



## 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

## INVITATION TO TENDER

## APPEL D'OFFRES

**Tender 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.

### Soumission 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 et 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

<b>Title - Sujet</b> Robot extraction ADN	
<b>Solicitation No. - N° de l'invitation</b> 01756-190322/A	<b>Date</b> 2019-01-15
<b>Client Reference No. - N° de référence du client</b> 01756-190322	<b>GETS Ref. No. - N° de réf. de SEAG</b> PW-\$MTA-370-15186
<b>File No. - N° de dossier</b> MTA-8-41332 (370)	<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 2019-02-25</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> Abidar, Samia	<b>Buyer Id - Id de l'acheteur</b> mta370
<b>Telephone No. - N° de téléphone</b> (514) 212-4965 ( )	<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 430 BOULEVARD GOUIN ST JEAN S'RICHELIEU Québec J3B 3E6 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

<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 Requirement

The Work to be performed 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).

## 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

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## **2.1.1 SACC Manual Clauses**

### **2.1.1.1 Best Delivery Date - Bid**

While delivery is requested by March 31, 2019, the best delivery that could be offered is \_\_\_\_\_.

## **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.

## **2.3 Enquiries - Bid Solicitation**

All enquiries must be submitted in writing to the Contracting Authority no later than **(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 \_\_\_\_\_ (*insert the name of the province or territory*).

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.

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## **PART 3 - BID PREPARATION INSTRUCTIONS**

### **3.1 Bid Preparation Instructions**

Due to the nature of the bid solicitation, bids transmitted by Epost Connect service will not be accepted.

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid (2 hard copies)

Section II: Financial Bid (1 hard copies)

Section III: Certifications (1 hard copies)

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.

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 Exchange Rate Fluctuation**

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

##### **3.1.2 SACC Manual Clauses**

#### **Section III: Certifications**

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

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## 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

It is mandatory to provide the technical / descriptive documents of the product that you are offering ( eg. drawing, data sheet, sketch, etc.) or a description to allow its technical evaluation. Failure to comply will render your bid non responsive.

Although the bidder must propose products that meet all of the following specifications and technical components described in Annex A at the closure date, bids will be evaluated on the technical requirements of Annex C - Mandatory technical evaluation criteria.

##### 4.1.1.1 Mandatory Technical Criteria

See Annex C "Mandatory technical evaluation criteria"

**IMPORTANT: The bidder must clearly demonstrate how the proposed equipment complies to each mandatory technical criteria at Annex C. Simply stating that the criteria are met is not sufficient.** Where it is necessary to refer to other documentation that is included in the proposal, bidders should include the precise location of the reference material including the title of the document, and the page and paragraph numbers. It is the bidder's responsibility to provide enough details to permit a complete evaluation.

Any proposal that does not clearly demonstrate compliance with each of the technical requirements listed in the "Mandatory Technical Criteria" (Annex C) at the closing date will be considered non-responsive.

#### 4.1.2 Financial Evaluation

Total financial evaluation: Sum of items 1 to 2 mentioned in Annex "B" .

##### 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

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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.

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Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](#)" list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed annex titled Federal Contractors Program for Employment Equity - Certification, before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.



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## 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 the date of the contract until the end of the warranty period inclusively.

#### 6.4.2 Delivery Date

All the deliverables must be received on or before \_\_\_\_\_ (*insert the date*).

#### 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: Samia Abidar  
Title: Supply officer  
Public Works and Government Services Canada  
Acquisitions Branch  
Telephone: 514-212-4965  
Facsimile: 514-922-3822

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E-mail address: samia.abidar@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 Technical Authority for the Contract is:

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_

Telephone: \_\_\_\_\_  
Facsimile: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

The Technical 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: \_\_\_\_\_  
Facsimile: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

## 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 lot price(s), as specified in Annex "B" for a cost of \$ \_\_\_\_\_.  
Customs duties are subject to exemption and Applicable Taxes are extra.

The contract will be awarded in Canadian currency. The rate given by the Bank of Canada in effect on the bid solicitation closing date will be applied as a conversion factor.

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.

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### 6.6.2 Limitation of Expenditure

SACC Manual clause C6000C (2017-08-17) Limitation of Price

### 6.6.3 Single Payment

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

### 6.6.4 SACC Manual Clauses

SACC Manual clause A2000C (2006-06-16) Foreign Nationals (Canadian Contractor)

SACC Manual clause A2001C (2006-06-16) Foreign Nationals (Foreign Contractor)

SACC Manual clause C2000C (2007-11-30) Taxes - Foreign-based Contractor

## 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.

## 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 \_\_\_\_\_ (*insert the name of the province or territory as specified by the Bidder in its bid, if applicable*).

## 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;

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- (b) the supplemental 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*) (*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**

SACC Manual clause A9068C (2010-01-11) Government Site Regulations

SACC Manual clause B1501C (2018-06-21) Electrical Equipment

SACC Manual clause G1005C (2016-01-28) Insurance - No Specific Requirement

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## ANNEX "A"- REQUIREMENT

### **Liquid Handling Arm and Robotic Manipulating Arm**

- System must include an eight-tip liquid handling arm with variable distance between tips from 9 to 38mm. Each tip must be independently controlled and be used individually to access samples, one at a time.
- Pipetting system must NOT be driven by a liquid filled circuit activated by syringes. For simplified maintenance purposes, no liquid filled pipetting, no system fluid and waste bottles required. Water displacement technologies will not be considered because of contamination potential which is deleterious to RNA extraction protocols.
- Pipetting arm internal channels must be protected by an in-line filter.
- Process security through Inline filter via PMP pressure sensing; Pressure sensing prevents liquid and aerosols entering the air chamber of the pipetting channel ensuring absence of cross-contamination.
- Pipetting technology must include;
  - capacitive Liquid Level Detection for use with conductive liquids
  - pressure-based Liquid Level Detection for use with non-conductive liquids
  - Pressure Monitored Pipetting for real-time quality control of all liquid transfer processes
- The pressure monitored pipetting system must be ready to operate without teaching or calibration required upon installation.
- The instrument must utilize disposable tips. All tip sizes must utilize the same disposable tip adapter. Disposable tips are available in 10, 50, 200 and 1000 µL sizes.
- Disposables tips are available from the original manufacturer AND 3<sup>rd</sup> party plasticware suppliers. Tips must NOT be restricted to a patented design. Disposable tips for the system must be available from at least 3 DIFFERENT manufacturing sources.
- Instrument must have a pipetting range from 0.5uL to 1000ul.
- The system must be able to utilize up to two independent arms for greater throughput through multitasking. A Liquid Handling arm as well as an independent robotic gripper arm to move labware and consumables around the work surface.
- For any reason, there must be the possibility to easily upgrade or exchange the arms of the robotic system at customer's site.
- System must be enclosed with Plexiglas protection shields, securing the work deck and user accidental tampering.

- 
- The Robotic gripper must have access to each edge (sides, front and rear) of the system to allow optimal device integration and minimize occupation of the liquid handling area.

### **Software**

- Editing of the software protocol must be able to be navigated from a single program interface.
- For user safety and process integrity, the instrument must include electro-magnetic door locks that are controlled by the software.
- System software is equipped with an instrument simulator that can be installed on many separate PC in order to program entire functional methods at a remote location while the actual instrument is running.

### **Accessories, Storage and Miscellaneous**

- The worksurface of the robot (« deck or worktable ») must have a minimum length of 1 meter (upto 2 meters) to accommodate various labware.
- The system must provide at least 8 microplates or disposable tips storage positions in addition to a minimum on deck 16 microplate positions.

### **Integrated Peripherals**

- The system can be integrated with a fully automated multimode microplate reader which includes Absorbance and Fluorescence.
- The system must include a shaking device with variable orbital settings and software controlled speed critical for DNA extraction procedure via magnetic beads.
- The system must have 3 cooling device (+4C to 100C) critical for keeping precious reagents at 4C and enabling complex protocol incubations.
- The instrument must be capable of adding a storage stacker with exchangeable columns on the side of the instrument.

### **Application Specifications:**

- Qualified protocols means that data has been verified by kit companies and received acceptance.
- System must be capable of;
  - Library prep for NGS protocols
  - Normalization of DNA
  - qPCR setup
  - Pooling
  - Capture
- Dedicated touch based operator interface for protocol selection and worktable set-up

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**Delivery address:**

Saint-Jean-sur-Richelieu Research and Development Centre  
430 Gouin Boulevard  
Saint-Jean-sur-Richelieu, Quebec  
J3B 3E6

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**ANNEX "B" – Basis of payment**

Item	Description	Quantity	Unit price
1.	Robot for DNA extraction as described in Appendix A -Requirement	1	\$ _____
2.	Delivery as described in Appendix A - Requirement	1	\$ _____
	<b>Total</b>		\$ _____



### ANNEX "C" Mandatory technical evaluation criteria

	Mandatory criteria	Technical demonstration (should include the precise location where to refer in the documentation included in the proposal or provide enough details to permit a complete evaluation)
<b><u>Liquid Handling Arm and Robotic Manipulating Arm</u></b>	1. System must include an eight-tip liquid handling arm with variable distance between tips from 9 to 38mm. Each tip must be independently controlled and be used individually to access samples, one at a time.	
	2. <i>Pipetting system must NOT be driven by a liquid filled circuit activated by syringes. For simplified maintenance purposes, no liquid filled pipetting, no system fluid and waste bottles required. Water displacement technologies will not be considered because of contamination potential which is deleterious to RNA extraction protocols.</i>	
	3. <i>Pipetting arm internal channels must be protected by an in-line filter</i>	
	4. Process security through Inline filter via PMP pressure sensing; Pressure sensing prevents liquid and aerosols entering the air chamber of the pipetting channel ensuring absence of cross-contamination.	
	5. <i>Pipetting technology must include;</i> <ul style="list-style-type: none"> <li>a. capacitive Liquid Level Detection for use with conductive liquids</li> <li>b. pressure-based Liquid Level Detection for use with non-conductive liquids</li> </ul>	

	<b>c.</b> Pressure Monitored Pipetting for real-time quality control of all liquid transfer processes	
	<b>6.</b> The instrument must utilize disposable tips. All tip sizes must utilize the same disposable tip adapter. Disposable tips are available in 10, 50, 200 and 1000 µL sizes.	
	<b>7.</b> Instrument must have a pipetting range from 0.5uL to 1000ul.	
	<b>8.</b> System must be enclosed with Plexiglas protection shields, securing the work deck and user accidental tampering.	
<b><u>Software</u></b>	<b>9.</b> Editing of the software protocol must be able to be navigated from a single program interface.	
<b><u>Accessories, Storage and Miscellaneous</u></b>	<b>10.</b> The system must provide at least 8 microplates or disposable tips storage positions in addition to a minimum on deck 16 microplate positions.	
<b><u>Integrated Peripherals</u></b>	<b>11.</b> The system must include a shaking device with variable orbital settings and software controlled speed critical for DNA extraction procedure via magnetic beads.	
	<b>12.</b> The system must have 3 cooling device (+4C to 100C) critical for keeping precious reagents at 4C and enabling complex protocol incubations.	
<b><u>Application Specifications;</u></b>	<b>13.</b> System must be capable of; <b>a.</b> Library prep for NGS	

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	<p>protocols</p> <ul style="list-style-type: none"><li><b>b.</b> Normalization of DNA</li><li><b>c.</b> qPCR setup</li><li><b>d.</b> Pooling</li><li><b>e.</b> Capture</li></ul>	
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***Note: No web links will be accepted. If you refer to a document please submit a paper copy .***