



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

**Bid Receiving Public Works and Government
Services Canada/Réception des soumissions
Travaux publics et Services gouvernementaux
Canada**
Room 100,
167 Lombard Ave.
Winnipeg
Manitoba
R3B 0T6
Bid Fax: (204) 983-0338

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet Fourier Transform Infrared Spectrom	
Solicitation No. - N° de l'invitation 5K003-181362/A	Date 2018-10-26
Client Reference No. - N° de référence du client 5K003-181362	
GETS Reference No. - N° de référence de SEAG PW-\$WPG-016-10684	
File No. - N° de dossier WPG-8-41130 (016)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2018-12-10	Time Zone Fuseau horaire Central Standard Time CST
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Hall, Marlene	Buyer Id - Id de l'acheteur wpg016
Telephone No. - N° de téléphone (204) 230-0147 ()	FAX No. - N° de FAX (204) 983-7796
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: Canadian Grain Commission Grain Research Laboratory Room 1519 - 303 Main Street Winnipeg, Manitoba R3C 3G8 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Public Works and Government Services Canada - Western
Region
Room 100
167 Lombard Ave.
Winnipeg
Manitoba
R3B 0T6

Delivery Required - Livraison exigée See Herein	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

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PART 1 - GENERAL INFORMATION

1.1 Requirement

The requirement is detailed under Article 6.2 of the resulting contract clauses.

1.2 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

1.3 Trade Agreements

The requirement is subject to the provisions of the North American Free Trade Agreement (NAFTA) and the Canadian Free Trade Agreement (CFTA).

1.4 epost Connect service

This bid solicitation allows bidders to use the epost Connect service provided by Canada Post Corporation to transmit their bid electronically. Bidders must refer to Part 2 entitled Bidder Instructions, and Part 3 entitled Bid Preparation Instructions, of the bid solicitation, for further information.

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The [2003](#) (2018-05-22) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

2.1.1 SACC Manual Clauses

[B1000T](#) (2014-06-26), Condition of Material - Bid

2.2 Submission of Bids

Bids must be submitted only to the Public Works and Government Services Canada (PWGSC) Bid Receiving Unit specified below by the date and time indicated on page 1 of the bid solicitation:

BRU: Western Region Bid Receiving Unit (Winnipeg)
Address: Room 100, 167 Lombard Avenue
Winnipeg, Manitoba R3B 0T6

E-post Connect: ROReceptionSoumissions.WRBidReceiving@tpsgc-pwgsc.gc.ca
Bids/Offeres will be not be accepted if emailed directly to this email address. This email is to initiate an ePost Connect conversation, as detailed in the Standard Instructions.

Bid Fax: (204) 983-0338

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than 15 calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Manitoba.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

- If the Bidder chooses to submit its bid electronically, Canada requests that the Bidder submits its bid in accordance with section 08 of the 2003 standard instructions. Bidders must provide their bid in a single transmission. The epost Connect service has the capacity to receive multiple documents, up to 1GB per individual attachment.

The bid must be gathered per section and separated as follows:

Section I: Technical Bid
Section II: Financial Bid
Section III: Certifications

- If the Bidder chooses to submit its bid in hard copies, Canada requests that the Bidder submits its bid in separately bound sections as follows:

Section I: Technical Bid (1 hard copy)
Section II: Financial Bid (1 hard copy)
Section III: Certifications (1 hard copy)

- If the Bidder is simultaneously providing copies of its bid using multiple acceptable delivery methods, and if there is a discrepancy between the wording of any of these copies and the electronic copy

provided through epost Connect service, the wording of the electronic copy provided through epost Connect service will have priority over the wording of the other copies.

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that bidders follow the format instructions described below in the preparation of hard copy of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573) (<https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573>). To assist Canada in reaching its objectives, bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

Section I: Technical Bid

In their technical bid, Bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment.

3.1.1 Electronic Payment of Invoices – Bid

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex “D” Electronic Payment Instruments, to identify which ones are accepted.

If Annex “D” Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

3.1.2 Exchange Rate Fluctuation

[C3011T](#) (2013-11-06), Exchange Rate Fluctuation

Section III: Certifications

Bidders must submit the certifications and additional information required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.

(b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Evaluation

4.1.1.1 Mandatory Technical Criteria

Mandatory technical evaluation criteria is included in Annex A.

4.1.2 Financial Evaluation

SACC Manual Clause [A0222T](#) (2014-06-26), Evaluation of Price

4.2 Basis of Selection

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#) website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#>).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

PART 6 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

6.1 Security Requirements

There is no security requirement applicable to the Contract.

6.2 Requirement

The Contractor must provide the items detailed under the "Requirement" at Annex "A".

6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

6.3.1 General Conditions

[2010A](#) (2018-06-21), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

6.4 Term of Contract

6.4.1 Period of the Contract

The period of the Contract is from date of Contract to July 31, 2019 inclusive

6.4.2 Delivery Date

All the deliverables must be received on or before the dates specified in Annex A, Requirement.

6.4.3 Delivery Points

Delivery of the requirement will be made to delivery point(s) specified at Annex "B" of the Contract.

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Marlene Hall
Procurement Specialist
Public Services and Procurement Canada
100 - 167 Lombard Avenue
Winnipeg, MB. R3B 0T6

Telephone: 204-230-0147
Fax: 204-983-7796
Email: marlene.hall@pwgsc-tpsgc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

6.5.2 Project Authority

The Project Authority for the Contract is: *A contact to be named at date of contract issuance.*

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority, however the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

6.5.3 Contractor's Representative

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: _____
Fax: _____
Email: _____

6.6 Payment

6.6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm unit price(s), as specified in Annex B for a cost of \$ _____. (*insert the amount at contract award*). Customs duties are included and Applicable Taxes are extra.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.6.2 Single Payment

SACC Manual clause [H1000C](#) (2008-05-12), Single Payment

6.6.3 SACC Manual Clauses

[C2000C](#) (2007-11-30), Taxes - Foreign-based Contractor

[C2605C](#) (2008-05-12) Canadian Customs Duties and Sales Tax - Foreign-based Contractor

6.6.4 Electronic Payment of Invoices – Contract

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s): **TBD**

6.7 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
 - a. The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
 - b. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

6.8 Certifications and Additional Information

6.8.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

6.9 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Manitoba.

6.10 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the general conditions [2010A](#) (2018-06-21), General Conditions - Goods (Medium Complexity);
- (c) Annex A, Requirement;
- (d) Annex B, Basis of Payment;
- (e) Annex C, Insurance – Specific Requirements;
- (f) the Contractor's bid dated _____ .

6.11 SACC Manual Clauses

- [A2000C](#) (2006-06-16) Foreign Nationals (Canadian Contractor)
- [A2001C](#) (2006-06-16) Foreign Nationals (Foreign Contractor)
- [A9068C](#) (2010-01-11) Government Site Regulations
- [B1501C](#) (2018-06-21) Electrical equipment
- [B7500C](#) (2006-06-16) Excess Goods
- [C5201C](#) (2008-05-12) Prepaid Transportation Costs
- [D0018C](#) (2007-11-30) Delivery and Unloading

6.12 Insurance – Specific Requirements

The Contractor must comply with the insurance requirements specified in Annex C. The Contractor must maintain the required insurance coverage for the duration of the Contract. Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract.

The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

The Contractor must forward to the Contracting Authority within ten (10) days after the date of award of the Contract, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. For Canadian-based Contractors, coverage must be placed with an Insurer licensed to carry out business in Canada, however, for Foreign-based Contractors, coverage must be placed with an Insurer with an A.M. Best Rating no less than "A-". The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

ANNEX "A"

REQUIREMENT

The Canadian Grain Commission's (CGC) Grain Research Laboratory (GRL) has a requirement for the supply, delivery, installation and training of one (1) fourier transform infrared spectrometer (FTIR), four (4) attenuated total reflectance (ATR) accessories, with workstation and software for operation and data analysis.

BACKGROUND:

The FTIR spectrometer will allow the CGC to conduct new research, apply fundamental approaches and chemometric methods to analyze the spectral characteristics of grain, grain end products, grain flour, pastes, gels, dough systems, solubilised grain components, grain processing intermediates and various degrading factors that affect end use quality. The overtone and harmonic vibrational bands in the visible and near infrared spectral regions will allow cross correlation with near infrared transmittance spectra from dispersive infrared spectrometers and provide insight into early spectral detection of degrading factors that affect end use quality. The fundamental vibration bands in the mid infrared spectral region will allow the research of chemical structural parameters such as the distribution of protein secondary structure in dough systems. To date, new information on the conformation of glutenin proteins has been limited by their extremely large size and insoluble nature. Sampling techniques unique to FTIR spectrometers will allow the analysis of these molecules and other factors that affect grain quality present in the complex systems mentioned previously.

OBJECTIVE:

An FTIR spectrometer is required that can be reconfigured and adapted for research projects to measure spectra in the visible, near, and mid infrared region of grain, grain end products, grain flour, pastes, gels, dough systems, solubilized grain components, grain processing intermediates and various degrading factors that affect end use quality. The current FTIR configuration will acquire spectra in the mid infrared region to elucidate the impact of molecular structure of proteins responsible for bread wheat quality. Accessories to extend spectral acquisition capabilities into the visible and near infrared range may be purchased in the future.

DELIVERY:

While delivery of the FTIR Spectrometer is requested by March 15, 2019, the best delivery that could be offered is _____.

The mandatory technical specifications are detailed in the Compliance Matrix.

COMPLIANCE MATRIX – Minimum Mandatory Performance Specification

It is mandatory that Bidder demonstrate compliance with the mandatory performance specification outline below in the Compliance Matrix.

Instructions:

1. Bidders are to provide supporting technical documentation for the specifications detailed in the Compliance Matrix, and cross-reference where the supporting documentation is found within the proposal to demonstrate compliance. Bidders are to clearly demonstrate compliance with the specifications.
2. Supporting technical documentation, such as specification sheets, performance brochures, and photographs or illustrations should provide adequate detail to substantiate that the goods offered meet the technical requirements. It is the Bidders responsibility to ensure that the submitted technical documentation provides adequate detail to prove that the proposed product(s) meet the requirements of the technical specification. If specific published technical documentation is not available, the Bidder should prepare a written narrative complete with a detailed explanation of how its bid demonstrates technical compliance.
3. If the complete specification and/or literature is not submitted as requested, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.
4. Canada will not evaluate information such as references to Web site addresses where additional information can be found.
5. Bidder must address any concerns with the Specifications in written detail to the Contracting Authority before bid closing as outlined in the Request for Proposal (RFP) document.
6. Failure to meet the minimum mandatory specifications will result in your proposal being deemed non-responsive, and be given no further consideration in the evaluation process.

COMPLIANCE MATRIX		
<p><u>Completion and submission of Mandatory Performance Specification is required to be considered responsive and for your offer to be given further consideration.</u></p> <p>a. Bidder must cross reference where in their technical offer, the performance specification is located.</p> <p>b. Provide the specification being offered which meets or exceeds <u>and cross-reference as to where the supporting documentation is found within your proposal.</u> If there is insufficient space in the table, assign SIR # (Supplementary Information Reference) and provide the appropriate details on a separate page in your offer. Where published supporting documentation is not available in the form of brochures, technical data sheets etc., prepare a written narrative complete with a detailed explanation of how its offer demonstrates compliance.</p>		
<p><u>All work and materials herein specified must meet and maintain minimum Canadian and Provincial certification(s) and approval(s) as applicable by Industry Standards.</u></p>		
Item	Description	Bidder's Response: indicate how you meet the specifications addressed below. Cross-reference where this technical specification is indicated in your bid documentation
	The Canadian Grain Commission's (CGC) Grain Research Laboratory (GRL) has a requirement for the supply, delivery and installation of one (1) fourier transform infrared spectrometer (FTIR), four (4) attenuated total reflectance (ATR) accessories, with workstation and software for operation and data analysis.	
1	Part 1: GENERAL PERFORMANCE SPECIFICATIONS	
1.1	All equipment must be new (not previously used for demonstration or loan), in that it must not include refurbished equipment, and in that all equipment must be of current manufacture.	
1.2	The instrument must be composed of standard equipment requiring no further research or development, must be a model in current production and conform to the current issue of the applicable specification and/or part number of the Original Equipment Manufacturer.	
1.3	The system must be completely installed and training provided within four weeks of delivery.	
1.4	The Bidder must be an Authorized seller for the Unit they are offering to the Crown.	

2	Part 2: Instrument Specifications	
2.1	The FTIR must be compatible with infrared (IR) sources, IR detectors and beamsplitter combinations to acquire spectra in the mid infrared (MIR) and near infrared regions (NIR) or broader including visible (VIS) and far IR (FIR).	
2.2	The FTIR must include hardware to measure spectra with a spectral resolution of 2cm ⁻¹ or better	
2.3	The FTIR optics housing must have 2 or more internal IR source positions to allow both a MIR and NIR source to be installed in the optics housing simultaneously	
2.4	The FTIR must include an internal IR source that can generate the MIR spectral range or broader	
2.5	The FTIR must include an internal IR source that can generate the NIR spectral range or broader	
2.6	The FTIR must include hardware to allow selection of internal IR source in software	
2.7	The FTIR must include a mid infrared potassium bromide (KBr) beamsplitter with a spectral range 400cm ⁻¹ to 4000cm ⁻¹ or broader	
2.8	The FTIR include a provision to install a MIR and NIR beamsplitter simultaneously and automate the exchange process without interfering with the purge state of the optics housing	
2.9	The FTIR must include a deuterated L-alanine doped triglycene sulphate (DLatGS) detector with KBr windows installed in the optics housing	
2.10	The FTIR must include a narrow band liquid nitrogen cooled mercury cadmium telluride (MCT) detector installed in the optics housing	
2.11	The FTIR must have an option to add an internal Indium Gallium Arsenide (InGaAs) detector to allow the collection of NIR spectra	
2.12	The FTIR optics housing must have 2 or more internal detector positions that allow a DLatGS, MCT and InGaAs detectors to be installed in the optics housing simultaneously with the following combinations at minimum: i.MCT and InGaAs ii.DLatGS and InGaAs	
2.13	The FTIR optics housing must have 3 or more internal detector positions that allow DLatGS, MCT and InGaAs detectors to be installed in the optics housing simultaneously	
2.14	The FTIR must include hardware for software selection of the internal detector position	

2.15	The FTIR must include hardware optics housing unit that can be purged with dry air and include a purge gas generator i. Must be specifically designed for use with FT-IR spectrometers ii. Must have an inlet pressure operating range of 60-120psig (pounds per square inch gauge) iii. Must be able to supply a minimum flow rate of 17 Litres per minute at 60psig or better to allow purging of the main optics housing and an external sampling compartment.	
2.16	The FTIR must have a minimum of one beam exit port on the left side and one beam exit port on the right side of the optics housing	
2.17	The FTIR must include hardware to allow software selection of one beam exit port on the left side and one beam exit port on the right side of the optics housing	
2.18	The FTIR must have a scan rate minimum of 15 spectra/sec at 8cm ⁻¹ or better	
2.19	The FTIR must be upgradeable with rapid scan hardware to achieve scan rates greater than 40 spectra/sec at 8cm ⁻¹ of spectral resolution or better	
2.20	The FTIR must be upgradeable with step scan hardware to acquire time resolved spectra in the microsecond range or better	
2.21	The FTIR must have a software selectable interferometer scan speed.	
2.22	The FTIR must have a 24 bit analog to digital converter with dual channel data acquisition	
2.23	The FTIR must have software selectable internal validation wheel with 4 or more positions	
2.24	The FTIR must have software selectable aperture size	
2.25	The FTIR must include automated sample compartment purge shutters	
2.26	The FTIR must include 1 set of KBr sample compartment windows	
2.27	The FTIR must allow the exchange and replacement of beamsplitter by the user.	
2.28	The FTIR must allow the exchange and replacement of IR source by the user.	
2.29	The FTIR must allow the exchange and replacement of detector by the user.	
2.30	The FTIR must be compatible with 3rd party accessories (e.g. Pike, Harrick Scientific, Specac etc.)	

3	Part 3: Attenuated total reflectance accessories	
3.1	<p>The FTIR must include a configurable universal attenuated total reflectance (ATR) accessory with the following specifications and extra parts:</p> <ul style="list-style-type: none"> i. Must have a single reflection diamond/ZnSe (zinc Selenium) crystal plate ii. Must have a 9 reflection diamond/ZnSe (zinc Selenium) crystal with trough plate iii. Must have high pressure sample clamp pressure control iv. Must have purgeable beam path v. Must have liquid and volatiles cover vi. Must have digital pressure indicator vii. Must have provision for mounting in the sample compartment area of the FTIR 	
3.2	<p>The FTIR must include a 3-12 reflection horizontal ATR accessory with the following specifications and extra parts:</p> <ul style="list-style-type: none"> i. Must have a 45 degree ZnSe crystal flat sampling plate ii. Must have a 45 degree ZnSe crystal trough sampling plate iii. Must have a selectable angle of incidence between 25 to 65 degrees iv. Must have purgeable and sealed beam path v. Must have a volatiles cover vi. Must have a powder press vii. Must have provision for mounting in the sample compartment area of the FTIR 	
3.3	<p>The FTIR must include a fiber optic mid infrared attenuated total reflectance (ATR) accessory with the following specifications and extra parts:</p> <ul style="list-style-type: none"> i. Must have a narrow band MCT detector on the accessory ii. Must have an adjustable height probe holder iii. Must have 1m fiber optic cable length iv. Must have 4.5mm diameter Diamond/ZnSe crystal v. Must have a probe shaft diameter of less than 13mm vi. Must have provision for mounting in the sample compartment area of the FTIR 	
4	Part 4: Workstation and Software requirement	
4.1	<p>The FTIR must include an instrument operation and data analysis workstation. The Instrument Operation and Analysis workstation must have the following specifications:</p> <ul style="list-style-type: none"> i. Intel i7 processor with >3Ghz Turbo frequency or better ii. 16 GB RAM or better iii. 256 GB SSD or better iv. 1 TB HDD or better v. CD/DVD writer vi. 24" TFT display or better vii. 2 or more USB 3.0 ports , 4 or more USB 2.0 ports , one or more RJ45 ports viii. one or more serial ports, one or more VGA ports , one or more display ports 	

4.2	The Instrument Operation and Analysis software must be Windows 10 Enterprise 64 bit compatible.	
4.3	The Instrument Operation and Analysis software must allow offline installation onto a workstation isolated from the internet.	
4.4	The Instrument Operation and Analysis software must be able to multitask with the ability to open multiple data files and allow the user to conduct data processing tasks concurrently during data acquisition.	
4.5	The Instrument Operation and Analysis software must be able to open multiple spectra files and generate multiple spectra plots to allow visual comparison of multiple spectra.	
4.6	The Instrument Operation and Analysis software must allow the user to select the unit for the x axis when displaying spectral graphs with at minimum the option to choose nm and cm-1 .	
4.7	The Instrument Operation and Analysis software must allow the user to customize program user interface with menus and icons relevant to user needs.	
4.8	The Instrument Operation and Analysis software must have the ability to run on any computer within the customer's organization without the use of a hardware key.	
4.9	The Instrument Operation and Analysis software must be able to use the Beer-Lambert law to quantify and integrate areas under curve peaks and allow the use of custom methods	
4.10	The Instrument Operation and Analysis software must be able to automatically detect peaks, create peak tables, and have sensitivity and threshold adjustment.	
4.11	The Instrument Operation and Analysis software must have user selectable baseline correction options to correct for tilted, concave or twisted spectra. The software must allow the user to select baseline points manually or automatically conduct baseline correction. The software must show a preview of the resulting spectra before performing the selected correction options.	
4.12	The Instrument Operation and Analysis software must be able to correct for IR absorption of water and carbon dioxide in the atmosphere. This correction must be optional and user defined.	
4.13	The Instrument Operation and Analysis software must allow reprocessing of interferograms with the option to modify the apodization function, zerofilling or interpolation to match a higher resolution interferogram, and phase correction	
4.14	The Instrument Operation and Analysis software must be capable of performing Fourier self-deconvolution	
4.15	The Instrument Operation and Analysis software must be capable of ATR correction allowing the user to specify at minimum: the number of reflections, angle of incidence sample index of refraction and crystal type	

4.16	The Instrument Operation and Analysis software must be capable of the following spectral operations: subtraction, division, normalization, straight line generation, first derivative conversion, second derivative conversion and smoothing	
4.17	The Instrument Operation and Analysis software must be capable of combining 2 spectra with different spectral ranges	
4.18	The Instrument Operation and Analysis software must be capable of converting absorbance, transmittance or reflectance y axis units into Kubelka-Munk units	
4.19	The Instrument Operation and Analysis software must be capable of curve fitting with user defined peak parameters such as position and width.	
4.20	The Instrument Operation and Analysis software must be capable of curve fitting with Lorentzian and Gaussian functions	
4.21	The Instrument Operation and Analysis software must allow the generation of report summaries after data processing. i. Software must allow the user to configure the appearance and content of analysis reports. ii. Software must allow the embedding of spectra plots into reports. iii. Software must allow user selection of which result parameters to show in reports. iv. Software must have the ability to export reports directly to printers and to PDF files.	
4.22	The Instrument Operation and Analysis software must allow the automation and customization of workflows using user defineable macros. i. The software must allow user defined macros to be shared and used as toolbar icons or menu entries. ii. The software must have a graphical editor for macro generation. iii. The software must allow direct macro coding with the native macro programming language or through a component object model interface.	
5	Part 5: Training	
5.1	Must provide on-site training, after acceptance of the instrument, for three (3) Canadian Grain Commission chemists and/or technicians by a qualified service engineer and/or applications chemist. Training must include instruction on all modes of operation of the instrument, all routine maintenance, and all features of the operating /data handling software.	
6	Part 6: Health and Safety	
6.1	The equipment must be approved by the Canadian Standards Association (CSA), CSA International OR a National Certification body for the Country of Manufacture (i.e. EC, UL) before shipping to the Canadian Grain Commission (CGC).	

7	Part 7: Electrical and Environmental Requirements	
7.1	Power requirements (Capable of operating with) 110-120V (115 V and 15 A or 20 A with) 3-prong grounded electrical cord and plug included.	
8	Part 8: Documentation and Manuals	
8.1	A complete and current set of end-user documentation including the following documents provided in English with each system delivered: i. Current instrument technical reference manual for operation and maintenance ii. Current software installation and user manual iii. Technical reference manuals from the Original Equipment Manufacturer (OEM) for each item delivered	
9	Part 9: WARRANTY	
9.1	Must provide a minimum 1 year full parts and labour warranty, which begins on the date of acceptance of the system.	
9.2	Warranty must provide on-site service by certified field service engineers.	
9.3	Warranty period must provide telephone consultation, without charge, for system operations and troubleshooting.	
9.4	Must be able to provide technical support after the warranty period for minimum 5 years.	

ANNEX "B"

BASIS OF PAYMENT

It is **MANDATORY** that Bidders submit firm prices/rates for the period of the proposed Contract for all items listed hereafter. **This section, when completed, will be considered as the Bidder's financial proposal.**

Prices quoted must remain firm for the period of the Contract. Prices **MUST** include ALL costs associated with providing the work in accordance with the Requirement, Annex A, attached herein. GST, if applicable, is to be shown as a separate item on any resulting invoice. Payment will be made in accordance with the following pricing.

FOB Destination: Canadian Grain Commission
 Room 1519 – 303 Main Street
 Winnipeg, Manitoba R3C 3G8
 Canada

CGC Customs Broker: Geo H. Young (GHY)
 1-204-947-6851

BASIS OF PAYMENT – Firm Price

Item	Description	Qty	Unit of Issue	Unit Price Currency _____
1.	Fourier Transform Infrared Spectrometer in accordance with the mandatory performance specifications detailed in Annex A – Requirement. Delivery date _____	1	each	\$
2.	On-site Training , in accordance with the mandatory performance specifications detailed in Annex A – Requirement. Includes all training materials and travel costs. Delivery date _____	1	each	\$
3.	Installation , in accordance with the mandatory performance specifications detailed in Annex A – Requirement. Includes all travel costs. Delivery date _____	1	each	\$
4.	Delivery charges , including freight and off-loading charges to CGC, Canada R3G 3G8	1	each	\$

ANNEX "C"

INSURANCE – SPECIFIC REQUIREMENT

Commercial General Liability Insurance

1. The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$2,000,000 per accident or occurrence and in the annual aggregate.
2. The Commercial General Liability policy must include the following:
 - a. Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada should read as follows: Canada, as represented by Public Works and Government Services Canada.
 - b. Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.
 - c. Products and Completed Operations: Coverage for bodily injury or property damage arising out of goods or products manufactured, sold, handled, or distributed by the Contractor and/or arising out of operations that have been completed by the Contractor.
 - d. Personal Injury: While not limited to, the coverage must include Violation of Privacy, Libel and Slander, False Arrest, Detention or Imprisonment and Defamation of Character.
 - e. Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
 - f. Blanket Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
 - g. Employees and, if applicable, Volunteers must be included as Additional Insured.
 - h. Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program)
 - i. Broad Form Property Damage including Completed Operations: Expands the Property Damage coverage to include certain losses that would otherwise be excluded by the standard care, custody or control exclusion found in a standard policy.
 - j. Notice of Cancellation: The Contractor will provide the Contracting Authority thirty (30) days prior written notice of policy cancellation or any changes to the insurance policy.
 - k. If the policy is written on a claims-made basis, coverage must be in place for a period of at least 12 months after the completion or termination of the Contract.
 - l. Owners' or Contractors' Protective Liability: Covers the damages that the Contractor becomes legally obligated to pay arising out of the operations of a subcontractor.

Solicitation No. - N° de l'invitation
5K003-181362/A
Client Ref. No. - N° de réf. du client
5K003-181362

Amd. No. - N° de la modif.
File No. - N° du dossier
WPG-8-41130

Buyer ID - Id de l'acheteur
WPG016
CCC No./N° CCC - FMS No./N° VME

ANNEX "D" to PART 3 OF THE BID SOLICITATION

ELECTRONIC PAYMENT INSTRUMENTS

The Bidder accepts any of the following Electronic Payment Instrument(s):

() Direct Deposit (Domestic and International)