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B3J 1T3  
Bid Fax: (902) 496-5016

**SOLICITATION AMENDMENT  
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

<b>Title - Sujet</b> Benchtop Spectrometer	
<b>Solicitation No. - N° de l'invitation</b> 01804-200387/A	<b>Amendment No. - N° modif.</b> 004
<b>Client Reference No. - N° de référence du client</b> 01804-20-0387	<b>Date</b> 2019-11-15
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$HAL-409-10788	
<b>File No. - N° de dossier</b> HAL-9-83102 (409)	<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 2019-11-26</b>	
<b>Time Zone</b> <b>Fuseau horaire</b> Atlantic Standard Time <b>AST</b>	
<b>F.O.B. - F.A.B.</b>	
Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Taylor, Kathie	<b>Buyer Id - Id de l'acheteur</b> hal409
<b>Telephone No. - N° de téléphone</b> (902) 403-4837 ( )	<b>FAX No. - N° de FAX</b> (902) 496-5016
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

**Comments - Commentaires**

**Vendor/Firm Name and Address**  
**Raison sociale et adresse du fournisseur/de l'entrepreneur**

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b>	<b>Delivery Offered - Livraison proposée</b>
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<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>

**Issuing Office - Bureau de distribution**

Atlantic Region Acquisitions/Région de l'Atlantique Acquisitions  
1713 Bedford Row  
Halifax, N.S./Halifax, (N.É.)  
Halifax  
Nova Scot  
B3J 1T3

Solicitation No. - N° de l'invitation  
01804-200387/A  
Client Ref. No. - N° de réf. du client  
01804-20-0387

Amd. No. - N° de la modif.  
004  
File No. - N° du dossier

Buyer ID - Id de l'acheteur  
hal409  
CCC No./N° CCC - FMS No./N° VME

**Amendment 004 is issued to respond to questions raised after the release of the  
Solicitation.**

**Q1:** **1.B)** The spectral range required is 7800-400cm<sup>-1</sup>. This specification is not optimal for FTIR (mid-IR) and not based on real instrument performance but rather a marketing lockout. The detector required for mid-IR measurements is not set up for an optimal signal acquisition and sensitivity for the near IR range which is 4000cm<sup>-1</sup> and above. This specification is therefore not optimal and questionable for it being in the requirements.

**A1:** Delete: Item 1B in Annex A Requirement

Insert: Item 1B, Annex A Requirement  
Include either an integrated ATR or an ATR Accessory. The ATR must have a monolithic diamond crystal. Due to the range of sample pH, Zinc Selenide (ZnSe) is not acceptable as an ATR crystal.

**Q2:** **1.C)** When upgrading a mid-IR system to a near-IR system such as suggested, there is a significant loss in quality of analysis. This type of upgrade would require a new detector and new set of optics to ensure a sufficient quality of analysis, similar to the point above. We are questioning the reason for an upgradable system when the industry tested and accepted solution is two separate dedicated systems, for mid-IR and near-IR.

**A2:** The reasoning for an upgradable device as described in 1.C is a business case for a single device with the greatest range of capability. It is not feasible to procure two separate instruments for mid-IR and near-IR nor is it practical considering the physical limitation of available laboratory space.

**Q3:** **2. F)** Would you be able to confirm the type of gasses that are planning to be analyze that would justify the required resolution of 0.25cm<sup>-1</sup>? This is a particularly high resolution, higher than normally necessary, and can result in a much higher signal to noise ratio as well as significantly longer collection times.

**A3:** The reasoning for the capability to achieve high spectral resolutions as listed in 2.F is a business case for a single device with the greatest range of capability for samples requiring resolution in this range.

**ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME**