

Advance Contract Award Notice (ACAN)

23-58242

Gas Chromatography/Mass Spectrometer

1. Advance Contract Award Notice (ACAN)

An ACAN is a public notice indicating to the supplier community that a department or agency intends to award a contract for goods, services or construction to a pre-identified supplier, thereby allowing other suppliers to signal their interest in bidding, by submitting a statement of capabilities. If no supplier submits a statement of capabilities that meets the requirements set out in the ACAN, on or before the closing date stated in the ACAN, the contracting officer may then proceed with the award to the pre-identified supplier.

2. Definition of the requirement

The National Research Council Canada has a requirement for the supply of quantity one (1) Gas Chromatography/Mass Spectrometer with Self Cleaning Ion Source capabilities to characterize and quantify micro and nanoplastics from environmental samples. The self-cleaning ion source must be controlled by the software, be built in the Mass Spectrometer and does not require removal of the source. The system must come with NIST MS library. The analysis software should be able to be installed on more than 2 computers. The Mass Spectrometer must have a dual filament and the system must be compatible with both helium and hydrogen.

3. Criteria for assessment of the Statement of Capabilities (Minimum Essential Requirements)

Any interested supplier must demonstrate by way of a statement of capabilities that its system meets the following requirements:

- The mass spectrometer must use an ion source where the metallic parts are constructed from inert material. Ion Source temperature should be controllable from 150 – 350 °C. Stainless steel is NOT acceptable as contaminants might stick to it.
- The system must be compatible with Hydrogen and Helium.
- MSD sensitivity must have an IDL with statistically derived at 99% confidence of eight sequential splitless injections of OFN (octafluoronaphthalene) equal or lower than 10 fg.
- The MSD must have a dual filament.
- Mass spectrometer must utilize a Mass Filter that can be independently heated up to 200°C (to lower contamination on the quadrupole). The material use in the quadrupole must have a low coefficient of linear expansion (below 2.0) to lower the expansion of the material (To lower downtime after a vent, more stability on the quadrupole ion transmission and performance, less tuning of the equipment required, etc.).
- The transfer line temperature must be user settable from 100-350 °C.
- The MSD mass range must be from 1 to 1,090 m/z.
- Mass axis stability must be better than 0.10 u/48 hours.
- Electronic pneumatic control (EPC): precision on pressure regularization is 0.001 psi or lower.

- The mass spectrometer's electronics must have the efficiency to support synchronous SIM/Scan.
- The mass spectrometer must have a Gain Normalized Autotune which optimizes the electron multiplier's (EM) gain to ensure the optimal balance between ion count, linearity and EM life expectancy.
- The mass spectrometer data system must have an integrated retention time-locking module for analyzing target compounds in complex matrices. The software module must provide the creation of custom compound databases as well as the utilization of vendor provided databases.
- The source must have a self-cleaning technology to lower downtime and increase the quality of the MS data. This technology must not require removal of the source from the MSD.
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- The data analysis software must/can be installed on at least two (2) PCs.
- Integrated deconvolution and spectral matching for identification and quantitation of low-level targets in complex matrices must be present.
- The tuning of the MSD must be automated and a report must be available at the end.
- The rough and high vacuum values must be available on the software for troubleshooting purposes.
- Must have the latest NIST version of the software.
- Support is guaranteed for 10 years from the date of purchase (System should have a 10 year value guarantee such that vendor shall have ten years' guaranteed parts and comprehensive service available or give residual value credit for replacement.)

4. Applicability of the trade agreement(s) to the procurement

This procurement is subject to the following trade agreement(s)

- Canadian Free Trade Agreement (CFTA)
- Canada-Korea Free Trade Agreement (CKFTA)

5. Justification for the Pre-Identified Supplier

Agilent is the only known vendor offering the latest quadrupole mass analyzer technology with hyperbolic geometry. This technology provides greater mass resolution, a requirement to analyze and differentiate analytes in complex samples (i.e., biological and environmental samples). They are also the only known GC/MS vendor providing a system with a self-cleaning ion source capability. This feature is required for dirtier and complex samples as it will improve the quality of the data overall by reducing background noise in the mass spectrometer. This feature is required to improve the quality of the data, allow for better reproducibility between samples, and better sensitivity.

6. Government Contracts Regulations Exception(s)

The following exception(s) to the Government Contracts Regulations is invoked for this procurement under subsection 6(d) - "only one person is capable of performing the work".

7. Exclusions and/or Limited Tendering Reasons

The following exclusion(s) and/or limited tendering reasons are invoked under the:

- a. Canadian Free Trade Agreement (CFTA) – Article 513 (1) (b) (iii): due to an absence of competition for technical reasons;
- b. Canada-Korea Free Trade Agreement (CKFTA) – referencing the WTO Protocol Amending the GPA, Article XIII (1) (b) (iii): due to an absence of competition for technical reasons;

8. Period of the proposed contract or delivery date

The equipment must be delivered on or before March 29, 2024.

9. Cost estimate of the proposed contract

The estimated value of the contract, including option(s), is \$98,092.91 (GST/HST extra).

10. Name and address of the pre-identified supplier

Agilent Technologies Canada
6705 Millcreek Drive, Unit 5
Mississauga, Ontario, L5N 5M4

11. Suppliers' right to submit a statement of capabilities

Suppliers who consider themselves fully qualified and available to provide the goods, services or construction services described in the ACAN may submit a statement of capabilities in writing to the contact person identified in this notice on or before the closing date of this notice. The statement of capabilities must clearly demonstrate how the supplier meets the advertised requirements.

12. Closing date for a submission of a statement of capabilities

The closing date and time for accepting statements of capabilities is February 20, 2024 at 2:00 EST.

13. Inquiries and submission of statements of capabilities

Inquiries and statements of capabilities are to be directed to:

Kelsie Coughlan
Senior Procurement Officer

Telephone: 343-550-0471
E-mail: Kelsie.Coughlan@nrc-cnrc.gc.ca