



AGRICULTURAL RESEARCH COUNCIL

REQUEST TO TENDER FOR:

TENDER NO: ARC/22/12/2023/2

Inductively Coupled Plasma Optical Emission Spectrometer System

Tender Administrative Requirements, Special Conditions & Functionality
Requirements



1.1 COMPULSORY ADMINISTRATIVE REQUIREMENTS FOR THE TENDER

The bidders shall provide the ARC (accompanying the bid document on the closing date/time) with the following information:

Criteria	Description of the criteria
1.1.1	Attendance of the compulsory briefing session. It is important for all bidders to attend briefing session as essential information relevant to the bid will be shared with all prospective bidders. Test Samples may also be issued to prospective bidders that are specific to this bid.
1.1.2	The potential bidder is encouraged to submit three (3) bid proposals as follows: i. Two (2) hard copies (one original and one copy) ii. One (1) electronic copy in PDF format saved on a memory stick, clearly marked, and indexed. iii. Bid proposals must be *properly bonded (not stapled), **clearly numbered and ***divided indexed
1.1.3	Submission of administrative documents. Bidders must fully complete and submit the following documents, certified copies must not be more than six (6) months: i. Certified copies of the bidders CIPC documents listing the type of organisation and director information. The company must not be on deregistration status or on awaiting deregistration status. ii. Submission of proof of the bidder's registration on the CSD (Full report) iii. Standard bidding documents completed in full and signed off by a duly authorised person

1.2 COMPULSORY TECHNICAL REQUIREMENTS

1.2.1 Certified licensed local distributor, with more than 5 years' experience in training of service technicians. Evidence in the form of certification or training manuals must be provided.	Comply	Do Not Comply
Substantiation: The bidder must submit the necessary Certification and Accreditation for their bid submission to be considered for further evaluation		

1.3 SPECIAL CONDITIONS FOR THE TENDER

1.3.1 Provide the multi element wavelength solution where necessary and must be sourced from an ISO 9001 certified producer. The wavelength calibration must cover the 170 nm to 760 nm range.
1.3.2 Warranty valid for 36 months from installation and commissioning for all non-consumable components (Components covered must be specified: e.g. Gas flow controllers / RF generators and so forth).
1.3.3 Conclude a Service Level Agreement for a period of 24 months with the ARC: Including annual cleaning and maintenance by a qualified service engineer. Included all required maintenance consumables. Approved callouts for repair and fault finding - 6 per year for the 24-month SLA cycle (12 total) as needed. Service engineers call out and travel to be included.
1.3.4 Agree to analyse (materials to be provided by the ARC) calibration solutions and prepared samples to demonstrate the instruments performance. Samples must be analysed on the same model of instrument as the one being supplied. ARC staff members will witness the analysis of the said samples at a location and time to be provided by the supplier.
Substantiation: The bidder must sign fully and return the Declaration of Acceptance of Special Conditions (Annexure C) of the Tender for their bid submission to be considered for further evaluation.

1.4 FUNCTIONALITY

A set of six multi-element calibration standards will be provided and their concentrations will be specified. The concentrations of the standard quality control, in-house sample quality control, certified reference material (CRM), low concentration standard, high concentration standard and 4 samples will be determined against the provided standards. A sequence of the analyses will be specified. The following parameters will be checked: linearity, r^2 value (Correlation coefficient), accuracy, repeatability, reproducibility, relative standard deviations (RSDs) and drift.

The following Rating Scale will be used:

- 1- Poor
- 2- Fair
- 3- Average
- 4- Good
- 5- Excellent

To proceed to the next stage of evaluation, the bidder must obtain a minimum average score of 3 in total.

Linearity

All analytes are to be done on linear calibration curves.

r^2 (correlation coefficient)

r^2 value will be evaluated as follows: rating criteria:

- 1. Poor - r^2 of less than 0.9950
- 2. Fair - r^2 of between 0.995-0.9990
- 3. Average - r^2 of between 0.9991-0.9994
- 4. Good - r^2 of between 0.9995-0.9998
- 5. Excellent - r^2 of between 0.9999 and 1

Accuracy

A standard quality control, in-house sample quality control, certified reference material and 4 samples will be analysed and the results will be check for accuracy. A 10% failure limit will be applied.

Rating criteria:

- 1. Poor - deviation of above 20 %
- 2. Fair - deviation of between 15.1 – 20.0 %
- 3. Average - deviation of between 10.1 % – 15.0 %

4. Good - deviation of between 5.1 – 10.0 %

5. Excellent – deviation of between 0 – 5.0 %

Reproducibility

The four samples provided will first be analysed on our instrument then analysed on your instrument to check for reproducibility.

Rating criteria:

1. Poor - RSD of above 20 %

2. Fair - RSD of between 15.1 – 20.0 %

3. Average - RSD of between 10.1 % – 15.0 %

4. Good - RSD of between 5.1 % – 10.0 %

5. Excellent – RSD of between 0 % – 5.0 %

Repeatability

A low concentration and a high concentration standards must be analysed 8 times (replicates). RSDs will be evaluated to check for stability according to the following rating scales:

Rating criteria:

1. Poor - RSD of above 20 %

2. Fair - RSD of between 15.1 % – 20.0 %

3. Average – RSD of between 10.1 % - 15.0 %

4. Good - RSD of between 5.1 % – 10.0 %

5. Excellent – RSD of between 0 % – 5.0 %

Drift

One of the calibration standard and a standard quality control will be analysed at the beginning and at the end of the sequence to check for drift. A drift correction method must be specified by the service provider. The difference between the two standards (First and last) will be evaluated as follows:

Rating criteria:

1. Poor - difference of above 20 %

- 2. Fair - difference of between 15.1 % – 20.0 %
- 3. Average – difference of between 10.1 % – 15.0 %
- 4. Good - difference of between 5.1 % – 10.0 %
- 5. Excellent – difference of between 0 % – 5.0 %

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