



RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Travaux publics et Services gouvernementaux
Canada
Place Bonaventure, portail Sud-Est
800, rue de La Gauchetière Ouest
7 ième étage
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

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-Est
800, rue de La Gauchetière Ouest
7 ième étage
Montréal
Québec
H5A 1L6

Title - Sujet Gas chromatograph-Tandem		
Solicitation No. - N° de l'invitation K8C13-160252/A	Date 2016-10-07	
Client Reference No. - N° de référence du client K8C13-160252		
GETS Reference No. - N° de référence de SEAG PW-\$MTA-309-14079		
File No. - N° de dossier MTA-6-39111 (309)	CCC No./N° CCC - FMS No./N° VME	
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-11-21		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: Paradis, Mary		Buyer Id - Id de l'acheteur mta309
Telephone No. - N° de téléphone (514) 496-3874 ()		FAX No. - N° de FAX (514) 496-3822
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: MINISTERE DE L'ENVIRONNEMENT 105 MCGILL-7e étage MONTREAL Québec H2Y2E7 Canada		

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée .	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



Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Destination	Unit Price/Prix unitaire FOB/FAM	Plant/Usine	Delivery Req. Livraison Req.	Del. Offered Liv. offerte
1	Gas chromatograph -tandem mass spectrometer system. • In accordance to the specifications stipulated at Annex A hereby enclosed.	K8C13	KW405	1	un	\$	XXXXXXXXXXXX			

TABLE OF CONTENTS

Update the automatic Table of Contents after having deleted, added or changed the text in the body of the document.

PART 1 - GENERAL INFORMATION	3
1.1 SECURITY REQUIREMENTS	3
1.2 REQUIREMENT	3
1.3 DEBRIEFINGS	3
1.4 TRADE AGREEMENTS.....	3
PART 2 - BIDDER INSTRUCTIONS	3
2.1 STANDARD INSTRUCTIONS, CLAUSES AND CONDITIONS	3
2.2 SUBMISSION OF BIDS.....	4
2.3 ENQUIRIES - BID SOLICITATION.....	4
2.4 APPLICABLE LAWS.....	4
PART 3 - BID PREPARATION INSTRUCTIONS	4
3.1 BID PREPARATION INSTRUCTIONS	4
PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION.....	6
4.1 EVALUATION PROCEDURES	6
4.2 BASIS OF SELECTION	8
PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION	9
5.1 CERTIFICATIONS REQUIRED WITH THE BID.....	10
5.2 CERTIFICATIONS PRECEDENT TO CONTRACT AWARD AND ADDITIONAL INFORMATION	10
PART 6 - RESULTING CONTRACT CLAUSES	11
6.1 SECURITY REQUIREMENTS	11
6.2 STATEMENT OF REQUIREMENT	11
6.3 STANDARD CLAUSES AND CONDITIONS	11
6.4 TERM OF CONTRACT	11
6.5 AUTHORITIES	11
6.6 PAYMENT.....	12
6.7 INVOICING INSTRUCTIONS	14
6.8 CERTIFICATIONS AND ADDITIONAL INFORMATION	14
6.9 APPLICABLE LAWS.....	14
6.10 PRIORITY OF DOCUMENTS	15
6.11 SACC MANUAL CLAUSES	15
6.12 TRANSPORT COSTS	15
6.13 SHIPPING INSTRUCTIONS	15
ANNEX "A"	16
STATEMENT OF REQUIREMENT	
ANNEX "B"	22
BASIS OF PAYMENT	

N° de l'invitation - Sollicitation No.
K8C13-160252/A
N° de réf. du client - Client Ref. No.
K8C13-160252

N° de la modif - Amd. No.
File No. - N° du dossier N°
MTA-6-39111

Id de l'acheteur - Buyer ID
MTA309
CCC / CCC No./ N° VME - FMS

ANNEX "C"25
MANDATORY TECHNICAL EVALUATION CRITERIA

ANNEX "D"29
MANDATORY RATED TECHNICAL EVALUATION

ANNEX "E"35
SOFTWARE EVALUATION

ANNEXE "F"36
.....
EVALUATION OF TEST SAMPLES

ANNEXE "G"39
LIST OF COMPOUNDS AND THEIR RANGE OF CONCENTRATIONS.....

PART 1 - GENERAL INFORMATION

1.1 Security Requirements

There is no security requirement for this procurement.

1.2 Requirement

The requirement is detailed under Annex 'A' – Statement of Requirement.

1.2.1 Optional Requirement

The Bidder grants to Canada the irrevocable option to extend the warranty of the Contract by up to **two additional** one year period(s) under the same terms and conditions established in the contract. The Contractor agrees that, during the extended period of the Contract, it will be paid in accordance with the applicable provisions as set out in the Basis of Payment.

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 World Trade Agreement and Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), and the Agreement on Internal Trade (AIT)."

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 (2016-04-04) 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: 120 days

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 Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

2.2.1 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favor a particular bidder will be given consideration provided they are submitted to the Contracting Authority **at least 15 days** before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than **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 the **Province of 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

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 copy)
Section III: Certifications (1 hard copy)

If there is a discrepancy between the wording of the soft copy 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 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](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). 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. The total amount of Applicable Taxes must be shown separately.

3.1.1 Exchange Rate Fluctuation

C3010T 2014-11-27 Exchange Rate Fluctuation Risk Mitigation

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

- a. Conformity to the mandatory technical criteria which are included in Annex 'C' – Mandatory technical criteria , Annex 'D' – Mandatory rated technical evaluation criteria, Annex 'E' Software evaluation, Annex 'F' Evaluation of test samples and Annex 'G' – List of compounds and their range of concentrations;
- b. Acceptance of terms and conditions as mentioned in the bid solicitation.

4.1.1.2 Evaluation method for the mandatory technical criteria

- a. At the bid closing date, bids will be evaluated on the preselected mandatory technical criteria at Annex 'C'

Note: The evaluation of all the mandatory technical criteria at Annexe 'C' will be done on a pass /fail basis.

- b. To demonstrate that your products meet all preselected mandatory specifications, bidders must submit with their bid , a copy of complete specifications and descriptive literature (technical documents such as data sheets, user manual or other) of the products offered. The technical documents must be already existing standard documents. The technical documents must not be written and specially drafted for this Request for Proposal.
- c. Canada will evaluate only the documentation provided with a bidder's bid. Canada will not evaluate information such as references to Website addresses where additional information can be found, or technical manuals or brochures or other not submitted with the bid.

Note 1:

To be considered, all these criteria have to be respected in order to facilitate evaluation of the next steps.

IN THE ABSENCE OF THIS INFORMATION, THE PROPOSAL WILL BE REJECTED.

Note 2:

The next step of the evaluation is the Mandatory rated technical evaluation which will take place in three phases:

- a. Phase 1: Annex 'D'- Mandatory rated technical evaluation criteria.
A maximum of 90 points has been attributed for these technical criteria.

To demonstrate that your products meet all preselected mandatory specifications, bidders must submit with their bid, a copy of complete specifications and descriptive literature (technical documents such as data sheets, user manual or other) of the products offered. The technical documents must be already existing standard documents. The technical documents must not be written and specially drafted for this Request for Proposal.

Canada will evaluate only the documentation provided with a bidder's bid. Canada will not evaluate information such as references to Website addresses where additional information can be found, or technical manuals or brochures or other not submitted with the bid.

- b. Phase 2 : Annex 'E' - Evaluation of software via WebEx session (instrument control, data acquisition, data processing).
A maximum of 100 points has been attributed for these technical criteria.

Important notes:

The bidder must organize a WebEx session. The Contracting Authority at PWGSC will book an appointment with the bidder and Environment Canada for the presentation of the WebEx session.

The session must be held within 3 weeks following the evaluation of the mandatory requirements.

- c. Phase 3: Annex 'F' - Evaluation of test Samples
A maximum of 90 points has been attributed for these technical criteria.
50 points will be allowed for the Sensitivity and 40 points will be on Linearity.

Important notes:

The contracting authority at PWGSC will contact the bidders that meet the mandatory technical criteria and instruct them to how to obtain the test samples which are available at Environment Canada. The bidders will then make necessary arrangements with Environment Canada to collect the test samples with instructions on how to proceed with the test samples.

The bidders must analyze the samples in their facilities with a system configured as indicated in the bid. Bidders must then submit the results based on the proposed configuration using PDF, by email or by regular mail. For further details see **Annex 'F'**.

Bidders have 3 weeks following the evaluation of mandatory requirements to deliver the results to Environment and Climate Change Canada.

4.1.2 Financial Evaluation

4.1.2.1. Mandatory financial criteria

- a. Compliance with the methods for setting the proposed prices;
b. Firm prices must be provided for all items listed on Annex 'B' – Basis of payment, Mandatory items and for *Optional items.

Note: *Optional items

Prices must be guaranteed for one year from the date of system acceptance. Canada reserves the right to purchase these options at the time of signing of the contract or up to one year after the apparatus is installed.

PROPOSALS THAT DO NOT MEET THESE REQUIREMENTS WILL BE REJECTED.

SACC Manual Clause

A0220T 2014-06-26 Evaluation of Price - Bid

A0222T 2014-06-26 Evaluation of Price - Canadian/Foreign bidders

4.1.3 Price evaluation

The prices at Annex 'B' – Basis of payment will be evaluated as follows:

Firm unit price x quantity of each item = Total price of each item. (Applies for items 1 to 4 – Mandatory items and for items 1 to 15 – Optional items)

Total firm price of all items 1+2+3+4, for Mandatory items

AND

Total firm price of all items 1+2+3+4+5+6+7+8 for Optional items

= the total price of the contract. (All applicable taxes are extra)

4.2 Basis of Selection

Basis of Selection - Highest Combined Rating of Technical Merit and Price

1. To be declared responsive, a bid must:
 - a. comply with all the requirements of the bid solicitation; and
 - b. meet all mandatory criteria; and point rated mandatory criteria at Annex D, E and F;

Point rated mandatory criteria will be done in the following way:
The rating is performed on a scale of 90 points for Annex D.
The rating is performed on a scale of 100 points for Annex E.
The rating is performed on a scale of 90 points for Annex F.
2. Bids not meeting a) and b) will be declared non-responsive.
3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 75 % for the technical merit and 25% for the price.
4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 75 %.

5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 25 %.
6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.
7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

Note:

The overall technical score of each responsive bid will be calculated as follows: The total number of points obtained at Annex B, C, D will be added together. The maximum number of points for the technical score is 280 points. Each bidder's score will then be recalculated over 100 points. (Total possible score).

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 75/25 ratio of technical merit and price, respectively.

This is an example of the calculation used to evaluate bids.

Basis of Selection - Highest Combined Rating Technical Merit (75%) and Price (25%)				
		Bidder 1	Bidder 2	Bidder 3
Overall Technical Score		85/100	95/100	75/100
Bid Evaluated Price		\$60,000.00	\$70,000.00	\$80,000.00
Calculations	Technical Merit Score	$85/95 \times 75 = 67.10$	$95/95 \times 75 = 75$	$75/95 \times 75 = 59.21$
	Pricing Score	$60/60 \times 25 = 25$	$60/70 \times 25 = 21.45$	$60/80 \times 25 = 18.75$
Combined Rating		92.10	96.42	77.96
Overall Rating		2nd	1st	3rd

Therefore, Bidder no. 2 would be awarded the contract.

Important note:

In the event of a tie, the contract that receives the highest score in the technical evaluation will be awarded the contract.

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

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

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

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

5.1 Certifications Required with the Bid

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

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the *Ineligibility and Suspension Policy* (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide with its bid the required documentation, as applicable, 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 *Ineligibility and Suspension Policy* (<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](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969)" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969) website (http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969).

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](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969)" list at the time of contract award.

PART 6 - RESULTING CONTRACT CLAUSES

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

6.1 Security Requirements

There are no security requirements for this contract.

6.2 Statement of 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 (2016-04-04), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

6.3.2 Supplementary General Conditions

4001 2015-04-01 Hardware Purchase, Lease and Maintenance
4003 2010-08-16 Licensed software
4004 2013-04-25 Maintenance and Support Services for Licensed Software

6.4 Term of Contract

6.4.1 Best Delivery Date – Bid

Complete delivery and installing of this analytical system in its entirety at the QLET is **March 20, 2017.**

Training - Minimum of 4 days as stipulated at Annex 'A' – Statement of requirements, Section 1f-Deliverables, must be completed within 4 weeks following acceptance of the entire analytical system.

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

N° de l'invitation - Sollicitation No.
K8C13-160252/A
N° de réf. du client - Client Ref. No.
K8C13-160252

N° de la modif - Amd. No.
File No. - N° du dossier N°
MTA-6-39111

Id de l'acheteur - Buyer ID
MTA309
CCC / CCC No. / N° VME - FMS

Name: MARY PARADIS
Title: Contracting officer
Public Works and Government Services Canada
Acquisitions Branch
Directorate: Quebec region
Address: 800 rue de la Gauchetière, Ouest
7th Floor, Place Bonaventure
Montreal, Qc
Telephone: (514)496-3874
Facsimile: (514) 496-3822
E-mail address: mary.paradis@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 Contractor's Representative

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

6.5.3. Contact at customer department:

For all information related to invoicing and/or payments you may communicate with:
(To be completed by Canada at the award phase of the contract)

Customer department: _____
Name: _____
Telephone: _____
Facsimile: _____
E-mail address: _____

6.5.4 Technical Authority

The Technical Authority for the Contract is: (This information will be completed, by Canada, at the Contract phase)

Name: _____
Organization: _____
Telephone: _____
Facsimile: _____
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.

6.6 Payment

6.6.1 Basis of Payment

Basis of payment – Firm unit prices

In consideration of the Contractor satisfactorily completing all of its obligations under the contract, the contractor will be paid a firm unit price, as specified in Annex B – Basis of payment – Mandatory items or Mandatory items and *optional items ,for a cost of \$ _____ (*The amount will be inserted at contract award*). Customs duties are _____ (*Insert the words 'include', 'excluded' OR '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.

*Optional items – The Crown reserves the right to purchase the optional items at the time of signing of the contract or up to one year after the apparatus is installed.

6.6.2 Limitation of Price

SACC Manual clause C6000C (2011-05-16) Limitation of Price

6.6.3 Milestone Payments - Subject to holdback

1. Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract and the payment provisions of the Contract, up to **15 percent** of the amount claimed and approved by Canada if:
 - a an accurate and complete claim for payment using form PWGSC-TPSGC 1111, Claim for Progress Payment, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
 - b all the certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives;
 - c all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.
2. The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all Work required under the Contract if the Work has been accepted by Canada and a final claim for the payment is submitted.

6.6.4. Schedule of Milestones

The schedule of milestones for which payments will be made in accordance with the Contract is as follows:

Milestone No.	Deliverable	Payment	Delivery Date
1	Delivery and complete installation of the gas chromatograph –tandem mass spectrometer.	100% of the total amount of the contract minus a 15% holdback that will be payable following start-up and successful performance tests as specified in Section 3.9 of Annex 'A' – Statement of requirements.	March 20, 2017

6.6.5 SACC Manual Clauses

C2000C 2007-11-30 Taxes – Foreign-based Contractor
C2605C 2008-05-12 Canadian Customs Duties and Sales Tax – foreign-based Contractor.

6.7 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 _____. *(To be completed. The name of the province or territory as specified by the Bidder in its bid, if applicable, will be inserted here)*

6.10 Priority of Documents

If there is a discrepancy between the wordings 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 Supplementary general conditions 4001 (2015-04-01) Hardware Purchase, Lease and Maintenance; 4003 (2010-08-16) Licensed software and 4004 (2013-04-25) Maintenance and Support Services for Licensed Software;
- (c) the general conditions 2010A (2016-04-04);
- (d) Annex A, Statement of Requirement;
- (e) Annex B, Basis of payment;
- (f) Annex C, Mandatory technical evaluation criteria;
- (g) Annex D, Mandatory rated technical evaluation criteria;
- (h) Annex E, Software evaluation;
- (i) Annex F, Evaluation of test samples and
- (j) Annex G, List of compounds and their range of concentrations;
- (k) the Contractor's bid dated _____, as clarified on _____ " **or** ", as amended on _____ .

6.11 SACC Manual Clauses

B7500C	2006-06-16	Excess goods
G1005C	2016-01-28	Insurance – No specific requirement
B1501C	2006-06-16	Electrical equipment
A9068C	2010-01-11	Government site regulation
A2000C	2006-06-16	Foreign Nationals (Canadian Contractor)
A2001C	2006-06-16	Foreign Nationals (Foreign Contractor)

6.12 Transportation costs

The contractor must ship the goods prepaid via _____ (insert the method of transportation) including all delivery charges to **(The Department of Environment, 105 McGill, 7th Floor, Montreal, QC)**. Prepaid Transportation costs must be shown as a separate item on the invoice, supported by a certified copy of the prepaid transportation bill of lading.

6.13 Shipping Instructions

Shipping Instructions – Delivery at destination

Goods must be consigned to the destination specified in the Contract and delivered:
Delivered Duty Paid (DDP) to **(The Department of Environment, 105 McGill, 7th Floor, Montreal, QC)**.

Incoterms 2000 for shipments from a commercial contractor.

ANNEX "A"

STATEMENT OF REQUIREMENT

The purchase and delivery of a Gas Chromatograph–Tandem Mass Spectrometer System

1. GENERAL DESCRIPTION

The Quebec Laboratory for Environmental Testing (QLET), Environment and Climate Change Canada, wishes to acquire a QqQ (triple-quadrupole) gas chromatograph–tandem mass spectrometer system in order to perform qualitative and quantitative analyses of a wide variety of trace organic compounds in environmental samples.

This instrument will be used as an analysis tool for legal samples taken for the enforcement of the *Canadian Environmental Protection Act*, the *Fisheries Act*, and other Canadian environmental laws and regulations, as well as for research and environmental monitoring projects. The data produced by this instrument may be presented in court during legal proceedings.

The acquisition of such an instrument by the QLET will increase the laboratory's analytical and development capacity and the achievement of results for the Department in the delivery of various programs.

The parameters that will be analyzed by this instrument include polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs) and alkylated PAHs, triazines and organophosphate pesticides, siloxanes, antioxidants (BNST, PREPOD and BENPAT), phthalates, polychlorinated naphthalenes (PCNs) and new halogenated flame-retardant compounds.

2. INSTRUCTIONS

2.1 Introduction

The supplier of the instrument must include all parts, equipment and software needed to perform the analyses. It is the supplier's responsibility to propose a hardware configuration for a complete system that is guaranteed to function in accordance with the given specifications.

The entire analytical system consists of a gas chromatograph, an autosampler, a tandem mass spectrometer, and a complete computer system (hardware and software).

3.0 TECHNICAL SPECIFICATIONS

3.1 Gas Chromatograph–Tandem Mass Spectrometer System

The triple-quadrupole gas chromatograph–tandem mass spectrometer system must consist of the following elements (but without being limited to these elements), must be complete, and must come with all of the equipment and software necessary to make an integrated system.

- a. Gas chromatograph (GC) (Section 3.2)
- b. Autosampler (Section 3.3)
- c. QqQ tandem mass spectrometer (Section 3.4)
- d. Data processing and operating software (Section 3.5)

- e. Computer equipment capable of supporting the data processing and operating software (Section 3.6)
- f. Deliverables (system installation and user training) (Section 3.7)
- g. Technical support (Section 3.8)
- h. Performance tests (Section 3.9)
- i. Optional elements (Section 3.10)

The prices submitted are for new items: that is, the items come directly from the manufacturer's factory and have never been installed, either permanently or temporarily, for production or testing by the manufacturer, the distributor or any of their clients.

If, before the items have been delivered, a component of the system is upgraded or a new system arrives on the market that renders the proposed system inferior in performance or sensitivity, the supplier must provide Environment and Climate Change Canada with the upgraded system or the new system at no additional cost.

3.2 Gas chromatograph

The words – 'Mandatory' and 'Rated' appear against each item as these will be evaluated for technical evaluation purposes- See details of the evaluation methodology at Part 4, 4.1.1.2 Evaluation method for the mandatory technical criteria)

- a. (MANDATORY) The gas chromatograph must have a cool on-column injector that is compatible with an autosampler. The injector must be installed at the front of the gas chromatograph.
- b. (MANDATORY) The gas chromatograph must have a multimode injector that can inject volumes of up to 250 µL at minimum and is equipped with a pressure relief valve to vent the solvent. The injector must be able to imitate the on-column injector and the split/splitless injector.
- c. (MANDATORY) All gas lines required for the system installation must be included (from the instrument to the gas cylinder, excluding the pressure gauge and pressure regulator on the cylinder).
- d. (MANDATORY) The gas chromatograph must be equipped with a keyboard for entering and consulting parameters.
- e. (RATED) The gas chromatograph must have gas lines connected to the heated injectors to prevent compounds from condensing in the injectors.
- f. (RATED) The chromatographic system must be capable of retention time locking.
- g. (RATED) The gas chromatograph oven must be equipped with a light, to facilitate maintenance operations inside the oven.

3.3 Autosampler

- a. (MANDATORY) The autosampler must be capable of injecting directly into a cool on-column injector.
- b. (MANDATORY) The autosampler must be able to hold a minimum of 150 2-mL vials.
- c. (MANDATORY) The tray containing the samples must be capable of being cooled below room temperature (i.e. below 20° C)
- d. (RATED) The sampler must allow the injection syringe to be rinsed with three different solvents.

3.4 QqQ tandem mass spectrometer

- a. (MANDATORY) The mass spectrometer must be a triple-quadrupole mass spectrometer (the collision cell can be hexapole or another type).

- b. (MANDATORY) The mass spectrometer must have two analytic quadrupoles (MS1 and MS2), each with a minimum mass range of 10 to more than 1000 amu.
- c. (MANDATORY) The mass spectrometer must be capable of recording a minimum of 5000 amu per second.
- d. (MANDATORY) The mass spectrometer must be capable of producing, at minimum, the following spectra: scan, product ion scan, precursor ion scan, neutral loss scan, multiple reaction monitoring (MRM), AND SELECTED ION MONITORING (SIM).
- e. (RATED) The mass spectrometer must be capable of recording a minimum of 250 MRM transitions per second.
- f. (RATED) The mass spectrometer must operate in electron ionization (EI) or atmospheric pressure ionization (APGC or APCI) mode.
- g. (RATED) The detector must have a dynamic range of at least 100,000.
- h. (RATED) The mass spectrometer must be equipped with a detector that has an expected service life greater than 10 years.
- i. (RATED) The mass spectrometer must be able to acquire data while the solvent is moving through the system.
- j. (RATED) The system must have a data bank on environmental contaminants to simplify the introduction of new methods (e.g. mass transition data, collision energy data).
- k. (RATED) The system must be able to connect to a liquid chromatograph.

3.5 Data processing and operating software

- a. (MANDATORY) The instrument's operating software (to control the equipment and process data) must be included in the cost of the equipment and must be compatible with a Microsoft Windows operating system, version 7 or later.
- b. (MANDATORY) The software must be able to display data in real time (minimum of six chromatograms in addition to readbacks, etc.).
- c. (MANDATORY) The user must be able to manipulate data (integration of peaks, library searches, construction of calibration curves, measurement of unknown samples, etc.) while data are being acquired.
- d. (MANDATORY) The quantification system must be able to produce the following calibration curves, at minimum: linear, quadratic, or using a relative response factor.
- e. (MANDATORY) The quantification system must be able to process Totals (compounds that do not have analogues and that are measured with an average relative response factor derived from one or more similar compounds) without having to use macros or programs outside the quantification software.
- f. (MANDATORY) The software must be capable of referencing a compound to a surrogate, relative to an internal standard, in order to calculate recovery percentages directly in the quantification software.
- g. (MANDATORY) The software must be able to quantify by adding the responses of several transitions and must be able to process at least three MRM transitions for each compound.
- h. (MANDATORY) The software must be capable of identifying the following events in some manner in the quantification software:
 - i. Ion ratios outside of limits defined by the user
 - ii. Acceptable levels for blanks, defined by the user
 - iii. When the maximum concentration has been exceeded (highest calibration point on the curve)
 - iv. When the concentration is below the detection threshold or below the lowest calibration point on the curve
 - v. When the concentration of analogue compounds is outside certain recovery limits
 - vi. When the correlation coefficient of the calibration curve is below the minimum threshold defined by the user
 - vii. When the quality-control samples are outside the criteria defined by the user

-
- viii. The peak of the compound of interest is below the minimum signal-to-noise (S/N) ratio specified by the user
- i. (MANDATORY) The software must be able to simultaneously display at minimum two pieces of information on each peak detected on the chromatogram (e.g. retention time, name of compound, measured area, S/N ratio).
 - j. (MANDATORY) The software must allow automatic calculation of the detection limits of each compound for each sample.
 - k. (RATED) The software must be able to produce analysis reports by sample and/or by compound.
 - l. (RATED) The software must have a feature for processing data from other mass spectrometers owned by Environment and Climate Change Canada in Montreal, based on the Agilent ChemStation and the Waters MassLynx.
 - m. (RATED) Software updates must be provided by the supplier at no charge for 3 years.
 - n. (RATED) A priority sample must be able to be inserted in the sequence at any time, without interrupting the sequence in progress.
 - o. (RATED) The quantification software must allow recalculation of data following changes to a parameter (e.g. changing the weight or volume extracted, or by measuring on two different calibration curves) without losing the manual re-integrations of the chromatographic peaks.
 - p. (RATED) The software must make it possible to quickly display a set of chromatograms (e.g. clicking the name of a compound will display all chromatograms associated with that compound).

3.6 Computer equipment capable of supporting the data processing and operating software

- a. (MANDATORY) The computer system must be equipped with a black and white laser printer capable of printing a minimum of 10 pages per minute at a resolution of 1200 × 1200.
- b. (MANDATORY) The computer system must have a minimum internal memory of 8 GB RAM.
- c. (MANDATORY) The system must be equipped with two 21" (at minimum) LCD or plasma screens with a minimum resolution of 1920 × 1080.
- d. (MANDATORY) The computer system must have two 500 GB or larger hard drives with rotational speeds of 7200 RPM at minimum; the drives must be configured as mirrors of each other (data saved on one drive must automatically be saved on the second drive as well).

3.7 Deliverables (system installation and user training)

- a. (MANDATORY) All system components must meet all current North American electrical standards.
- b. (MANDATORY) The supplier must provide a pre-installation guide and specifications for the equipment as soon as the contract is awarded. The specifications must include the necessary counter space, the operating temperature and ambient conditions, the electrical connections required (voltages and number), the gases required, the weights of the various pieces of equipment, and any other prerequisites (ventilation, etc.).
- c. (MANDATORY) The system must be delivered with at minimum one set of consumables for continuous operation for at least 1 year (e.g. filaments, O-rings, gaskets, fuses, heaters).
- d. (MANDATORY) The supplier must provide the tools needed for system maintenance.
- e. (MANDATORY) The supplier must provide an additional licence for a second workstation.

- f. (MANDATORY) The complete system must be guaranteed for a minimum period of 1 year; the warranty will begin on the day the system is accepted following performance tests.
- g. (MANDATORY) The complete system must be installed and fully operational within 1 month following delivery.
- h. (MANDATORY) The supplier must offer at least 4 days of training to at least four Environment and Climate Change Canada analysts in Montreal. The training must cover the instrument and the software, including calibration and data processing (quantification). The training must be given within 4 weeks following acceptance of the system.
- i. (RATED) The supplier must deliver its products using a carrier certified by SmartWay or another valid environmental certification organization.

3.8 Technical support

- a. (MANDATORY) For the duration of the warranty, a technician must be available on site within 2 business days following a service call. Telephone support must be available within 1 business day.

3.9 Performance tests

When the instrument is started up, it must meet or exceed the following performance criteria (MANDATORY):

Analysis Mode	Compound Used	Quantity	Expected Result
EI scan	Octafluoronaphthalene	1 pg	S/N > 1500:1 on ion 272 scanning masses from 50 to 300 amu
EI MRM	Octafluoronaphthalene	100 fg	S/N > 4500:1, recording transitions 272→241 or 272→222, at 5 scans per second at a resolution of 0.7 u
EI MRM	Octafluoronaphthalene	100 fg	8 consecutive injections should give an RSD% below 8%
EI SIM	Octafluoronaphthalene	50 fg	S/N > 10:1 recording ions at m/z 272 and 273 at 5 scans per second at a resolution of 0.7 u

The tests specified in **Section 3.9** of this document, must all be done on site at the QLET laboratory with a 30-m DB5-MS column, internal diameter of 0.25 mm, phase thickness of 0.25 µm. The supplier can choose the injector used. The QLET will provide the column. The supplier is responsible for providing the compounds for the tests. A QLET laboratory analyst must be present during the tests.

In addition, if the manufacturer's specifications in the brochures exceed these specifications, the manufacturer's published specifications must be met during installation.

The supplier must also demonstrate during start-up that the device is capable of generating linear calibration curves (relative response factors [RRFs] lower than 20% STD for all PCB compounds [in MRM mode]). We will provide the masses to be recorded for all compounds as well as the calibration solutions. The list of compounds and the range of concentrations can be found in **Appendix G**.

The performance test documents must be submitted to the QLET.

3.10 Options

A price listing for the items listed below must be submitted with the bidder's proposal. These prices must be protected for a period of 1 year from the date of contract award. Environment and Climate Change Canada reserves the right to purchase or not purchase one or more options when the contract is signed. If the price of the option purchased at the initial order is different than the price of the same option purchased later, the supplier must give the price for both situations at

Annex 'B' – Basis of payment.

- a) Chemical ionization (CI) option: ionization source and all material necessary to use the chemical ionization option
- b) Most recent NIST spectral library
- c) Service contract for 1 additional year
- d) Service contract for 2 additional years
- e) List of prices of main consumables (filaments, heaters, vials, syringes, O-rings, gaskets, etc.)
- f) Additional source if the device uses the electron ionization system
- g) If the proposed configuration can be coupled to a liquid chromatograph, the price of this type of system must be provided.

N° de l'invitation - Solicitation No.
K8C13-160252/A
N° de réf. du client - Client Ref. No.
K8C13-160252

N° de la modif - Amd. No.
File No. - N° du dossier N°
MTA-6-39111

Id de l'acheteur - Buyer ID
MTA309
CCC / CCC No./ N° VME - FMS

ANNEX "B"
BASIS OF PAYMENT

'MANDATORY ITEMS '

Notes to suppliers:

1. Firm prices are required for all items in the table below.
2. The applicable taxes are all extra to the prices on the table below.

ITEM No.	QUANTITY	DESCRIPTION	FIRM PRICE	TOTAL
1	1	The purchase and delivery of a QqQ (triple-quadrupole) gas chromatograph-tandem mass spectrometer system. The entire analytical system consists of a gas chromatograph, an auto sampler, a tandem mass spectrometer and a complete computer system (Hardware and software). (As described in Annex 'A' - Statement of Requirement). Brand name: _____ Model offered: _____	\$ _____ / each	\$ _____
2	1	Installation charges. (Price to include labour, tooling, necessary equipment and travel costs for the complete execution of the needs required).	\$ _____ / lot	\$ _____
3	1	The supplier must offer at least 4 days of training to at least four (4) Environment and Climate Change Canada analysts in Montreal. The training must cover the instrument and the software, including calibration and data processing (quantification). The training must be given within	\$ _____ / lot	\$ _____

N° de l'invitation - Sollicitation No.
K8C13-160252/A
N° de réf. du client - Client Ref. No.
K8C13-160252

N° de la modif - Amd. No.
File No. - N° du dossier N°
MTA-6-39111

Id de l'acheteur - Buyer ID
MTA309
CCC / CCC No./ N° VME - FMS

		4 weeks following acceptance of the system.		
4	1	Transport charges (FOB Destination)	\$ _____ / lot	\$ _____
			GRAND TOTAL: (for items 1 to 4)	\$ _____

ANNEX "B"
BASIS OF PAYMENT

'OPTIONAL ITEMS '

Notes to suppliers:

- Prices for all available options must be indicated below, as they will be considered for bid evaluation purposes.
- Firm prices are required for all items in the table below.
- The applicable taxes are all extra to the prices on the table below.
- Prices must be guaranteed for one year from the date of system acceptance. The Crown reserves the right to purchase these options **at the time of signing of the contract or up to one year after the apparatus is installed.**

ITEM No.	QUANTITY	DESCRIPTION	FIRM PRICE	TOTAL
1	1	Service contract for 1 additional year that the apparatus is in service.	\$ _____ / year	\$ _____
2	1	Service contract for two additional years that the apparatus is in service.	\$ _____ / years	\$ _____
3	1	Chemical ionization (CI) option: ionization source and all material necessary to use the chemical ionization option.	\$ _____ / lot	\$ _____
4	1	Most recent NIST spectral library.	\$ _____ / lot	\$ _____
5	1	List of prices of main consumables (filaments, heaters, vials, syringes, O-rings, gaskets, etc.)	\$ _____ / lot	\$ _____
6	1	Additional source if the device uses the electron ionization system.	\$ _____ / lot	\$ _____
7	1	If the proposed configuration can be coupled to a liquid chromatograph, the price of this type of system must be provided.	\$ _____ / lot	\$ _____
8	1	Transport charges (FOB Destination)	\$ _____ / lot	\$ _____
			GRAND TOTAL: (for items 1 to 8)	\$ _____

ANNEX 'C'
MANDATORY TECHNICAL EVALUATION CRITERIA

TO BE COMPLETED BY SUPPLIERS - AT CLOSING DATE AND HOUR OF SOLICITATION:

The information that figures in this table must be duly completed and submitted **at the closing date and hour of the solicitation**

The proposals must cover all the subjects indicated in the sections below mentioned in order to be considered.

In order to explain and demonstrate how the supplier meets the requirements of the bid, the suppliers must attach to their bid, a copy of the complete specifications and descriptive literature (Technical documents such as data sheets, user manual or other) of the products being offered. The technical documents must be already existing standard documents. The technical documents must not be written and specially drafted for this Request for Proposal.

The supplier must not simply answer 'Yes, requirement met'.

If a supplier is unable to demonstrate that their products meet the performance criteria mentioned below, this will render their bid non-compliant.

Canada will only evaluate the documents that are sent along with the bids submitted by the supplier.

Canada will not evaluate information that is on a web site address where supplementary information can be found. Neither will it evaluate instruction manuals or technical brochures that are not sent with the bid.

Only the proposals which meet the mandatory criteria will be subject to the financial evaluation.
The proposals that fail to meet all these conditions will be rejected.

1. Mandatory Technical Specifications:

The entire analytical system consists of a gas chromatograph, an auto sampler, a tandem mass spectrometer and a complete computer system (hardware and software).

The supplier of the instrument must include all parts, equipment and software needed to perform the analyses. It is the supplier's responsibility to propose a hardware configuration for a complete system that is guaranteed to function in accordance with the given specifications.

Description	Specify the area in the bid document or in the technical documents that describes the mandatory specifications needed
1a. Gas Chromatograph	
a. The gas chromatograph must have a cool on-column injector that is compatible with an auto sampler. The injector must be installed at the front of the gas chromatograph.	
b. The gas chromatograph must have a multimode injector that can inject volumes of up to 250 µL at minimum and is equipped with a pressure relief valve to vent the solvent. The injector must be able to imitate the on-column injector and the split/split less injector.	

c. All gas lines required for the system installation must be included (from the instrument to the gas cylinder, excluding the pressure gauge and pressure regulator on the cylinder).	
d. The gas chromatograph must be equipped with a keyboard for entering and consulting parameters.	
1b. Auto sampler	
a. The auto sampler must be capable of injecting directly into a cool on-column injector.	
b. The auto sampler must be able to hold a minimum of 150 2-mL vials.	
c. The tray containing the samples must be capable of being cooled below room temperature (i.e. below 20 °C).	
1c. Mass Spectrometer	
a. The mass spectrometer must be a triple-quadrupole mass spectrometer (the reaction cell can be hexapole or another type).	
b. The mass spectrometer must have two analytic quadrupoles (MS1 and MS2), each with a minimum mass range of 10 to more than 1000 amu.	
c. The mass spectrometer must be capable of recording a minimum of 5000 amu per second.	
d. The mass spectrometer must be capable of producing, at minimum, the following spectra: scan, product ion scan, precursor ion scan, neutral loss scan, multiple reaction monitoring (MRM), and selected ion monitoring (SIM).	
1d. Data Processing and Operating Software	
a. The instrument's operating software (to control the equipment and process data) must be included in the cost of the equipment and must be compatible with a Microsoft Windows operating system, version 7 or later.	
b. The software must be able to display data in real time (minimum of six chromatograms in addition to readbacks, etc.).	
c. The user must be able to manipulate data (integration of peaks, library searches, construction of calibration curves, measurement of unknown samples, etc.) while data are being acquired.	
d. The quantification system must be able to produce the following calibration curves, at minimum: linear, quadratic, or using a relative response factor.	
e. The quantification system must be able to process Totals (compounds that do not have analogues and that are measured with an average relative response factor derived from one or more similar compounds) without having to use macros or programs outside the quantification software.	
f. The software must be capable of referencing a compound to a surrogate, relative to an internal standard, in order to calculate recovery percentages directly in the quantification software.	

g. The software must be able to quantify by adding the responses of several transitions and must be able to process at least three MRM transitions for each compound.	
h. The software must be capable of identifying the following events in some manner in the quantification software <ul style="list-style-type: none"> i. Ion ratios outside of limits defined by the user. ii. Acceptable levels for blanks, defined by the user. iii. When the maximum concentration has been exceeded (highest calibration point on the curve). iv. When the concentration is below the detection threshold or below the lowest calibration point on the curve. v. When the concentration of analogue compounds is outside certain recovery limits. vi. When the correlation coefficient of the calibration curve is below the minimum threshold defined by the user . vii. When the quality-control samples are outside the criteria defined by the user . viii. The peak of the compound of interest is below the minimum signal-to-noise (S/N) ratio specified by the user. 	
i. The software must be able to simultaneously display at minimum two pieces of information on each peak detected on the chromatogram (e.g. retention time, name of compound, measured area, S/N ratio).	
j. The software must allow automatic calculation of the detection limits of each compound for each sample.	
1e. Computer Equipment Capable of Supporting the Data Processing and Operating Software	
a. The computer system must be equipped with a black and white laser printer capable of printing a minimum of 10 pages per minute at a resolution of 1200 × 1200.	
b. The computer system must have a minimum internal memory of 8 GB RAM.	
c. The system must be equipped with two 21" (at minimum) LCD or plasma screens with a minimum resolution of 1920 × 1080.	
1f. Deliverables	
a. All system components must meet all current North American electrical standards.	
b. The supplier must provide a pre-installation guide and specifications for the equipment as soon as the contract is awarded. The specifications must include the necessary counter space, the operating temperature and ambient conditions, the electrical connections required (voltages and number) the gases required, the weights of the various pieces of equipment, and any other prerequisites (ventilation, etc.).	
c. The system must be delivered with at minimum one set of consumables for continuous operation for at least 1 year (e.g. filaments, O-rings, gaskets, fuses, heaters).	

N° de l'invitation - Sollicitation No.
K8C13-160252/A
N° de réf. du client - Client Ref. No.
K8C13-160252

N° de la modif - Amd. No.
File No. - N° du dossier N°
MTA-6-39111

Id de l'acheteur - Buyer ID
MTA309
CCC / CCC No./ N° VME - FMS

d. The supplier must provide the tools needed for system maintenance.	
e. The supplier must provide an additional licence for a second workstation.	
f. The complete system must be guaranteed for a <u>minimum period of 1 year</u> ; the warranty will begin on the day the system is accepted following performance tests.	
g. The complete system must be installed and fully operational within 1 month following delivery.	
h. The supplier must offer at least 4 days of training to at least four Environment and Climate Change Canada analysts in Montreal. The training must cover the instrument and the software, including calibration and data processing (quantification). The training must be given within 4 weeks following acceptance of the system.	
1g. Technical Support	
a. For the duration of the warranty, a technician must be available on site within 2 business days following a service call. Telephone support must be available within 1 business day.	

ANNEX 'D '
MANDATORY RATED TECHNICAL EVALUATION CRITERIA

TO BE COMPLETED BY SUPPLIERS - AT CLOSING DATE AND HOUR OF SOLICITATION:

The information that figures in this table must be duly completed and submitted **at the closing date and hour of the solicitation**

The proposals must cover all the subjects indicated in the sections below mentioned in order to be considered.

In order to explain and demonstrate how the supplier meets the requirements of the bid, the suppliers must attach to their bid, a copy of the complete specifications and descriptive literature (Technical documents such as data sheets, user manual or other) of the products being offered. The technical documents must be already existing standard documents. The technical documents must not be written and specially drafted for this Request for Proposal.

The supplier must not simply answer 'Yes, requirement met '.

If a supplier is unable to demonstrate that their products meet the performance criteria mentioned below, this will render their bid non-compliant.

Canada will only evaluate the documents that are sent along with the bids submitted by the supplier.

Canada will not evaluate information that is on a web site address where supplementary information can be found. Neither will it evaluate instruction manuals or technical brochures that are not sent with the bid.

Only the proposals which meet the mandatory criteria will be subject to the financial evaluation.
The proposals that fail to meet all these conditions will be rejected.

1. Mandatory rated technical specifications:

The entire analytical system consists of a gas chromatograph, an auto sampler, a tandem mass spectrometer and a complete computer system (hardware and software).

The supplier of the instrument must include all parts, equipment and software needed to perform the analyses. It is the supplier's responsibility to propose a hardware configuration for a complete system that is guaranteed to function in accordance with the given specifications.

Description	Maximum Points	Specify the area in the bid document or in the technical documents that describes the mandatory specifications needed
1a. Gas Chromatograph		
a. The gas chromatograph must have gas lines connected to the heated injectors to prevent compounds from condensing in the injectors: <ul style="list-style-type: none"> The lines can be heated to above 150 °C: 5 points The lines cannot be heated to above 150 °C: 0 points 	5	
b. The chromatographic system must be capable of retention time locking. <ul style="list-style-type: none"> The system is capable of retention time locking: 4 points The system is not capable of retention time locking: 0 points 	4	
c. The gas chromatograph oven must be equipped with a light, to facilitate maintenance operations inside the oven. <ul style="list-style-type: none"> The oven is equipped with a light: 3 points The oven is not equipped with a light: 0 points 	3	
1b. Autosampler		
a. The sampler must allow the injection syringe to be rinsed with three different solvents: <ul style="list-style-type: none"> The sampler allows rinsing with three different solvents: 3 points The sampler does not allow rinsing with three different solvents: 0 points 	3	
1c. Mass Spectrometer		
a. The mass spectrometer must be capable of recording a minimum of 250 MRM transitions per second. <ul style="list-style-type: none"> The spectrometer is capable of recording more than 400 transitions per second: 4 points The spectrometer is capable of recording between 250 and 400 transitions per second: 2 points The spectrometer is not capable of recording a minimum of 250 transitions per second: the bid is rejected 	4	

<p>b. The mass spectrometer must operate in electron ionization (EI) or atmospheric pressure ionization (APGC or APCI) mode:</p> <ul style="list-style-type: none"> The spectrometer operates in atmospheric pressure mode: 8 points The spectrometer operates under vacuum, in electron ionization mode: 5 points 	8	
<p>c. The detector must have a dynamic range of at least 100,000:</p> <ul style="list-style-type: none"> The detector has a dynamic range of 1,000,000 or greater: 4 points The detector has a dynamic range of between 100,000 and 1,000,000: 2 points The detector has a dynamic range of less than 100,000: the bid is rejected 	4	
<p>d. The mass spectrometer must be equipped with a detector that has an expected service life greater than 10 years:</p> <ul style="list-style-type: none"> The detector has a service life greater than 10 years: 5 points The detector has a service life of less than 10 years, but the manufacturer agrees to replace the detector with a new one every 2 years up to a maximum of 10 years: 4 points The detector has a service life of less than 10 years, but the manufacturer does not agree to replace the detector with a new one every 2 years up to a maximum of 10 years: 0 points 	5	
<p>e. The mass spectrometer must be able to acquire data while the solvent is moving through the system:</p> <ul style="list-style-type: none"> The spectrometer can acquire data while the solvent is moving through the system: 3 points The spectrometer cannot acquire data while the solvent is moving through the system: 0 points 	3	
<p>f. The system must have a data bank on environmental contaminants to simplify the introduction of new methods (e.g. mass transition data, collision energy data):</p> <ul style="list-style-type: none"> The system has a data bank on a minimum of 1200 compounds: 3 points The system has a data bank on between 900 and 1200 compounds: 2 points The system has a data bank on fewer than 900 compounds: 1 point The system does not have a data bank: 0 points 	3	

g. The system must be able to connect to a liquid chromatograph: <ul style="list-style-type: none"> The system can connect to a liquid chromatograph easily and quickly (in under 30 minutes): 10 points The system can connect to a liquid chromatograph in more than 30 minutes: 6 points The system cannot connect to a liquid chromatograph: 0 points 	10	
1d. Data Processing and Operating Software		
a. The software must be able to produce analysis reports by sample and/or by compound: <ul style="list-style-type: none"> The software produces analysis reports sorted by sample or by compound, as selected by the operator: 3 points The software produces analysis reports sorted only by sample or only by compound: 0 points 	3	
b. The software must have a feature for processing data from other mass spectrometers owned by Environment and Climate Change Canada in Montreal, based on the Agilent ChemStation and the Waters MassLynx: <ul style="list-style-type: none"> The software can process data from both ChemStation and MassLynx: 7 points The software can process data from either ChemStation or MassLynx: 4 points The software cannot process data from either ChemStation or MassLynx: 0 points 	7	
c. Software updates must be provided by the supplier at no charge for 3 years: <ul style="list-style-type: none"> The supplier will provide free software updates for 3 years: 4 points The supplier will provide free software updates for 2 years: 2 points The supplier will provide free software updates for 1 year: 1 point The supplier will not provide free software updates: 0 points 	4	
d. A priority sample must be able to be inserted in the sequence at any time, without interrupting the sequence in progress: <ul style="list-style-type: none"> The software can insert a priority sample without interrupting the sequence in progress: 3 points The software cannot insert a priority sample without interrupting the sequence in progress: 0 points 	3	

e. The quantification software must allow recalculation of data following changes to a parameter (e.g. changing the weight or volume extracted, or by measuring on two different calibration curves) without losing the manual re-integrations of the chromatographic peaks: <ul style="list-style-type: none"> The software can recalculate data after a parameter has been changed: 10 points The software cannot recalculate data after a parameter has been changed, or manual re-integrations have to be redone: 0 points 	10	
f. The software must make it possible to quickly display a set of chromatograms (e.g. clicking the name of a compound will display all chromatograms associated with that compound): <ul style="list-style-type: none"> The software has a feature to display a set of predefined chromatograms with a single click: 6 points The software has a feature to display a set of predefined chromatograms in multiple clicks (several steps): 2 points The software does not have this feature or must be reprogrammed at every use: 0 points 	6	
1e. Computer Equipment Capable of Supporting the Data Processing and Operating Software	No rated criteria	
1f. Deliverables		
The supplier must deliver its products using a carrier certified by SmartWay or another valid environmental certification organization: <ul style="list-style-type: none"> The supplier will use an environmentally certified carrier: 5 points The supplier will use a non-environmentally friendly or non-certified carrier: 0 points 	5	

Total number of points for the rated technical evaluation criteria: 90 points

ANNEX 'E'
SOFTWARE EVALUATION

NOTE TO SUPPLIERS:

The software used to control all of the components of the system (including the auto sampler, the gas chromatograph and the mass spectrometer) and to process data will be evaluated during a **WebEx presentation** organized by the bidder. The session must be held **within 3 weeks following the evaluation of the mandatory requirements.**

The PWGSC Contracting Authority will contact the bidders to make an appointment for the WebEx presentation on behalf of Environment Canada.

The scores awarded will be based on the ease of use of the feature (number of clicks, logical menus, ease of operation). The following elements of the software will be evaluated:

1. Device adjustment (sensitivity, resolution, etc.): **(maximum 20 points)**
 - Manual adjustment: **8 points**
 - Automatic adjustment (Auto tune): **7 points**
 - Real-time display of data (read backs, peaks scanned, etc.): **5 points**
2. Development of a method for monitoring multiple transitions (multiple reaction monitoring) **(maximum 20 points)**
 - Entry of gas chromatograph programming data: **5 points**
 - Entry of mass spectrometer data (MRM transitions, scanning time, collision energy, documentation of each transition [e.g. name of molecule being analyzed], etc.): **10 points**
 - Automation of development process: **5 points**
3. Qualitative data processing **(maximum 25 points)**
 - Qualitative study of an analysis of several compounds in scan mode (TIC chromatograms or specific extracted-ion chromatograms): **5 points**
 - Ease of generating chromatograms (subtracting background noise, generating average spectra, etc.): **5 points**
 - Ease of searching the spectral library: **5 points**
 - Ease of completing the data acquisition table (table that specifies the samples, the GC and MS parameters, the position of the vials on the carousel, the concentration of standards, etc.): **10 points**
4. Quantitative data analysis **(maximum 35 points)**
 - Ease of re-integrating peaks manually: **5 points**
 - Ease of generating calibration curves: **5 points**
 - Ease of having the software warn of differences in relation to the expected value (e.g. difference in retention time of compounds or in isotope ratios): **5 points**
 - Ease of calculating detection limits and quantification limits: **5 points**
 - Ease of calculating Totals: **5 points**
 - Ease of configuring the presentation of results columns: **5 points**
 - Ease of entering parameters for each compound: **5 points**

The total number of points for the Software evaluation: 100 points

ANNEX 'F'
EVALUATION OF TEST SAMPLES

NOTE TO SUPPLIERS:

1.1 Instructions

Bidders whose proposed systems meet the mandatory requirements listed in **Appendix C** must obtain test samples from Environment and Climate Change Canada. Bidders must analyze the samples in their facilities with a system configured as indicated in the bid. Bidders will have 3 weeks following the evaluation of mandatory requirements to deliver the results to Environment and Climate Change Canada.

The PWGSC Contracting Authority will contact the bidders to make an appointment to obtain the test samples on behalf of Environment Canada.

The data must be provided as raw data, without having been passed through a noise-reduction or smoothing algorithm. The data must be provided in PDF format by email or in print format by regular mail.

1.2 Description of samples

The samples will consist of a calibration curve of flame-retardant compounds. Details on the concentrations, structures and molecular masses of these compounds will be provided when the samples are delivered. The masses specified (fragments or molecular ions) must be used to generate the results (two masses per compound). A chromatographic method will also be suggested; bidders are free to use this method or any other chromatographic method of their choice. The compounds are as follows:

Table of halogenated flame-retardant compounds that will be evaluated

#	Name	Abbreviation	CAS No.
1	1,2,3,4,5-Pentabromobenzene	PBBZ	608-90-2
2	Hexabromobenzene	HBBZ	87-82-1
3	Pentabromotoluene	PBT	87-83-2
4	2,3,5,6-Tetrabromo- <i>p</i> -xylene	pTBX	23488-38-2
5	Pentabromoethylbenzene	PBEB	85-22-3
6	Tetrabromo- <i>o</i> -chlorotoluene	TBCT	39569-21-6
7	2,3-Dibromopropyl-2,4,6-tribromophenyl ether	DPTE	35109-60-5
8	Allyl 2,4,6-tribromophenyl ether	ATE	3278-89-5
9	2-Bromoallyl 2,4,6-tribromophenyl ether	BATE	n/a
10	Pentabromobenzyl acrylate	PBBA	59447-55-1
11	2-Ethylhexyl-2,3,4,5-tetrabromobenzoate	EHTBB	183658-27-7
12	Bis(2-ethyl-1-hexyl)tetrabromophthalate	BEHTBP	26040-51-7
13	α -Tetrabromoethylcyclohexane	α -TBECH	3322-93-8
14	β -Tetrabromoethylcyclohexane	β -TBECH	3322-93-8

15	α -1,2,5,6-Tetrabromocyclooctane	aTBCO	3194-57-8
16	γ -1,2,5,6,9,10-Hexabromocyclododecane	gHBCD	134237-52-8
17	2,2',4,5,5'-Pentabromobiphenyl	BB-101	67888-96-4
18	Octabromotrimethylphenylindane	OBIND	155613-93-7
19	1,2-Bis(2,4,6-tribromophenoxy)ethane	BTBPE	37853-59-1
20	Hexachlorocyclopentenyl-dibromocyclooctane	HCDBCO	51936-55-1
21	Syn-Dechlorane Plus®	s-DP	135821-03-3
22	Anti-Dechlorane Plus®	a-DP	135821-74-8
23	Decabromodiphenyl ethane	DBDPE	84852-53-9
	¹³ C ₆ -Hexabromobenzene	¹³ C ₆ -HBB	surrogate
	¹³ C ₆ -1,2-Bis(2,4,6-tribromophenoxy)ethane	¹³ C ₆ -BTBPE	surrogate
	¹³ C ₁₂ - γ -1,2,5,6,9,10-Hexabromocyclododecane	¹³ C ₁₂ -HBCD	surrogate
	¹³ C ₆ -2-ethylhexyl-d17-2,3,4,5-tetrabromobenzoate	¹³ C ₆ -EHTBB	surrogate
	¹³ C ₆ -bis(2-ethylhexyl-d17)tetrabromophthalate	¹³ C ₆ -BEHTBP	surrogate
	¹³ C ₆ -1,2,3,4,5-pentabromobenzene	¹³ C ₆ -PBBZ	surrogate
	¹³ C ₁₀ -Dechlorane Plus Anti	¹³ C ₁₀ -anti-DP	surrogate
	¹³ C ₁₂ -2,2',5,5'-tetrabromobiphenyl	¹³ C ₁₂ -T ₄ -PBDE	internal standard
	¹³ C ₁₂ -2,2',4,4',5-pentabromodiphenyl ether	¹³ C ₁₂ -P ₅ -PBDE	internal standard
	¹³ C ₁₂ -2,2',4,4',5,6'-hexabromodiphenyl ether	¹³ C ₁₂ -H ₆ -PBDE	internal standard
	¹³ C ₁₂ -2,2',3,3',4,4',5,6'-nonabromodiphenyl ether	¹³ C ₁₂ -N ₉ -PBDE	internal standard

1.3 Evaluation of results

Bidders will be evaluated using the following criteria:

1.3.1 Sensitivity (maximum 50 points)

Sensitivity (S/N) will be evaluated with the solution with the lowest concentration (approximately 1 pg/ μ L), with injections of 1 μ L; if certain compounds are below the detection threshold for this solution, the bidder must use the solution with the lowest concentration where the compound is visible. On each chromatogram, the calculated SIGNAL-TO-NOISE ratio must be indicated with the most abundant ion. Sensitivity will be calculated by Environment and Climate Change Canada by extrapolating to a signal-to-noise ratio of 3. A chromatogram of a blank sample (solvent) must also be provided.

For each compound (**23 in total**), the supplier with the lowest detection limit will be awarded 10 points, the supplier with the second-lowest will be awarded 5 points, the supplier with the third-lowest will be awarded 2 points, and the others will be awarded 0 points. At the end of the evaluation, the supplier with the most points will be awarded **50 points**, and the others will be standardized in relation to this supplier.

Here is a sample evaluation with two compounds:

#	Name	Abbr ev.	Supplier A		Supplier B		Supplier C	
			Sensitivity (pg/μL)	Poin ts	Sensitivity (pg/μL)	Poin ts	Sensitivity (pg/μL)	Poin ts
1	1,2,3,4,5-Pentabromobenzene	PBBZ	2	5	0.1	10	5	2
2	Hexabromobenzene	HBBZ	0.01	10	0.05	5	0.1	2

1.3.2 Linearity (maximum 40 points)

The linearity of the calibration curves will be evaluated. The solutions provided will contain internal standards that must be used to calculate the relative response factors (RRFs). These factors must be provided for each compound, as well as the percentage of standard deviation. The number of calibration points used must also be provided for each compound.

For each compound (23 in total), the supplier that has a linear curve (defined as having an RSD% < 20%) with the most calibration points will be awarded 10 points, the second supplier that has a linear curve (RSD% < 20%) will be awarded 5 points, and the other suppliers will be awarded 0 points. At the end of the evaluation, the supplier with the most points will be awarded **40 points**, and the others will be standardized in relation to this supplier.

The total number of points for the test samples: 90 points

ANNEX 'G'
LIST OF COMPOUNDS AND THEIR RANGE OF CONCENTRATIONS

List of compounds and their range of concentrations. These compounds will be used to demonstrate the linearity of the calibration curves and the application of relative response factor calculation.

Polychlorinated Biphenyls (PCBs)	Method of Calculating Relative Response Factor (RRF)
Trichlorobiphenyls	
IUPAC # 18	Individual, with $^{13}\text{C}_{12}$ -Tri-CB # 28
IUPAC # 17	Individual, with $^{13}\text{C}_{12}$ -Tri-CB # 28
IUPAC # 31	Individual, with $^{13}\text{C}_{12}$ -Tri-CB # 28
IUPAC # 28	Individual, with $^{13}\text{C}_{12}$ -Tri-CB # 28
IUPAC # 33	Individual, with $^{13}\text{C}_{12}$ -Tri-CB # 28
Tetrachlorobiphenyls	
IUPAC # 52	Individual, with $^{13}\text{C}_{12}$ -Tetra-CB # 52
IUPAC # 49	Individual, with $^{13}\text{C}_{12}$ -Tetra-CB # 52
IUPAC # 44	Individual, with $^{13}\text{C}_{12}$ -Tetra-CB # 52
IUPAC # 74	Individual, with $^{13}\text{C}_{12}$ -Tetra-CB # 52
IUPAC # 70	Individual, with $^{13}\text{C}_{12}$ -Tetra-CB # 52
Pentachlorobiphenyls	
IUPAC # 95	Individual, with $^{13}\text{C}_{12}$ -Penta-CB # 111
IUPAC # 101	Individual, with $^{13}\text{C}_{12}$ -Penta-CB # 111
IUPAC # 99	Individual, with $^{13}\text{C}_{12}$ -Penta-CB # 111
IUPAC # 87	Individual, with $^{13}\text{C}_{12}$ -Penta-CB # 111
IUPAC # 110	Individual, with $^{13}\text{C}_{12}$ -Penta-CB # 111
IUPAC # 82	Individual, with $^{13}\text{C}_{12}$ -Penta-CB # 111
IUPAC # 118	Individual, with $^{13}\text{C}_{12}$ -Penta-CB # 111
IUPAC # 105	Individual, with $^{13}\text{C}_{12}$ -Penta-CB # 111

N° de l'invitation - Sollicitation No.
K8C13-160252/A
N° de réf. du client - Client Ref. No.
K8C13-160252

N° de la modif - Amd. No.
File No. - N° du dossier N°
MTA-6-39111

Id de l'acheteur - Buyer ID
MTA309
CCC / CCC No./ N° VME - FMS

Hexachlorobiphenyls	
IUPAC # 151	Individual, with ¹³ C ₁₂ -Hexa-CB # 153
IUPAC # 149	Individual, with ¹³ C ₁₂ -Hexa-CB # 153
IUPAC # 153	Individual, with ¹³ C ₁₂ -Hexa-CB # 153
IUPAC # 132	Individual, with ¹³ C ₁₂ -Hexa-CB # 153
IUPAC # 138	Individual, with ¹³ C ₁₂ -Hexa-CB # 153
IUPAC # 158	Individual, with ¹³ C ₁₂ -Hexa-CB # 153
IUPAC # 128	Individual, with ¹³ C ₁₂ -Hexa-CB # 153
IUPAC # 156	Individual, with ¹³ C ₁₂ -Hexa-CB # 153
IUPAC # 169	Individual, with ¹³ C ₁₂ -Hexa-CB # 153
Heptachlorobiphenyls	
IUPAC # 187	Individual, with ¹³ C ₁₂ -Hepta-CB # 178
IUPAC # 183	Individual, with ¹³ C ₁₂ -Hepta-CB # 178
IUPAC # 177	Individual, with ¹³ C ₁₂ -Hepta-CB # 178
IUPAC # 171	Individual, with ¹³ C ₁₂ -Hepta-CB # 178
IUPAC # 180	Individual, with ¹³ C ₁₂ -Hepta-CB # 178
IUPAC # 191	Individual, with ¹³ C ₁₂ -Hepta-CB # 178
Polychlorinated Biphenyls (PCBs) (continued)	Method of calculating relative response factor (RRF)
IUPAC # 170	Individual, with ¹³ C ₁₂ -Hepta-CB # 178
Octachlorobiphenyls	
IUPAC # 199	Individual, with ¹³ C ₁₂ -Octa-CB # 194
IUPAC # 195	Individual, with ¹³ C ₁₂ -Octa-CB # 194
IUPAC # 194	Individual, with ¹³ C ₁₂ -Octa-CB # 194
IUPAC # 205	Individual, with ¹³ C ₁₂ -Octa-CB # 194
Nonachlorobiphenyls:	
IUPAC # 208	Individual, with ¹³ C ₁₂ -Nona-CB # 208
IUPAC # 206	Individual, with ¹³ C ₁₂ -Nona-CB # 208

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File No. - N° du dossier N°
MTA-6-39111

Id de l'acheteur - Buyer ID
MTA309
CCC / CCC No./ N° VME - FMS

Decachlorobiphenyl	
IUPAC # 209	Individual, with ¹³ C ₁₂ -Nona-CB # 208
Homologue groups	
Tri-CB	Average, with IUPAC # 18, 17, 31, 28, 33
Tetra-CB	Average, with IUPAC # 52, 49, 44, 74, 70
Penta-CB	Average, with IUPAC # 95, 101, 99, 87, 110, 82, 118, 105
Hexa-CB	Average, with IUPAC # 151, 149, 153, 132, 138, 158, 128, 156, 169
Hepta-CB	Average, with IUPAC # 187, 183, 177, 171, 180, 191, 170
Octa-CB	Average, with IUPAC # 199, 195, 194, 205
Nona-CB	Average, with IUPAC # 208, 206
Deca-CB	Individual, with IUPAC # 209
Marked analogs (% recovery)	
¹³ C ₁₂ -Tri-CB # 28	Individual, with ¹³ C ₁₂ -IUPAC # 47
¹³ C ₁₂ -Tetra-CB # 52	Individual, with ¹³ C ₁₂ -IUPAC # 47
¹³ C ₁₂ -Penta-CB # 111	Individual, with ¹³ C ₁₂ -IUPAC # 101
¹³ C ₁₂ -Hexa-CB # 153	Individual, with ¹³ C ₁₂ -IUPAC # 101
¹³ C ₁₂ -Hepta-CB # 178	Individual, with ¹³ C ₁₂ -IUPAC # 170
¹³ C ₁₂ -Octa-CB # 194	Individual, with ¹³ C ₁₂ -IUPAC # 209
¹³ C ₁₂ -Nona-CB # 208	Individual, with ¹³ C ₁₂ -IUPAC # 209
Internal standards	
¹³ C ₁₂ -IUPAC # 47	N/A
¹³ C ₁₂ -IUPAC # 101	N/A
¹³ C ₁₂ -IUPAC # 170	N/A
¹³ C ₁₂ -IUPAC # 209	N/A

Range of concentrations: 1 to 200 pg/μL