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R3B 0T6
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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.

Comments - Commentaires

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

Issuing Office - Bureau de distribution
Public Works and Government Services Canada -
Western Region
Room 100
167 Lombard Ave.
Winnipeg
Manitoba
R3B 0T6

Title - Sujet Ultra High Pressure Liquid Chromato	
Solicitation No. - N° de l'invitation 01586-150482/A	Amendment No. - N° modif. 001
Client Reference No. - N° de référence du client 01586-150482	Date 2016-01-22
GETS Reference No. - N° de référence de SEAG PW-\$WPG-070-9714	
File No. - N° de dossier WPG-5-38225 (070)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-02-03	Time Zone Fuseau horaire Central Standard Time CST
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: Barenz, Leanne	Buyer Id - Id de l'acheteur wpg070
Telephone No. - N° de téléphone (204) 229-6909 ()	FAX No. - N° de FAX (204) 983-7796
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

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

This amendment number 001 is raised to answer questions asked regarding Solicitation number 01586-150482/A as follows:

Question #1

Multi column oven with a range from 4 to 110 Deg C. Would the End User consider a max column oven temperature **reduction to 85 Deg C**. There are very few columns that require temperatures in that range. Most column packing will begin to degrade above 80 Deg C. If the end user feels that higher temperature is required, we request the user provide the column type and application, so we can suggest an appropriate substitute.

Answer #1

High temperature column oven allows for increased flow rate while maintaining performance, since there is a better transfer from the mobile phase to the stationary phase. It also results in reduced back pressure, which means we can use small particle size or longer columns to increase resolution. In addition, it will allow us to use a variety of columns such as sub 2 micron particles-filled columns, providing more flexibility and alternatives to target specific analysis. The range is necessary to allow for both traditional silica-based columns as well as the more recent small particle size ones. High temperatures also allow for atypical organic modifiers to be used, providing alternatives to standard analysis, and faster analysis. Overall, the high temperature column oven potential provides high efficiency even at faster flow rates. All of the above are necessary to optimize our work load and do research leading to the most efficient analytical methods possible.

Question #2

Clarification: As written, this specification seems to **request 1300 bar at 5 mL/min**. Certainly pumps should be able to exceed 1300 bar and push solvent 5 mL/min, but not at the same time. Sub 2µm particle size packings generating back pressures close to 1300 bar are commonly used in 2.1mm ID or narrower columns, which are not run at flow rates anywhere near 5mL/min. Columns using sub 2µm particle sizes in wider column diameters, which would require higher flow rates, are not widely available, as there is no reason to use them. Would 1300bar up to 3mL/min, and 800bar from 3-5mL/min. be acceptable?

Answer #2

It would be acceptable to have a pump that can accomplish both 1300 bar and 5ml/min. It is not necessary to have both at one time.

Question #3

Request Removal of Specification, S/N of 100,000. While sensitivity is absolutely a critical factor, S/N as a specification is subject to data processing and data smoothing to the point where the number itself is meaningless. If you smooth the noise to near zero, the smallest peak can have an infinite S/N, while having no benefit to detection limit. Another common noise reduction technique is "Thresholding", where the instrument does not respond to any signal below a set value. Again, noise is removed returning a S/N of some large value without benefit. Without a clear definition of how any S/N would be achieved, the specification is ambiguous.

Answer #3

Data processing and smoothing are not practical options in a high throughput situation. We are dealing with both a large number of samples and many analytes per sample. The S:N ratio is critical in providing us with confidence in our work. The signal to noise ratio is affected by, among other things, ionization efficiency. We need to have a very low LOD and very high reproducibility. Estrogens, in particular, are biologically active at extremely low levels. This is best achieved with the highest possible S:N ratio. We are also working with matrices that are difficult, ie: feces, wastewater and plant materials. With a higher S:N ratio we are able to spend less time and money in sample preparation to remove all the potential interferences. S:N ratios should be determined by injection of 1pg reserpine (MS/MS mode, electrospray on-column,ESI positive) and monitoring of S:N on the transition m/z 609 to 195. S:N ratios should also be

determined by injection of 1pg chloramphenicol (MS/MS mode, electrospray on-column, ESI negative) and monitoring of S:N on transition m/z 321 to 152.

We feel this specification can be monitored on all machines in a consistent manner so are not willing to remove the specification.

Question #4**Mass Range from 2 – 2050 Daltons.**

Would the end user consider an amendment to **2 to 2000 m/z**. There are no drugs or pesticides anywhere near that mass range. Peptides and bio molecules in that mass range will usually have double charges keeping them in the mass range of the instrument.

Answer #4

Yes, this is OK.

*****All other terms and conditions remain the same*****