



C 2.2. BILL OF QUANTITIES

**C2.2: BILL OF QUANTITIES**

TENDER NO. JSM/LABSERVE/01/07W00-2022

APPOINTMENT OF A SERVICE PROVIDER TO SUPPLY LABORATORY EQUIPMENTS AND PROVIDE LABORATORY SERVICES FOR WATER AND WASTEWATER AS AND WHEN REQUIRED FOR A PERIOD OF 36 MONTHS (Rates Only).

**PRICE SCHEDULE**

NOTE 1: The tender will be evaluated and awarded FOR THE WHOLE BILL OF QUANTITIES. Tenderers must tender on all sub-items per section. Tenderers, who did not tender on all sub-items per section, will automatically be disqualified.

NOTE 2: The quantities indicated are only approximate figures for evaluation purposes and the Municipality does not guarantee to purchase this or any quantity.

NOTE 3: The tendered rate shall include the supply, delivery and offloading of the specified items in the Bill of Quantities.

NOTE 4: All the items in the Bill of Quantities must comply with SABS standards.

WATER AND WASTEWATER LABORATORY SERVICES CONTRACT.

PRICING SCHEDULE – FIRM PRICES AND SPECIFICATIONS

Physical, Aesthetic, Chemical and Microbiological Determinants For Water Quality Analysis			
Physical and Aesthetic determinants			
Determinant	Unit	Quantity	Amount
		1	
Monochloramine	mg/L	1	
Colour	mg/L Pt-Co	1	
Conductivity	mS/m	1	
Odour or taste	-	1	
Total dissolved solids	mg/L	1	

Tenderer

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Turbidity	NTU	1	
Ph at 25°C	Ph units	1	
<b>Chemical determinants- Macro determinants</b>			
Nitrate as N	mg/L	1	
Sulfate as SO <sub>4</sub> 2-	mg/L	1	
Fluoride as F-	mg/L	1	
Ammonia as N	mg/L	1	
Chloride as Cl-	mg/L	1	
Sodium as Na	mg/L	1	
Zinc as Zn	mg/L	1	
<b>Chemical determinants- Micro determinants</b>			
Antimony as Sb	µg/L	1	
Arsenic as As	µg/L	1	
Cadmium as Cd	µg/L	1	
Total chromium as Cr	µg/L	1	
Cobalt as Co	µg/L	1	
Copper as Cu	µg/L	1	
Cyanide ( recoverable) as CN-	µg/L	1	
Iron as Fe	µg/L	1	
Lead as Pb	µg/L	1	
Manganese as Mn	µg/L	1	
Mercury as Hg	µg/L	1	
Nickel as Ni	µg/L	1	
Selenium as Se	µg/L	1	
Uranium as U	µg/L	1	
Vanadium as V	µg/L	1	
Aluminium as Al	µg/L	1	
<b>Chemical determinants- Organic determinants</b>			
Total organic carbon as C	mg/L	1	
Trihalomethane	mg/L	1	
Microcystic as LR	µg/L	1	
Phenols	µg/L	1	
<b>Microbiological determinants</b>			

Tenderer

Witness 1

Witness 2

Employer

Witness 1

Witness 2



E.Coli /100ml		1	
Total Coliform Bacteria /100ml		1	
Faecal coliform Bacteria /100ml		1	

Physical, Aesthetic, Chemical and Microbiological Determinants For Wastewater Quality Analysis			
Determinants	Unit	Quantity	AMOUNT
Ph at 25°C	Ph units	1	
Conductivity	mS/m	1	
Suspended Solids at 105°C	-	1	
Settling	mℓ/ℓ/hour	1	
Nitrate as N	mg/L	1	
Ortho phosphate as P	-	1	
Chemical oxygen demand as O <sub>2</sub> (Total)	-	1	
E.Coli/100 m/ℓ	-	1	
Free & Saline Ammonia As N	-	1	
		1	
Laboratory Equipment			
Benchtop turbiditymeter		1	
Portable turbiditymeter		1	
Benchtop PH/electrical conductivitymeter		1	
Portable photometer		1	
1000 ml Glass beakers		1	
6 Beaker Jar Stirrer		1	
Turbiditymeter Standard Bulk Solution Calibration Kit		1	
Water Distillation Unit		1	

Tenderer

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Turbidity sample cells		1	
Free chlorine reagent powder		1	
Diethyl Phenylenediamine (DPD 1,2 & 3)		1	
Wire brush		1	
Spectrophotometer		1	
Chemical Oxygen Demand reactor		1	
Laboratory digital scale		1	
Laboratory thermometer		1	
Pipet		1	
Test tube brushers		1	
Burettes		1	
Condenser cylinder		1	
Graduated pipettes		1	
Erlenmeyer flask		1	
Spatula		1	
Test tube rack		1	
Funnel		1	
PH/ORP – Portable Meter, IP67 Rugged waterproof PH/Mv & temp meter c/w epoxy PH electrode, case, buffers		1	
Dissolved Oxygen – Portable meter. IP67 Rugged waterproof DO meter c/w case, membrane & M9501-3 Galvanic probe		1	

Tenderer

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Digital pocket thermometer – 40 ~+300degC c/w probe 150 x 4mm on 1.5m cable		1	
Patula, Spoon-250mm, SS one end spoon and one end flat made of stainless steel grade202		1	
Resort stand and clamp. Universal clamp, aluminium, cork lined, holds up to 50-65 mm circle		1	
Test tube 25mm, 80mm long handle:105mm		1	
Glass stirring rods 5x300mm		1	
Glass filter funnel, stem: 10x100mm		1	
Glass beaker with spout, Low form, 1000ml 5mm diameter x 145 mm high, with spout		1	
Glass beaker with spout, low form 500ml 70 mm diameter x 95mm high with spout		1	
Glass measuring cylinders, spouted, A grade, 1000 ml, 500ml and 250ml		1	

Tenderer

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Burette with PTFE key stopcock, 500ml, 40 mm o.d x 1.6 mm wall x 590 mm long, with PTFE key stopcock 4.0 bore, cal. In 2 ml, 0 ml top 500 ml bottom		1	
Buld pipette, grade A, 100ml		1	
Graduated pipette, Grade A, 10ml		1	
Coil condenser, 250mm B24		1	
Erlenmeyer (conical) flask narrow neck, 1000ml, 131 mm diameter x 42mm neck diameter x 220mm total length		1	
Volumetric flask, grade A clear, 1000ml NS 24, Grade A with ISO Certificate		1	
Test tube rack, 3 tier, 62 place, holes 13mmD		1	
Plastic aspirator with screw cap, 25L		1	
Luna Precision Balance, Internal Calibration. Capacity: 2600g Readability: 0.01g Pan size: 185x185mm		1	
5L Still Water		1	

Tenderer

Witness 1

Witness 2

Employer

Witness 1

Witness 2



Immersion Glass Thermometer, +110 degree celcius max		1	
COD Reactor Model RD 125 with 25 Holes		1	
Chlorine MD 100 DUO using tabs		1	
Pocket sized absolute pressure meter		1	
Spectro Complete (Accessories and Case)		1	
<b>TOTAL AMOUNT</b>			
<b>VAT @ 15 %</b>			
<b>TOTAL INCLUSIVE OF VAT</b>			

***TOTAL AMOUNT (INCLUDING VAT) TO BE FORWARDED TO FORM C 1.1 (FORM OF OFFER)***

**NB:** Pricing must comply with the requirements as set in the scope of work.

Price adjustment of items on the BOQ will be done through negotiation and with the approval of the accounting Officer.

Factors that may lead to price increase negotiation may include Natural disaster, Fuel price increase and Inflation.

NOTE: ONLY FIRM PRICES WILL BE ACCEPTED NON-FIRM PRICES (INCLUDING PRICES SUBJECT TO RATES OF EXCHANGE VARIATIONS) WILL NOT BE CONSIDERED.

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Tenderer

Witness 1

Witness 2

Employer

Witness 1

Witness 2