



**RETURN BIDS TO:**

**RETOURNER LES SOUMISSIONS À:**

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  
FAX pour soumissions: (514) 496-3822

**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**

<b>Title - Sujet</b> Rhéomètre / viscosimètre	
<b>Solicitation No. - N° de l'invitation</b> 01B30-190386/A	<b>Date</b> 2018-12-20
<b>Client Reference No. - N° de référence du client</b> 01B30-190386	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$MTA-670-15167	
<b>File No. - N° de dossier</b> MTA-8-41236 (670)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2019-01-30</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Heure Normale du l'Est HNE
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Ibrahimy, Saad	<b>Buyer Id - Id de l'acheteur</b> mta670
<b>Telephone No. - N° de téléphone</b> (514) 207-9568 ( )	<b>FAX No. - N° de FAX</b> (514) 496-3822
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> MINISTERE DE L'AGRICULTURE ET DE L'AGROALIMENTAIRE CDRSH - ST-HYACINTHE 3600 BOUL.CASAVANT OUEST ST HYACINTHE Québec J2S 8E3 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**

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

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

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## **PART 1 - GENERAL INFORMATION**

### **1.1 Security Requirements**

There is no requirement related to security.

### **1.2 Requirement**

The Work to be performed is detailed under Article 6.2 of the resulting contract clauses.

### **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 Trade Agreements**

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

### **1.5 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.

Subsection 5.4 of [2003](#), Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days  
Insert: 90 days

## 2.2 Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated in the bid solicitation.

*Note this is the email address for epost Connect service only*  
RQ Réception Soumissions / QR Supply Tenders Reception (TPSGC/PWGSC)  
[TPSGC.RQReceptionSoumissions-QRSupplyTendersReception.PWGSC@tpsgc-pwgsc.gc.ca](mailto:TPSGC.RQReceptionSoumissions-QRSupplyTendersReception.PWGSC@tpsgc-pwgsc.gc.ca)

Bids will be not be accepted if emailed directly to this email address. This email is only to initiate an ePost Connect conversation, as detailed in the Standard Instructions.

## 2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later 10 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 Quebec.

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 there is a discrepancy between the wording of the soft copy on electronic media and the hard copy, the wording of the hard copy will have priority over the wording of the soft 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

Bidders should fill out the Annex C "Mandatory Technical Criteria" below in order to identify the technical bid page and/or section where the criteria are demonstrated.

The bidder must demonstrate that its technical bid is compliant with every technical criteria listed in Annex C. In order to do so, a drawing and/or a technical sheet and/or a descriptive document of the proposed equipment must be provided with the bid. Internet links will not be accepted.

Only the information included in the technical bid will be taken into consideration in the evaluation of the mandatory technical criteria.

A list of parts, including consumable products and accessories should be provided with the bid.

Although bidders must propose products meeting all mandatory specifications and components outlined in Annex A; at the bid closing date, bids will be evaluated on following preselected mandatory criteria mentioned in Annex C to be demonstrated in the bid.

#### 4.1.2 Financial Evaluation

*SACC Manual* Clause [A0222T](#) (2014-06-26), Evaluation of Price – Canadian / Foreign Bidders

The total price for the items (Items 1+2+3+4 = TOTAL) indicated in Annex B "Basis of Payment" will be evaluated.

### 4.2 Basis of Selection

#### 4.2.1 SACC Manual Clause – Mandatory Technical Criteria

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

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## **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**

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 \(2018-06-21\)](#), 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 June 30<sup>th</sup>, 2019 inclusive

#### **6.4.2 Delivery Date**

While delivery is requested by March 31<sup>st</sup>, 2019, the best delivery that could be offered is \_\_\_\_\_.

#### **6.4.5 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: Saad Ibrahimy

Solicitation No. - N° de l'invitation  
01B30-190386/A  
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File No. - N° du dossier  
MTA-8-41236

Buyer ID - Id de l'acheteur  
MTA670  
CCC No./N° CCC - FMS No./N° VME

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Title: Supply specialist  
Public Works and Government Services Canada  
Acquisitions Branch  
Address: Place Bonaventure, portail Sud-Ouest, 800, de La Gauchetière West Street, Floor 7, # 7300.  
Montreal (Qc) H5A 1L6  
Telephone: 514-207-9568  
E-mail address: saad.ibrahimy@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 Technical Authority

The Technical Authority for the Contract is:

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

The Technical Authority named above 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 Technical Authority, however the Technical 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: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

## 6.6 Payment

### 6.6.1 Basis of Payment – Firm Price

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm lot price(s), as specified in Annex "B" for a cost of \$ \_\_\_\_\_.  
Customs duties are subject to exemption 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 Limitation of Price

SACC Manual clause [C6000C](#) (201708-17) Limitation of Price

## 6.6.3 Single Payment

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

## 6.6.4 SACC Manual Clauses

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

## 6.6.5 Electronic Payment of Invoices – Contract

*This clause will be revised based on the choices selected at 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);
- e. Wire Transfer (International Only);

## 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.

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01B30-190386/A  
Client Ref. No. - N° de réf. du client  
01B30-19-0386

Amd. No. - N° de la modif.  
File No. - N° du dossier  
MTA-8-41236

Buyer ID - Id de l'acheteur  
MTA670  
CCC No./N° CCC - FMS No./N° VME

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## 6.9 Applicable Laws

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

## 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), apply to and form part of the Contract;
- (c) Annex A, Requirement;
- (d) Annex B, Basis of payment;
- (e) the Contractor's bid dated \_\_\_\_\_ (*insert date of bid*)

## 6.11 SACC Manual Clauses

A9068C (2010-01-11) Government Site Regulations  
B1501C (2018-06-21) Electrical Equipment  
G1005C (2016-01-28) Insurance - No Specific Requirement

## ANNEX "A" REQUIREMENT

### Rheometer

#### 1. Background

The purpose of this device is to modernize our rheological analysis tools in order to make them more efficient. A high-end, next-generation rheometer for laboratory use will enable us to quantify the rheological parameters of a myriad of food matrices (beverages, emulsions, hydrogel, yogurts, etc.), under controlled conditions. The new device will modernize and improve the scientific and technical capacity of our equipment, thus enabling federal researchers to better support innovation, uptake and sustainability in the sector. It will enable the measurement of the rheological properties of food materials through flow, transient analysis (creep and stress relaxation) and viscoelastic property tests.

In this context, the specifications for the rheometer are as follows.

#### 2. Minimum performance specifications

- 2.1 The system and its components must be water-resistant and must be accessible for maintenance operations;
- 2.2 The exterior cladding must be rustproof;
- 2.3 The system must meet the electrical standards in effect in the province of Quebec. Proof is required no later than at the time of installation of the unit.  
Proof: The system must be accompanied by a certification issued by an organization that is accredited by the Standards Council of Canada and recognized by the provincial authority with jurisdiction, in this case the Régie de Bâtiment du Québec;
- 2.4 The supplier must provide written certification to the effect that the unit was previously tested in the manufacturer's plant and that all system components are operational.
- 2.5 The angular velocity (CR) of the rheometer must have a minimum range of 0 to 300 radians per second (rad/s);
- 2.6 The rheometer's angular displacement resolution must be  $\leq 25$  nanoradians (nrad);
- 2.7 The inertia of the rheometer's motor must be  $\leq 20$  microNewton meters per second squared ( $\mu\text{N}\cdot\text{m}\cdot\text{s}^2$ );
- 2.8 The rheometer must enable the following tests to be performed:
  - 2.8.1 Tests in oscillatory mode
    - 2.8.1.1 Fixed-frequency stress sweep (linear and logarithmic);
    - 2.8.1.2 Fixed-stress frequency sweep (linear and logarithmic);
    - 2.8.1.3 Fixed-deformation frequency sweep (linear and logarithmic);
    - 2.8.1.4 Fixed-frequency deformation sweep (linear and logarithmic);
    - 2.8.1.5 Fixed-frequency and -stress temperature sweep;
    - 2.8.1.6 Continuous-flow oscillatory stress overlay;
    - 2.8.1.7 Continuous-flow oscillatory deformation overlay;
    - 2.8.1.8 Simultaneous overlay of multiple frequencies onto previous modes
  - 2.8.2 Tests in flow mode
    - 2.8.2.1 Stress sweep;
    - 2.8.2.2 Shear rate sweep;
    - 2.8.2.3 Stress sweep by stages;
    - 2.8.2.4 Stress sweep by stages with periods of stability; and

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2.8.2.5 Fixed-stress or -shear temperature sweep.

2.8.3 Tests in transient mode

- 2.8.3.1 Constant and recoverable stress creep; and
- 2.8.3.2 Stress relaxation.

- 2.9 The rheometer must be capable of conducting tests as per mandatory specification 2.8 in mixed procedures;
- 2.10 The rheometer must allow for automatic control and adjustment of the air gap. The adjustment of the air gap must be made in the following ways, but not limited to: automatic, velocity profile defined by user, and normal force;
- 2.11 The rheometer must have the following measuring geometries: parallel plate geometries of 25, 40 and 60 millimeters (mm), cone-plate of 2° angle geometries of 40, 50 and 60 mm, and vapour and humidity protection cells;
- 2.12 The rheometer must have a measurement system with concentric cylinders and double gap with temperature control (minimal range of 0° to 100°C) by Peltier effect, including the Peltier temperature controller, the external cylinder and the cover; the rotor and the cover;

### 3. Training

The supplier must provide training on the optimal use of the device. The training must be provided to a group of six people. It should be given in French, otherwise in English, at the Saint-Hyacinthe Research and Development Centre. See address under point 4. Training hours are from Monday to Friday, from 8 a.m. to 4 p.m., exclusive of statutory holidays. Training must include, but not be limited to, the following items: the maintenance, use and functioning of the devices and the data processing software.

### 4. Delivery and installation

The system must be delivered and installed at the Saint-Hyacinthe Research and Development Centre, located at the following address:

Agriculture and Agri-Food Canada  
Saint-Hyacinthe Research and Development Centre  
3600 Casavant Boulevard West  
Saint-Hyacinthe, Quebec J2S 8E3

Delivery hours are from Monday to Friday, from 8 a.m. to 4 p.m., exclusive of statutory holidays.

### 5. Deliverables

- The Rheometer system, including all accessories required for its proper functioning. A parts list including consumables, accessories and the operator's manual must be supplied with the equipment, ideally in French, otherwise in English: two paper copies or the electronic version must be supplied;
- Delivery and Installation;
- Training on the use of the equipment.

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## ANNEX "B" BASIS OF PAYMENT

### Note to Bidders:

- Firm prices, all inclusive are required for all items in the table below.
- Applicable taxes are extra for all items.

Item	Item Description	Quantity	Unit Price
1	Rheometer system as described in point 2 of Annex A – Requirement; all accessories and operator's manual are included.	1	\$ _____
2	Delivery as described in point 4 of Annex A – Requirement.	1	\$ _____
3	Installation as described in point 4 of Annex A – Requirement.	1	\$ _____
4	Training (group of 6 people) as described in point 3 of Annex A – Requirement.	1	\$ _____
	<b>Grand total (including items 1, 2, 3 and 4)</b>		<b>CAD \$ _____</b>

## ANNEX “C” MANDATORY TECHNICAL CRITERIA

Bidder must clearly demonstrate in the technical submission that product is compliant with those particular specification.

Criterion No.	Description of criterion	Technical bid reference (page and/or section)
1	The rheometer must be able to take measurements in controlled deformation (CS) and controlled stress (CR) modes.	
2	The rheometer must have a CS and CR (oscillation and rotation) torque of $\leq 10$ nanoNewton metres (nN.m) and a maximum torque of $\geq 200$ microNewton metres (mN.m).	
3	The rheometer's torque resolution must be $\leq 0.1$ nN.m	
4	The rheometer's frequency must have a minimum range of $1.0E-7$ to 600 rad/s.	
5	The rheometer's normal force must have a minimum range of 0.01 to 50 Newtons (N).	
6	The rheometer must enable tests to be performed in oscillatory, flow, and transient modes, in both separate and mixed procedures.	
7	The rheometer must enable fixed-frequency, fixed-deformation, and fixed-stress sweep tests to be performed.	
8	The rheometer must include temperature control by Peltier plate (temperature-controlled bath included) in a minimum temperature range of 0 to 100 degrees Celsius (°C).	
9	The rheometer software must include a complete data analysis model on the equipment. The analysis model must be able to be used on the other computers at the Research Centre. Data transfer must be via an internal network or via cable or USB; WIFI is not available.	
10	The rheometer software must be compatible with Windows 10.	

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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);
- Wire Transfer (International Only);