



The following price adjustment formula will be applicable for calculating contract price adjustments (CPA).

$Pa = (1-V) Pt \left( D1 \frac{R1t}{R1o} + D2 \frac{R2t}{R2o} + D3 \frac{R3t}{R3o} + Dn \frac{Rnt}{Rno} + VP1 \right)$		
Pa	=	The new adjusted price to be calculated
V	=	Fixed portion of the bid price (15% or 0.15)
Pt	=	Original bid price. Note that Pt must always be the original bid price and not an adjusted price
(1-V)Pt	=	Adjustable portion of the bid price (85% or 0.85).
D1 – Dn	=	= Each factor (or percentage) of the bid price, e.g., material, labour, transport, overheads, etc. The total of the various factors (or percentages) D1 – Dn must add up to 1 (or 100%).
R1t – Rnt	=	= End Index. Index figure obtained from the index at the end of each adjustment period
R1o–Rno	=	Base Index. Index figure at the time of bidding.
VPt	=	15% (or 0.15) of the original bid price. This portion of the bid price remains fixed, i.e. it is not subject to price adjustment.

## 17.6 FORMULA COMPONENT DEFINITIONS

### 17.6.1 Adjustable amount

The adjustable amount is the portion of the bid price which is subject to adjustment. In this bid the adjustable amount is 85% of the original bid price. For example, if the bid price is R1000, then only R850 will be subject to adjustment.

**17.6.2 Fixed portion**

The fixed portion represents those costs which will not change over the adjustment period and **DOES NOT** represent the profit margin. In this bid the fixed portion is 15% of the original bid price. Using the same example as above, it would amount to R150 which will remain fixed over the contract period.

**17.6.3 Cost components and proportions**

- a) The cost components of the contract price usually constitute the cost of materials (raw material or finished product), cost of direct labour, cost of transport and those other costs which are inclined to change. The proportions are the contribution to the contract price of each of these cost components. In this bid the following cost components will be used to calculate contract price adjustments.
- b) Bidders are requested to submit the cost breakdown of the bid price for each item with their bid. Should the cost breakdown be the same for all items on the bid, please indicate it clearly in the bid document. Successful bidders will not be allowed to change the cost breakdown of bid prices during the tenure of the contract.
- c) In a case where the same cost components are applicable to all items offered please fill out the Cost components document attached with the bid other than that cost components must be indicated on each line item when finalising pricing schedule.

Cost Component	% Contribution
D1- Imported Raw Material / Finished product (if applicable)	
D2 - Local Raw Material / Finished product (if applicable)	
D3 - Labour	
D4 - Transport	
D5 – Housing and utilities	
D6 – Other	
<b>TOTAL (Cost components must add up to 100%)</b>	<b>100 %</b>

**17.6.4 Applicable indices / references**

The applicable index refers to the relevant market index, which is a true reflection of price movement(s) in the cost over time. In this bid the following indices or reference will be applicable:

Cost component	Index Publication	Index Reference
D1 – Imported Raw Material / Finished product (if applicable)	Supplier / Manufacturer invoice(s) and remittance	Documentary evidence to accompany claim.
D2 - Local Raw Material / Finished product (if applicable)	STATS SA P0142.1 (PPI) Table 1	Textiles, clothing and footwear– Clothing OR Documentary evidence to accompany claim
D3 - Labour	STATS SA P0141 (CPI), Table E OR Labour agreement <sup>2</sup>	Table E - All Items OR Labour agreement to be provided
D4 – Transport	STATS SA P0141 (CPI) Table E	Table E - Transport – Other Running Cost
D5 – Housing and utilities	STATS SA P0141 (CPI) Table E	Table E – Housing and utilities Headline
D6 – other	Specify	Documentary evidence to accompany application

**17.6.5 Base Index Date**

The base index date applicable to the formula is defined as the date at which the price adjustment starts. In this bid the base index date is 2023-02-01.

**17.6.6 End Index Date**

The end index dates are the dates at predetermined points in time during the contract period. In this bid the end indices are defined in the next paragraph (Price Adjustment Periods).

**17.6.7 Price Adjustment Periods**

Adjustment to contract prices must be applied for at the following dates:

Adjustment	CPA application to reach the office at the following dates	End Index Date	Dates from which adjusted prices will become effective
1 <sup>st</sup> Adjustment	After One year of signing the contract		Date of application of adjustment after approval was obtained
2 <sup>nd</sup> Adjustment	After year two of signing the contract		Date of application of adjustment after approval was obtained

*\* In cases where invoices are supplied as documentary evidence, it is advised that invoices closest to the Base Index date and the End Index date be submitted. It should ideally reflect the adjustment period.*

*\* In the absence of a labour agreement, the labour cost component will be adjusted with CPI Headline inflation.*

**17.7 RATES OF EXCHANGE (ROE) – BASE AND AVERAGE RATES**

In the event where material and/or finished products are imported the following will apply:

The formula described above will be used and the imported cost component of the bid price (D1) will be adjusted taking into account the base RoE rate (refer paragraph 30.3.4) and the average RoE rate over the period under review indicated in paragraph 30.3.6 below.

In the event where the RoE adjustment goes hand in hand with a material/product price increase, the material/product price (in foreign currency) will be converted to South African currency using



the base rate (paragraph 30.3.4) for the earlier invoice and the average RoE rate for the period under review as indicated in paragraph 30.3.6 below for the later invoice.

The imported cost component (D1) will be adjusted together with all the other cost components indicated in paragraph 30.2.3 and 30.2.4 above and at the predetermined dates indicated in paragraph 30.2.7 above

Rate(s) of exchange to be used in this bid in the conversion of the bid price of the item(s) to South African currency is indicated in the table below.

Currency	Rates of exchange 12-month average for the contract period
US Dollar	16,36317375
Pound Sterling	17,291054
Euro	20,17991158
Yuan	2,430866

Should the bidder make use of any other currency not mentioned above, the bidder is requested to calculate the average for the period **January 2022 to December 2022** using the Reserve Bank published rates for the specific currency. Visit [www.reservebank.co.za](http://www.reservebank.co.za) to obtain the relevant rates. Please refer to TCBD 2 (Procedure to download historical exchange rates from the Reserve Bank website) for instructions.

Contract price adjustments due to rate of exchange variations are based on average exchange rates as published by the Reserve Bank for the periods indicated hereunder:

Adjustment	Average exchange rates for the period:
1st Adjustment	1 year after signing of contract
2 <sup>nd</sup> Adjustment	2 years after signing of contract

## 18. GENERAL

Unless prior approval has been obtained from SAPS Contract Management, no adjustment in contract prices will be made.



Applications for price adjustment must be accompanied by documentary evidence in support of any adjustment.

CPA applications will be applied strictly according to the specified formula and parameters above as well as the cost breakdown supplied by bidders in their bid documents.

In the event where the supplier's CPA application, based on the above formula and parameters, differs from Contract Management SAPS verification, Contract Management SAPS will consult with the supplier to resolve the differences. The South African Police Service reserves the right to negotiate amended contract prices at any stage prior to the final notification to end users.

**19. BREACH OF CONTRACT**

The South African Police Service reserves the right to terminate the contract(s) if the contractor does not honour contract(s) obligations including submission of information.

**20. PACKAGING**

Goods supplied must be packed in suitable packaging before distribution to end users.

NAME OF BIDDER: .....

NAME OF CONTACT PERSON: .....

CAPACITY: .....

SIGNATURE: ..... DATE: .....





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## DEVIATION SHEET: Bid 19/1/9/1/144TD (22)

To all bidders:

Please complete the deviation sheet for **all alternative or additional offers made.**

Please complete the deviation sheet for all paragraphs in the specification that you comment **"Do not comply"**

**Specification paragraph:**

*Reason:*

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*Offered:*

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**Specification paragraph**

*Reason:*

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## DEVIATION SHEET: Bid 19/1/9/1/144TD (22)

*Offered:*

**Specification paragraph**

*Reason:*

*Offered:*





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## DEVIATION SHEET: Bid 19/1/9/1/144TD (22)

<b>Specification paragraph</b>
<i>Reason:</i>
<i>Offered:</i>

### PRICING SCHEDULE – FIRM PRICES (PURCHASES)

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

**IN CASES WHERE DIFFERENT DELIVERY POINTS INFLUENCE THE PRICING, A SEPARATE PRICING SCHEDULE MUST BE SUBMITTED FOR EACH DELIVERY POINT**

Name of bidder ..... Bid number **19/1/9/144TD (22)**

Closing Time 11:00

Closing date: **2023-04-03**

OFFER TO BE VALID FOR 90 DAYS FROM THE CLOSING DATE OF BID.

Item Nr	ICN NUMBER	DESCRIPTION	QT	BID PRICE IN RSA CURRENCY ** (ALL APPLICABLE TAXES INCLUDED)	COUNTRY OF MANUFACTURE
<b>1</b>	6640T05017222	SAMPLE CHAMBER AND INTRODUCTION SYSTEM FILTERS, COLLIMATORS, COOLING SYSTEM, X- RAY GENERATOR AND TUBE, DETECTION SYSTEM.	1		
<b>2</b>	6130T05047685	THE SYSTEM MUST BE SUPPLIED WITH AN INLINE UNINTERRUPTED POWER SUPPLY (UPS) CAPABLE OF PROVIDING SUFFICIENT BACK UP POWER FOR 30 MINUTES. THE INSTRUMENT MUST BE ABLE TO MEASURE TRACE AND MAJOR ELEMENTS IN A SAMPLE	1		
<b>3</b>	7025T05047839	PRINTER:THE SYSTEM MUST SUPPLIED WITH THE COLOUR LASER PRINTER MEETING THE FOLLOWING MINIMUM REQUIREMENTS <b>A</b> STANDARD CONNECTIVITY: HI SPEED USB PORT. <b>B</b> PRINT QUALITY: 1200 X 1200 DOTS PER INCH (DPI) OR BETTER. <b>C</b> PRINTER DRIVERS AND INSTALLATION ON CD-ROM/ MEMORY CARD. <b>D</b> SUPPLY OF TWO SETS OF STANDARD CARTRIDGES (04 COLOUR INK) ON DELIVERY OF THE WDXRF	1		
<b>4</b>	7010180183581	DATA PROCESSOR DESKTOP: THE	1		

		<p>SYSTEM MUST BE SUPPLIED WITH A DESKTOP COMPUTER WITH THE FOLLOWING MINIMUM SPECIFICATIONS</p> <p><b>A</b> LCD SCREEN WITH A MINIMUM OF 21 INCH, KEYBOARD AND MOUSE</p> <p><b>B</b> LATEST VERSION MICROSOFT OFFICE PROFESSIONAL</p> <p><b>C</b> 1TB FIXED SOLID STATE DISK DRIVE AND &gt;8GB RAM (OR BETTER)</p> <p><b>D</b> INTEL BASED PC WITH INTEL CORE I7-3970X EXTREME EDITION OR PROCESSOR, 3.5GH OR BETTER</p> <p><b>E</b> ADDITIONAL ETHERNET CARD TO MAKE PROVISION TO CONNECT TO A LOCAL AREA NETWORK (LAN)</p> <p><b>F</b> AT LEAST FOUR (04) USB PORTS</p> <p><b>G</b> LATEST 2022 GRAPHIC CARD, CD AND DVD WRITER.</p>			
		<p>TRAINING MUST BE PRESENTED AT THE INSTALLATION SITE TO SIXTEEN (16) PEOPLE FOR A PERIOD OF ATLEAST ONE WEEK PER GROUP OF FOUR (04). THE TRAINING MUST COVER BOTH OPERATION AND MAINTENANCE ASPECTS OF THE (WDXRF)</p> <p><b>A</b> INTRODUCE THE CANDIDATES TO THE FUNDAMENTALS AND APPLICATION OF WDXRF</p> <p><b>B</b> PROVIDE CANDIDATES WITH AN OVERVIEW OF THE SAMPLE INTRODUCTION SYSTEM, SAMPLE PREPARATION, WDXRF HARDWARE AND SOFTWARE.</p> <p><b>C</b> HOW TO SETUP AN ANALYTICAL STRATEGY FOR UNKNOWN SAMPLES.</p> <p><b>D</b> METHOD DEVELOPMENT.</p> <p><b>E</b> ROUTINE MAINTENANCE AND INSTRUMENT DIAGNOSTIC THAT ARE TO BE DONE BY LABORATORY PERSONNEL.</p> <p><b>F</b> CALCULATIONS OF RESULT AND REPORT GENERATION.</p>			
5	9825T05080365		1		
6	6640T05084654	SMALL SAMPLE HOLDERS (6-8mm)	1		
7	6640T05084655	LIQUID SAMPLE HOLDERS	1		
8	6640T05084656	LOOSE POWDER SAMPLE HOLDERS	1		
9	6640T05084657	PRESSED PELLETS SAMPLE HOLDERS (40mm)	1		
10	9825T05030161	EXTENDED MAINTENANCE PLAN: A FULL THREE (03) YEAR EXTENDED	1		

		<p>MAINTENANCE OF THE SYSTEMS WELL AS THE DATA MANAGEMENT SYSTEM MUST BE PROVIDED FOR (ADDITIONAL TO THE COMPULSORY ONE YEAR WARRANTY). THE COST MUST BE STATED ANNUALLY. ALL SERVICES AND REPAIRS MUST BE INCLUDED IN THE EXTENDED MAINTENANCE AND BE STRUCTURED AS FOLLOWS</p> <p><b>A</b> AT LEAST TWO (02) MAINTENANCE SERVICES WITH PARTS INCLUDED PER ANNUM.</p> <p><b>B</b> PROVISION FOR ALL REPAIRS.</p>			
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- Required by: **DIVISION: Gauteng Forensic**

- At: **Forensic Science Laboratory**

As per address list Annexure "A" of the specification

COUNTRY OF MANUFACTURE .....

- Brand and model .....

- Does the offer comply with the specification(s)?

\*YES/NO

- If not to specification, indicate deviation(s) .....

- Period required for delivery .....

\*Delivery: Firm/not firm

- Delivery basis .....

Note: All delivery costs must be included in the bid price, for delivery at the prescribed destination.

\*\* "all applicable taxes" includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.

\*Delete if not applicable

## BIDDER'S DISCLOSURE

### 1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

### 2. Bidder's declaration

- 2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest<sup>1</sup> in the enterprise, employed by the state? **YES/NO**

- 2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

- 2.2 Do you, or any person connected with the bidder, have a relationship

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<sup>1</sup> the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

with any person who is employed by the procuring institution? YES/NO

2.2.1 If so, furnish particulars:

.....  
.....

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? YES/NO

2.3.1 If so, furnish particulars:

.....  
.....

### 3 DECLARATION

I, \_\_\_\_\_ the \_\_\_\_\_ undersigned,  
(name)..... in  
submitting the accompanying bid, do hereby make the following  
statements that I certify to be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium<sup>2</sup> will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring

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<sup>2</sup> Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.



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institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.

- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....	.....
Signature	Date
.....	.....
Position	Name of bidder

**PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL  
PROCUREMENT REGULATIONS 2022**

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

**NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022**

**1. GENERAL CONDITIONS**

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and

1.2 **To be completed by the organ of state**

*(delete whichever is not applicable for this tender).*

- a) The applicable preference point system for this tender is the 80/20 preference point system.
- b) The lowest/ highest acceptable tender will be used to determine the accurate system once tenders are received.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price; and
- (b) Specific Goals.

1.4 **To be completed by the organ of state:**

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
<b>Total points for Price and SPECIFIC GOALS</b>	<b>100</b>

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

- 1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

## 2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

## 3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

### 3.1. POINTS AWARDED FOR PRICE

#### 3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

#### 80/20

$$P_s = 80 \left( 1 - \frac{P_t - P_{min}}{P_{min}} \right)$$

Type equation here.

Where

$P_s$  = Points scored for price of tender under consideration

$P_t$  = Price of tender under consideration

$P_{min}$  = Price of lowest acceptable tender

## 4. POINTS AWARDED FOR SPECIFIC GOALS

- 4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
- (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,

then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

**Table 1: Specific goals for the tender and points claimed are indicated per the table below.**

**Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)**

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Persons historically disadvantaged on the basis of race with at least 51% ownership	5 points	
Persons historically disadvantaged on the basis of gender with at least 51% ownership by woman	5 points	
Persons with at least 51% ownership who are youth	5 points	
Persons historically disadvantaged by unfair discrimination on the basis of disability with at least 51% ownership	5 points	

#### DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm.....

4.4. Company registration number: .....

4.5. TYPE OF COMPANY/ FIRM

Partnership/Joint Venture / Consortium  
One-person business/sole propriety  
Close corporation  
Public Company

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Personal Liability Company  
(Pty) Limited  
Non-Profit Company  
State Owned Company

[TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
  - (a) disqualify the person from the tendering process;
  - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
  - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
  - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
  - (e) forward the matter for criminal prosecution, if deemed necessary.

.....	
SIGNATURE(S) OF TENDERER(S)	
SURNAME AND NAME:	.....
DATE:	.....
ADDRESS:	.....
	.....
	.....
	.....
	.....

SPEC NO: 32323/2022

**BID SPECIFICATION FOR PROCUREMENT OF A WAVELENGTH DISPERSIVE X-RAY FLUORESCENCE SPECTROMETER (WDXRF), INCLUDING COMMISSIONING, TRAINING, AND MAINTENANCE FOR A PERIOD OF THREE YEARS**

## SPECIFICATION INSTRUCTION & BACKGROUND

## Preamble Statement

Suppliers are hereby invited to bid for the supply and installation of a Wavelength Dispersive X-Ray Fluorescence Spectrometer (WDXRF) by the South African Police Service's Forensic Science Laboratory.

This specification calls for the supply, delivery, installation and commissioning of a fully automated computer con-trolled WDXRF and its accessories for the analysis of Gold and Platinum Group Metals ores, their intermediate products (e.g. refractory / smelter (liquid and powder form) and finished products (e.g. metal alloys).

All correspondence must be written in English.

**Bid specification:**

Service/items required must comply with the specifications as set out in this document.

The bidder must indicate in writing with a **Comply** for compliance with the requirements and a **Not Comply** for non-compliance with the requirements in the relevant column of every specification field. Failure to indicate **Comply** or **Not Comply** will result in the disqualification of the bid (ticks, yes or no will not be considered).

## TECHNICAL REQUIREMENTS

No	Description	COMPLY OR DON'T COMPLY
1.	<b>REQUIREMENTS OF THE WAVELENGTH DISPERSIVE X-RAY FLUORESCENCE SPECTROMETER (WDXRF) ICN : 6640T05017222 SAMPLE CHAMBER AND INTRODUCTION SYSTEM, FILTERS, COLLIMATORS, COOLING SYSTEM, X-RAY GENERATOR AND TUBE, DETECTION SYSTEM</b>	
1.1	The Wavelength Dispersive X-Ray Fluorescence Spectrometer (WDXRF) is required at the Forensic Science Laboratory at 270 Pretoria Road, Silverton, Pretoria, and will be installed in room 517B.	
1.2	It is the responsibility of every bidder to ensure that the site of operation is suitable. The necessary ancillary items must be included and/installed to meet the operation requirements of the equipment and the costs thereof must be included in the bid amount.	
1.3	The instrument must be new and be the latest model of the offer.	
1.4	The instrument must have full elemental coverage from Be (Beryllium) to U (Uranium) and be capable of full quantitative and qualitative analysis of all elements in this range.	

Brig JS 600000

Colin Espach

Col MB Disnezo

Lt Col. E. J. Sandoz

Lt Col. A Mphaphuli

Capt. T. P. Rathbun



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SPEC NO: 32323/2022

**BID SPECIFICATION FOR PROCUREMENT OF A WAVELENGTH DISPERSIVE X-RAY FLUORESCENCE SPECTROMETER (WDXRF), INCLUDING COMMISSIONING, TRAINING, AND MAINTENANCE FOR A PERIOD OF THREE YEARS**

No	Description	COMPLY OR DON'T COMPLY
1.5	The following calibration and calibration verifications standards must be included with the installation: a) Mining sample (Gold, Platinum group metals and chrome) in the form of pressed pellets.	
1.6	The system must be supplied with a pre-loaded standard less semi-quantitative method/s for the analysis of unknown samples as liquids, solids and loose powders.	
1.7	The system must be supplied with an auto-sampler/ sample changer with sample rotation/spinner, for fully automatic measurement and automatic sample changeover.	
1.8	The system must have automatic sample recognition for solids, liquids and powders to avoid the possibility of running liquids or loose powders under vacuum conditions.	
1.9	A combination of sample trays/magazines/racks must be supplied with the instrument to accommodate all the sample sizes.	
1.10	The auto-sampler/sample changer system must be able to handle at least twenty (20) samples.	
1.11	The instrument must be delivered with the ability for analysis in air, under vacuum (for solids, pressed pellets, fused beads) and analysis under Helium or Nitrogen atmosphere (for loose powders and liquids).	
1.12	The X-Ray tube (Rh anode or better) must be able to operate at a power of at least 4kW and 60kV.	
1.13	The instrument must have an automatic primary beam filter changer or equivalent for eliminating characteristic tube lines, decreasing background spectra and increasing S/N ratios.	
1.14	The instrument must have an automatic analysis area changer with the capability for at least three (3) different analysis area sizes, covering the range between 6mm to 34mm at least.	
1.15	The instrument must be fitted with analyser crystals or equivalent to cover all possible regions of interest from Be to U.	
1.16	The instrument must be fitted with an automatic collimator changer or equivalent. Primary beam collimators as well as a collimator mask or equivalent.	
1.17	The instrument must be supplied with, and connected to the required cooling system, and any gas regulators that may be required must also be supplied.	
1.18	The instrument must be equipped with a protective mechanism/feature that prevents damage to the optical path (X-Ray tube, goniometer and detectors) caused by spillage of liquids or deposition of liberated loose powders/dust.	

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SPEC NO: 32323/2022

**BID SPECIFICATION FOR PROCUREMENT OF A WAVELENGTH DISPERSIVE X-RAY FLUORESCENCE SPECTROMETER (WDXRF), INCLUDING COMMISSIONING, TRAINING, AND MAINTENANCE FOR A PERIOD OF THREE YEARS**

No	Description	COMPLY OR DON'T COMPLY
1.19	The system must have fully automatic microprocessor/PC control over $\theta/2\theta$ relationship between crystal and detector.	
1.20	The system must be able to perform full quantitative analysis from sub-ppm levels to 100% from user defined calibrations and have the ability for performing matrix corrections and fundamental parameters calibrations.	
1.21	The spectra obtained from the instrument must be able to be sequential overlaid in order to allow spectra comparisons within the software.	
1.22	Peak identification, labelling of peaks and spectra in the software must be possible.	
1.23	The system must be supplied with an inline uninterrupted power supply (UPS) – <u>ICN: 6130T05047685</u> , capable of providing sufficient back-up power for at least 30 minutes.	
1.24	The instrument must be able to measure trace and major element in a sample.	
2.	<b>OPERATION OF THE SYSTEM</b>	
2.1	The installation must include the installation of an AC power line if more than 15 Amp 240 Volt is required. A Certificate of Compliance must be supplied in the event of the installation of an AC power line.	
2.2	The successful bidder shall provide operation and maintenance manuals in hard copy and electronic format.	
3.	<b>INSTRUMENT SOFTWARE REQUIREMENTS</b>	
3.1	The installation must include the spectrometer software.	
3.2	The software must make provision to define user levels.	
3.3	The instrument must be compatible and integrated to a Laboratory Information Management System (LIMS).	
3.4	Software must be capable of archiving results ensuring integrity of raw data and traceability of operations for audit trails.	
3.5	The software must be capable of automatic identification of possible interferences.	
3.6	The software must feature user-customizable Quality Control Protocols (QCP)	
3.7	The software must be capable of generating customized reports using third party software, in this case Microsoft Office Professional suite, CSV, PDF and HTML for web access compatibility.	

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