



RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:

Travaux publics et Services gouvernementaux
Canada
Voir dans le document/
See herein
NA
Québec
NA

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

Vendor/Firm Name and Address

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

Issuing Office - Bureau de distribution

Travaux publics et Services gouvernementaux Canada
Place Bonaventure, portail Sud-Oue
800, rue de La Gauchetière Ouest
7e étage, suite 7300
Montréal
Québec
H5A 1L6

Title - Sujet FTIR Spectrometer	
Solicitation No. - N° de l'invitation 01B30-210149/A	Date 2020-09-29
Client Reference No. - N° de référence du client 01B30-210149	
GETS Reference No. - N° de référence de SEAG PW-\$MTA-170-15865	
File No. - N° de dossier MTA-0-43120 (170)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2020-11-02	Time Zone Fuseau horaire Heure Normale du l'Est HNE
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: Cimpan, Cristina	Buyer Id - Id de l'acheteur mta170
Telephone No. - N° de téléphone (514) 604-3855 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: CRDSTH 3600 BOUL.CASAVANT OUEST ST HYACINTHE Québec J2S8E3 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée Voir doc.	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 Security Requirements

There is no security requirement applicable to this document.

1.2 Requirement

The requirement is detailed under Annex "A" - Requirement.

1.3 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.

1.4 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](#) (2020-05-28) 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:

PWGSC Québec Region Bid Receiving Unit

Only bids submitted using epost Connect service will be accepted. The Bidder must send an email requesting to open an epost Connect conversation to the following address:

TPSGC.RQReceptionSoumissions-QRSupplyTendersReception.PWGSC@tpsgc-pwgsc.gc.ca

Note: **Bids will not be accepted if emailed directly to this email address.** This email address is to be used to open an epost Connect conversation, as detailed in Standard Instructions [2003](#), or to send bids through an epost Connect message if the bidder is using its own licensing agreement for epost Connect.

It is the Bidder's responsibility to ensure the request for opening an epost Connect conversation is sent to the email address above at least six days before the solicitation closing date.

Bids transmitted by facsimile or hardcopy to PWGSC will not be accepted.

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than seven (7) 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 Québec.

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.

2.5 Bid Challenge and Recourse Mechanisms

- (a) Several mechanisms are available to potential suppliers to challenge aspects of the procurement process up to and including contract award.
- (b) Canada encourages suppliers to first bring their concerns to the attention of the Contracting Authority. Canada's [Buy and Sell](#) website, under the heading "[Bid Challenge and Recourse Mechanisms](#)" contains information on potential complaint bodies such as:
 - Office of the Procurement Ombudsman (OPO)
 - Canadian International Trade Tribunal (CITT)
- (c) Suppliers should note that there are **strict deadlines** for filing complaints, and the time periods vary depending on the complaint body in question. Suppliers should therefore act quickly when they want to challenge any aspect of the procurement process.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

The Bidder must submit its bid electronically in accordance with section 08 of the 2003 standard instructions. The epost Connect system has a limit of 1GB per single message posted and a limit of 20GB per conversation.

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

Section I: Technical Bid

Section II: Financial Bid

Section III: Certifications

Bids transmitted by facsimile or hardcopy will not be accepted.

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

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.

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

The technical evaluation will be based on the mandatory technical criteria to be demonstrated detailed in the Annex C.

Bidders must demonstrate each of these mandatory technical criteria with documents and/or brochures and/or technical drawings, which must be submitted with their proposal.

Bidders must complete the grid in Annex C and include it with their proposal.

4.1.2 Financial Evaluation

According to the total price of the items 1 to 4 indicated in Annex B - Basis of Payment.

4.1.2.1 SACC Manual Clause

[A0222T](#) (2014-06-26), Evaluation of Price-Canadian/Foreign Bidders

4.2 Basis of Selection

4.2.1 SACC Manual Clause

[A0031T](#) (2010-08-16), Basis of Selection - Mandatory Technical Criteria

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 *(see Annex E)*

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real property 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.

5.2.3 Additional Certifications Precedent to Contract Award

5.2.3.1 Certification - Original Equipment Manufacturer (OEM)

- a) Any Bidder that is not the Original Equipment Manufacturer (OEM) for every item proposed as part of its bid is required to submit a certificate signed by the OEM (not the bidder) certifying the bidder's authority to provide and maintain the OEM's items. No Contract will be awarded to a Bidder that is not the original equipment manufacturer of the items proposed to Canada unless the manufacturer certification has been provided to Canada.
- b) If the equipment proposed by the Bidder originates with multiple OEMs, a separate OEM certification is required from each OEM.
- c) For the purposes of this bid solicitation, OEM means the manufacturer of the equipment, as evidenced by the name appearing on the equipment and on all accompanying documentation.

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

6.1.1 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](#) (2020-05-28), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

6.3.1.1 Warranty Period

a) For the emergency power module described in Annex A (section 3.4):

- section 09 of general conditions [2010A](#) (2020-05-28) is amended by replacing the period of 12 months by 60 months.

All other provisions of the warranty section remain in effect.

b) For the battery described in Annex A (section 3.4):

- section 09 of general conditions [2010A](#) (2020-05-28) is amended by replacing the period of 12 months by 24 months.

All other provisions of the warranty section remain in effect.

6.3.2 Supplemental General Conditions

[4001](#) (2015-04-01), Hardware Purchase, Lease and Maintenance, apply to and form part of the Contract.

[4003](#) (2010-08-16), Licensed Software, 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 the date of Contract to September 30, 2021, inclusive.

6.4.2 Delivery Date

All the deliverables must be received on or before March 31, 2021.

Solicitation No. - N° de l'invitation
01B30-210149/A
Client Ref. No. - N° de réf. du client
01B30-210149

Amd. No. - N° de la modif.
File No. - N° du dossier
MTA-0-43120

Buyer ID - Id de l'acheteur
MTA130
CCC No./N° CCC - FMS No./N° VME

6.4.3 Delivery Points

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

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Cristina Cimpan
Title: Acting Procurement Agent
Public Works and Government Services Canada
Acquisitions Branch Directorate Supply
Telephone: 514-604-3855
E-mail address: cristina.cimpan@tpsgc-pwgsc.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 *(to be completed by Canada at contract award)*

The Project Authority for the Contract is:

Name: _____
Title: _____
Organization: _____
Address: _____

Telephone: _____
Facsimile: _____
E-mail address: _____

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 *(to be filled by the bidder)*

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: _____
Facsimile: _____
E-mail address: _____

6.6 Payment

6.6.1 Basis of Payment - Firm Price, Firm Unit Price(s) or Firm Lot Price(s)

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit prices, as specified in Annex B for a cost of \$ _____ (*will be indicated at the 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 Multiple Payments

SACC Manual Clauses H1001C (2008-05-12), Multiple Payments

6.6.3 SACC Manual Clauses

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

6.6.4 Electronic Payment of Invoices – Contract (*Annex D*)

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

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;
- c. Direct Deposit (Domestic and International);
- d. Electronic Data Interchange (EDI).

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 has been 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 (*to be filled by the bidder*)

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____ (*insert the name of the CANADIAN province or territory*).

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 supplemental general conditions [4001](#) (2015-04-01), Hardware Purchase, Lease and Maintenance;
- (c) the supplemental general conditions [4003](#) (2010-08-16), Licensed Software;
- (d) the general conditions [2010A](#) (2020-05-28), General Conditions - Goods (Medium Complexity);
- (e) Annex A, Requirement;
- (f) Annex B, Basis of payment;
- (g) the Contractor's bid dated _____ (*insert date of bid*) (*If the bid was clarified or amended, insert at the time of contract award: “, as clarified on _____” or “, as amended on _____” and insert date(s) of clarification(s) or amendment(s)*)

6.11 SACC Manual Clauses

[A9068C](#) (2010-01-11), Government Site Regulations
[B1501C](#) (2018-06-21), Electrical equipment
[D0018C](#) (2007-11-30), Delivery and Unloading
[G1005C](#) (2016-01-28), Insurance - No Specific Requirement

6.12 Dispute Resolution

- (a) The parties agree to maintain open and honest communication about the Work throughout and after the performance of the contract.
- (b) The parties agree to consult and co-operate with each other in the furtherance of the contract and promptly notify the other party or parties and attempt to resolve problems or differences that may arise.
- (c) If the parties cannot resolve a dispute through consultation and cooperation, the parties agree to consult a neutral third party offering alternative dispute resolution services to attempt to address the dispute.
- (d) Options of alternative dispute resolution services can be found on Canada's Buy and Sell website under the heading "[Dispute Resolution](#)".

ANNEX "A"

REQUIREMENT

FOURIER TRANSFORM INFRARED SPECTROMETER (FTIR) FOR THE ANALYSIS OF MILK AND DAIRY PRODUCTS

1. Background

This equipment is required for the Saint-Hyacinthe Research and Development Center (CRD) (Saint-Hyacinthe, Quebec, Canada). Replacing a system dating from 1999, the FTIR infrared analyzer must analyze the composition of liquid and semi-liquid dairy products. It must allow the analysis of milk (cow, sheep, goat and buffalo) raw, pasteurized (HTST, UHT), homogenized, reduced in lactose or fortified in proteins, creams, drinkable yogurts, chocolate milks, whey, ultrafiltration, microfiltration and reverse osmosis concentrates and their permeates. It must simultaneously measure the concentrations (%) of proteins, fat, lactose, total solids and non-fat solids in addition to the casein content for the milk.

The FTIR spectrometer is used for research and development (R&D) applications and by the industrial program of Saint-Hyacinthe CRD. The system must consist of an analyzer (1), a laptop computer (1), control and data acquisition software (1) and an emergency power supply module (1).

In this context, here are the specifications for the infrared analyzer.

2. Constraints

The system must be approved by the Canadian Standards Association (CSA).

3. Mandatory technical criteria:

3.1 The FTIR infrared analyzer must:

- 3.1.1** be operated by a power supply between 100 and 140 V AC, single phase, frequency 50-60 Hz.
- 3.1.2** using a diode laser as a light source;
- 3.1.3** be equipped with an FTIR interferometer scanning the infrared spectrum covering at least a range of wavelengths between 400 and 4000 cm⁻¹;
- 3.1.4** provide a minimum spectral resolution of 18 cm⁻¹;
- 3.1.5** be provided with an automatic mirror adjustment system;
- 3.1.6** allow the analysis of small volume samples: minimum volume equal to or less than 8 ml;
- 3.1.7** allow the analysis of samples whose temperature varies from 5 to 55 ° C;
- 3.1.8** be equipped with a heated pipette to temper the milk samples at the inlet of the analyzer;
- 3.1.9** be provided with a sample supply line fitted with a removable filter that can be cleaned by the operator;
- 3.1.10** be equipped with an electronic system for automatic humidity control without requiring the use of a desiccant;
- 3.1.11** be equipped with a pumping system that automatically adapts to the viscosity of the sample;

- 3.1.12** allow multisampling analyzes by a measurement sequence to be carried out on a sufficient number of sub-samples (more than 30) to eliminate the need for high pressure homogenization of samples containing fat;
- 3.1.13** perform the analysis of a milk sample in 30 seconds or less;
- 3.1.14** allow automatic zero adjustments and cell cleaning conditions according to the characteristics of the sample;
- 3.1.15** be equipped with diagnostic tools using smart chips;
- 3.1.16** be equipped with a bidirectional cuvette cleaning system; in the event of a blockage, this system must allow automatic cleaning without having to disassemble the tubing;
- 3.1.17** be delivered with two reservoirs for Zero solution and soap, a waste collection container and drain tubes;
- 3.1.18** meet the requirements of ISO 9622 / IDF 141 for the application of medium infrared spectroscopy for the analysis of milk and liquid dairy products;
- 3.1.19** be delivered with an installation and maintenance kit (tools, solution for zeroing, cleaning solution);
- 3.1.20** be delivered with a minimum one-year warranty, covering all parts and labor.

3.2 The laptop computer must:

- 3.2.1** use the Microsoft® Windows 10 Professional 64-bit operating system;
- 3.2.2** be delivered with a flat screen 19 inches or more, a keyboard and mouse;
- 3.2.3** be delivered with a minimum one-year warranty, covering all parts and labor.

3.3 The software must:

- 3.3.1** be compatible with the Microsoft® Windows 10 Professional 64-bit operating system;
- 3.3.2** provide self-diagnostic tools, which report and record real-time diagnostic events, maintenance and troubleshooting histories;
- 3.3.3** inform the operator, with a warning, when the wear of the cuvette requires replacement;
- 3.3.4** allow automatic instrument standardization (drift correction) using water spectra to calculate the optical path length and determine the required intensity correction;
- 3.3.5** allow the use of calibration data, including infrared spectra and reference chemical analysis data, created by other compatible FTIR infrared analyzers;
- 3.3.6** be able to be updated at no additional cost.

- 3.4** The emergency power module must be guaranteed for a minimum period of 5 years and must be equipped with a battery with a power of 1100 watts or more, guaranteed for a minimum period of 2 years.

3.5 The included and installed calibrations (5) shall provide prediction models for:

- 3.5.1** MILK: raw, homogenized, pasteurized and commercial milks for the analysis of proteins, fats, total solids, non-fat solids, lactose, glucose, galactose, urea, free fatty acids, casein, citric acid and acidity titratable;
- 3.5.2** CREAM: raw, homogenized, pasteurized, commercial creams and whey creams for the analysis of proteins, fats, lactose, total solids and non-fat solids;
- 3.5.3** WHEY & PERMEAT: whey and ultrafiltration permeates for the analysis of proteins, fats, lactose, total solids, non-fat solids and titratable acidity;
- 3.5.4** WHEY CONCENTRATES & CONCENTRATED PERMEATES: concentrated whey, concentrated permeates, whey protein concentrates and isolates for the analysis of proteins, fats, lactose, total solids, non-fat solids and titratable acidity ;

3.5.5 CONCENTRATED AND FORTIFIED MILKS: chocolate milks, flavored milks, condensed milks, evaporated milks, sweetened condensed milks, infant formula for the analysis of proteins, fats, lactose, total solids and non-fat solids.

3.6 The analyzes of the MILK components must at least cover the following ranges:

- 3.6.1 Proteins: 0 to 6.4%;
- 3.6.2 Fat: 0 to 10.2%;
- 3.6.3 Total solids: 0 to 21.5%;
- 3.6.4 Non-fat solids: 0 to 11.6%;
- 3.6.5 Lactose: 0 to 5.8%;
- 3.6.6 Caseins: 0 to 6.9%.

3.7 The analyzes of the CREAM components must cover the following ranges as a minimum:

- 3.7.1 Proteins: 0 to 3.9%;
- 3.7.2 Fat: 0 to 50.5%;
- 3.7.3 Total solids: 0 to 55.2%;
- 3.7.4 Non-fat solids: 0 to 9.2%;
- 3.7.5 Lactose: 0 to 4.5%.

3.8 The analyzes of the components of WHEY and PERMÉAT must at least cover the following ranges:

- 3.8.1 Proteins: 0 to 4.5%;
- 3.8.2 Fat: 0 to 1.1%;
- 3.8.3 Total solids: 0 to 11.8%;
- 3.8.4 Lactose: 0 to 6.1%.

3.9 The analyzes of the components of WHEY and CONCENTRATED PERMEATES must at least cover the following ranges:

- 3.9.1 Proteins: 0 to 30%;
- 3.9.2 Fat: 0 to 2.4%;
- 3.9.3 Total solids: 0 to 38.6%;
- 3.9.4 Non-fat solids: 0 to 37.4%;
- 3.9.5 Lactose: 0 to 25.8%.

3.10 The analyzes of the components of CONCENTRATED and FORTIFIED MILKS must at least cover the following ranges:

- 3.10.1 Proteins: 0 to 15%;
- 3.10.2 Fat: 0 to 36%;
- 3.10.3 Total solids: 0 to 52.2%;
- 3.10.4 Non-fat solids: 0 to 41.8%;
- 3.10.5 Lactose: 0 to 25.1%.

3.11 The REPEATABILITY of the analyzes of the composition of MILK must be (expressed in coefficients of variation [CV1%]):

<0.25% CV (protein, fat and lactose, total solids);

3.12 The PRECISION of the analyzes of the composition of MILK must be (expressed in coefficients of variation [CV1%]):

<1.0% CV (protein, fat, lactose and total solids);

¹CV % = *Standard deviation divided by the mean of the samples tested multiplied by 100.*

4. Certification of Conformity

The supplier must provide a written certificate of conformity demonstrating that the system has been tested at the manufacturer's factory and that all elements of the system are functional. The certificate must be provided with the delivery of the system.

5. Delivery

The system must be delivered no later than March 31, 2021 to the Saint-Hyacinthe Research and Development Center located at the following address:

Saint-Hyacinthe Research and Development Center
Agriculture and Agri-Food Canada
3600, Casavant blvd. West
Saint-Hyacinthe, QC
J2S 8E3

6. Installation and training

The system must be installed in the laboratory of the Saint-Hyacinthe Research and Development Center. Complete training must be given, in French or English, to at least two users. The training should include the following items, but not be limited to: maintenance, use, calibration and operation of the device. Additionally, training must be completed within 2 weeks of delivery and acceptance of the equipment.

7. Deliverables

Provide all technical documentation (operator and parts manuals) upon delivery of the equipment, i.e. complete user, maintenance and calibration guides in French and / or English in 2 hard copies or in electronic version.

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File No. - N° du dossier
MTA-0-43120

Buyer ID - Id de l'acheteur
MTA130
CCC No./N° CCC - FMS No./N° VME

ANNEX "B"

BASIS OF PAYMENT

Item	Item description	Amount	Unit price *
1	Fourier Transform Infrared Spectrometer (FTIR), comprising one (1) analyzer, one (1) laptop computer, one (1) control and data acquisition software and one (1) emergency power module and all accessories (in accordance with the requirements of Annex A), and with the attestation of conformity and the CSA certificate.	1	_____ \$
2	On-site installation and training, in accordance with the specifications of Annex A, Article 6 (includes training material and travel costs).	1	_____ \$
3	Technical documentation (see article 7 of Annex A).	1	_____ \$
4	All costs of packaging, transport and delivery.	1	_____ \$
TOTAL PRICE (1+2+3+4) :			_____ \$ *

* If other currency than \$ CAD, please indicate: _____

* Customs duties included.

* Applicable taxes extra.

ANNEX "C"

MANDATORY TECHNICAL CRITERIA

Bidders must demonstrate each of these mandatory technical criteria with documents and/or brochures and/or technical drawings, which must be presented with their proposal.

No.	Mandatory technical criteria to be demonstrated (see annex A)	Reference: Please indicate where these technical criteria are demonstrated in your technical submission (section / page).
3.1.3	The FTIR infrared analyzer (1) must be equipped with an FTIR interferometer scanning the infrared spectrum covering at least a range of wavelengths between 400 and 4000 cm ⁻¹ ;	
3.1.4	The FTIR infrared analyzer must provide a minimum spectral resolution of 18 cm ⁻¹ ;	
3.1.6	The FTIR infrared analyzer must allow the analysis of small volume samples: minimum volume equal to or less than 8 ml;	
3.1.8	The FTIR infrared analyzer must be equipped with a heated pipette to temper the milk samples at the entrance to the analyzer;	
3.1.9	The FTIR infrared analyzer must be equipped with a sample supply line fitted with a removable filter that can be cleaned by the operator;	
3.1.10	The FTIR infrared analyzer shall be equipped with an electronic system for automatic humidity control without requiring the use of a desiccant;	
3.1.11	The FTIR infrared analyzer must be equipped with a pumping system that automatically adapts to the viscosity of the sample;	
3.1.12	The FTIR infrared analyzer shall be capable of performing multisampling analyzes by one measurement sequence on a sufficient number of subsamples (more than 30) to eliminate the need for high pressure homogenization of samples containing fat;	
3.1.15	The FTIR infrared analyzer must be equipped with diagnostic tools using smart chips;	
3.1.16	The FTIR infrared analyzer must be equipped with a two-way cuvette cleaning system; in the event of a blockage, this system must allow automatic cleaning without having to disassemble the tubing;	

3.2.1	The laptop computer must use the Microsoft® Windows 10 Professional 64-bit operating system;	
3.3.4	The software must allow automatic standardization of the instrument (drift correction) using water spectra to calculate the optical path length and determine the necessary intensity correction;	
3.3.5	The software must allow the use of calibration data, including infrared spectra and reference chemical analysis data, created by other compatible FTIR infrared analyzers;	
3.5.1	The calibrations included and installed must provide prediction models for milk (raw, homogenized, pasteurized and commercial milks for analysis of protein, fat, total solids, non-fat solids, lactose, glucose, galactose, urea, acids free fat, casein, citric acid and titratable acidity);	
3.5.2	The included and installed calibrations must provide prediction models for cream (raw, homogenized, pasteurized, commercial creams and whey creams for the analysis of protein, fat, lactose, total solids and non-fat solids);	
3.5.3	The included and installed calibrations must provide prediction models for whey and permeate (whey and ultrafiltration permeates for analysis of protein, fat, lactose, total solids, non-fat solids and titratable acidity);	
3.5.4	The calibrations included and installed must provide prediction models for whey concentrates and permeate concentrates (whey concentrates, permeate concentrates, whey protein concentrates and isolates for analysis of protein, fat, lactose, total solids, non-fat solids and titratable acidity);	
3.5.5	Included and installed calibrations must provide prediction models for condensed and fortified milks (chocolate milks, flavored milks, condensed milks, evaporated milks, sweetened condensed milks, infant formula for protein analysis, fat, lactose, total solids and non-fat solids);	

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ANNEX "D"

ELECTRONIC PAYMENT INSTRUMENTS

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

- ☐ VISA Acquisition Card;
- ☐ MasterCard Acquisition Card;
- ☐ Direct Deposit (Domestic and International);
- ☐ Electronic Data Interchange (EDI).

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ANNEX "E"

COMPLETE LIST OF COMPANY BOARD OF DIRECTORS

NOTE TO BIDDERS

WRITE ALL DIRECTOR'S FULL NAMES IN BLOCK LETTERS

IF YOU ALREADY HAVE A PROCUREMENT BUSINESS NUMBER (PBN), PLEASE INSERT BELOW :
