metallic ends and rubber insulation and rubber <b>Specification:</b> Fits into Metrohm F sockets	20
61464320	KF titration Vessel	Metrohm Coulometric titration assembly to slot in electrodes and seals.	<b>Type:</b> Metrohm type <b>Inside diameter:</b> 50mm <b>Outside diameter:</b> 50mm <b>Material:</b> Borosilicate glass <b>Height:</b> 114mm <b>Capacity rating:</b> 250mL	66
60341100	Indicator Electrode	Indicator probe with two platinum pins, used in the Karl Fisher application for water determination.	Type: Generator electrode Material: Glass Dimensions: length 108mm Diameter 24mm Temperature range: 0 to 100 degree pH range: 1 -14 Application: Coulometric Karl Fischer	66

#### 1.2.1 Requirements:

- Supplier must be able to provide service to all the P&FS Laboratories.
- Service/repair agent must respond to the request within 48hrs of purchase order issue.
- Spares/consumables must be for Metrohm brand of equipment.

#### 1.3 Other requirements

##### 1.3.1 Supplier to include in the quotation:

- ✓ Labour rate per hour (certified technician)
- ✓ Travel rate per km
- ✓ Travel time per hour
- ✓ Delivery charge
- ✓ Accommodation

#### 1.4 Instrument service/calibration/repairs/spares and consumables to be delivered to the following addresses:

- P&FS laboratory (Rosherville)  
Eskom Research & Innovation Centre  
Oil lab - Block B - Reception  
Lower Germiston Road  
Rosherville  
2022
- P&FS laboratory (RoteK)  
Oil Lab  
RoteK – Next to Site & Switchgear (Workshop)  
Lower Germiston Road

Rosherville  
2022

- c) P&FS laboratory (Witbank)  
Oil lab  
Eskom Park  
Next to Electrical Workshop  
Watermeyer Street  
Witbank
- d) P&FS laboratory (Pietermaritzburg)  
Oil lab - Eskom  
1 Portland Road  
Mkondeni  
Pietermaritzburg  
3021
- e) P&FS laboratory (Port Elizabeth)  
c/o Eastern Cape Training Centre  
Oil lab  
Workshop 2  
Spondo Road  
Struandale  
Port Elizabeth  
6001
- f) P&FS laboratory (Brackenfell)  
Oil lab  
Eskom Road  
Brackenfell  
Cape Town  
7535
- g) P&FS laboratory (Bloemfontein)  
C/o Transnet Depot  
Oil lab - Eskom  
Loco Street  
East End  
Bloemfontein  
9001
- h) P&FS laboratory (Klerksdorp)  
Oil lab - Eskom  
22 Goueweg  
Townsland  
Klerksdorp  
2571
- i) P&FS laboratory (Seshego) Polokwane  
Oil lab – Eskom  
53 Moletsisi Street  
Seshego

**1.5 Requirements:**

- Supplier must be able to provide service to all the P&FS Laboratories.
- Service/repair agent must respond to the request within 48hrs of purchase order issue.

**2. Specification of Product or Goods**

**TECHNICAL EVALUATION CRITERIA**

**\*Below requirements to be submitted with the Tender Document**

Technical Criteria	Description	Proof	Score allocation (%)	Total Score (%)
Availability of Spares and consumables	Supplier to provide all the spares/consumables as per the scope of work in table 1.	Quotation	10	10
Competency	Supplier to prove that they can service and repair all P&FS Metrohm instruments.	CV and Metrohm basic and advanced service training certificate (Metrohm basic and advanced service training as per Metrohm guidelines)	20	20
On-site service and repairs	Supplier must be able to perform service and repairs on all P&FS laboratories sites (as per section 5.4).	Confirm commitment on company letterhead	15	15
Turnaround time	The supplier must respond to request for repairs within 48 hours of receiving the purchase order number.	Confirm commitment on company letterhead	10	10
Experience	Relevant experience of not less than three (3) years on working with Metrohm instruments	Submit three (3) letter/s of reference from customer/s where related services were rendered.	15	15
		Submit two (2) letter/s of reference from customer/s where related services were rendered.	5	

OEM	OEM supplier	Indicate in a letterhead that supplier is an OEM	20	20
	If not an OEM Must provide letter from OEM that they will support your tender	Submit a letter from OEM that they will support tenderer with sale of spares and consumables.	10	
Service certificate / report	Service /Calibration certificate / report must comply with guidelines as in the tender document	Example of a certificates / reports	10	10
<b>Total</b>				<b>100%</b>


**Threshold =75%**

#### **EVALUATION CRITERIA FOR SHEQ**

**\*Below requirements to be submitted with the Tender Document.**

<b>SHEQ evaluation criteria</b>	<b>Submitted (Yes/No)</b>
• Baseline SHE risk assessment	
• Signed 37(2) agreement	
• Acknowledgement of Eskom's rules and requirements	
• Valid letter of good standing	
• SHE policy	

Approved by: NN Khuzwayo (Zanele)

Signature: 

Date: 11 January 2022