

COMPLETE THIS FORM TO INITIATE SUPPLIER SCOUTING

MEPNN Supplier Scouting Opportunity Synopsis

- *The submitting organization (ex. MEP Center, requesting company, federal/state agency) agrees to notify NIST MEP of the status of actions taken as a result of this scouting instance within 30 days after receiving a results report. Notification should be via email to scouting@nist.gov, indicating the following:
- Contact with matches identified in report complete and supply contract awarded, process complete
 - Contact with matches identified in report complete and no supply contract awarded, process complete
 - Contact with matches identified in report complete and supply negotiations underway, process in progress
 - Contact with matches identified in report underway; supply negotiations not yet begun; process in progress
 - Contact with matches identified in report not yet begun, process in progress
 - Contact with matches identified in report will not occur within the next 6-months, process complete

HD Collector + GC Isolink

10 days

Opportunities will be posted for 30 days unless specified

Item to be Scouted

Please describe the item application/ the end use of item.* Provide the item number if applicable: (N95 Mask vs Protective Mask).

EPA's recently acquired mass spectrometer is incapable of measuring hydrogen isotopes and so we sought for the necessary package upgrade to make H isotopes possible. This consists of a bundle of two propriety items made only by thermofisher for the thermofisher mass spectrometer; HD Collector + GC Isolink C to CH

2022-099

Supplier Scouting Number (NIST MEP use)

Scouting customer/product NAICS Code, if known

TECHNICAL INFORMATION:	1. Supplier Information	a. Type of supplier being sought*
		<input checked="" type="checkbox"/> Manufacturer <input type="checkbox"/> Contract Manufacturer <input type="checkbox"/> Distributor <input type="checkbox"/> Other _____
	2. Summary of Technical Specifications and Performance Requirements:	a. Describe the manufacturing processes (elaborate to provide as much detail as possible).*
		Item is a series of Faraday collectors and analyte preparation system that allows for hydrogen isotope detection. Please see attached product depiction and descriptions.
		b. Provide dimensions / size / tolerances / performance specifications for the item.*
		These items are self contained with the instrument.
		c. List required materials needed to make the product, including materials of product components.*
		Package consists of the analytical equipment specific to the Thermo Delta V necessary to perform isotope measurements on hydrogen in addition to carbon and nitrogen. There is the HD collector which consists of internal faraday cups specifically designed to capture hydrogen atoms and a specialized GC Isolink II that can handle both C and H atoms.

	2. Summary of Technical Specifications and Performance Requirements cont:	d. Are there applicable certification requirements? * <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Please explain
		Scientific equipment upgrade
		e. Are there applicable regulations? * <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Please explain
		Scientific equipment upgrade for environmental analysis - primary research
		f. Are there any other standards, requirements, etc.? * <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Please explain
		N/A
		g. Additional Comments: Is there other information that would impact the item's performance or usefulness? Please explain. No other Thermo-Delta V compatible system is on the market in existence because these devices are fully integrated into the Delta V system with intentional, proprietary design by Thermofisher.
BUSINESS INFORMATION:	3. Volume and Pricing	3a. Estimated potential business volume (i.e., # Units Per Day, Month, Year) *:
		EPA requires one "entire system."
		b. Estimated target price / unit cost information (if unavailable explain) *: \$39,859.54 for the entire system as described in leaflet.
	4. Delivery Requirements:	a. When is it needed by? (Immediate, 30 Days, 6 months, etc.)* Immediate and for long term future needs.
		b. Describe packaging requirements (i.e., individually/group packaging)* Laboratory Equipment and Devices Applicable Standards: International Electrotechnical Commission (EIC) Standards, International Organization for Standardization (ISO) Standards, and ANSI/AAMI Standards applicable packaging.
		c. Where will this item be shipped? * GLTED, Duluth MN
		5. Additional Comments: Is there other information you would like to include? - Vendor/company must be registered or will register in SAM.gov (https://sam.gov/content/home). - This inquiry does not guarantee award of a contract. - EPA requires a commercial off the shelf instrument that is immediately available that meets the technical specifications attached. Vendors shall provide documentation that their proposed product meets or exceeds the technical specifications attached.

Thermo Electron North America LLC

1400 North Pointe Parkway Ste #10

West Palm Beach, FL 33407

Federal Tax ID #: 43-1992201

BUDGETING QUOTATION

HD Collector Upgrade + GC Isolink C to CH Upgrade

EPA Duluth
6201 Congdon Blvd
Duluth, MN 55804
Attn: Ryan Lepak
Phone: 218-529-5183
lepak.ryan@epa.gov

Qty		HD Collector Upgrade	Unit Price	Total Price
1	EXR1340280	Field upgrade to HD Collector. Customer will receive a refund of 4000 Euro if original collector is sent back under EXR1340280Q.	\$19,682.88	\$19,682.88
GC Isolink C to CH Upgrade				
1	0722683	Upgrade to GC IsoLink II for CH for GC IsoLink II for C	\$23,099.23	\$23,099.23
Miscellaneous				
1	Warranty	One year full parts and labor	included	included

Subtotal		\$42,782.11
Shipping and Insurance FOB Delivery		\$500.00
<i>Government Discount</i>		-\$3,422.57
TOTAL		\$39,859.54

8/15/2022 Taylor Graham
Thermo Fisher Scientific
taylor.graham@thermofisher.com
cell phone: 561-676-3823

Salient Characteristics- Thermo Fisher DELTA V Plus with GC Isolink II System – field collector upgrade

Brand Name: Thermo Fisher

Brand Name Website:

<https://www.thermofisher.com/order/catalog/product/IQLAAEGAATFABHMZZZ#/IQLAAEGAATFABHMZZZ>

Brand Name Technical Specs based on available documentation:

<https://www.thermofisher.com/order/catalog/product/IQLAAEGAATFABHMZZZ#/IQLAAEGAATFABHMZZZ>

[Application Note: GC-IRMS: Assessment of Precision and Accuracy of Carbon Isotope Fingerprints Measurements in Natural Gas \(thermofisher.com\)](#)

http://lachniet.faculty.unlv.edu/Delta_V_Plus_files/Delta_V_Plus_Thermo_Product_Guide.pdf

<http://www.isomass.com/products/isotopic-analysis/delta-v-plus/>

These specs cover the entire instrument for which the HD Field Collector and coupled GC Isolink Upgrades are compatible. They are the only option on the market for the instrument we've already procured.

Sellers shall offer goods/services that meet the following Salient Characteristics of the Thermo Fisher DELTA V Plus with GC Isolink II System

Must be able to run in either Dual Inlet mode or continuous flow mode and include all equipment and peripherals required to switch between modes

Must be able to analyze individual compounds within light natural gas mixtures for $\delta^{13}\text{C}$ and $\delta^2\text{H}$ of hydrocarbon gases with a range of compositional values and include all equipment and peripherals needed for these analyses.

Trade-in of an older IRMS instrument must be allowed

If other than brand name, must demonstrate the ability to analyze hydrocarbon gases with composition of components as low as 0.15 mol% or lower

If other than brand name, must supply a list of three installs where the end user is analyzing hydrocarbon gases

If other than brand name, must demonstrate ability to analyze the components ($\text{C}_1\text{-C}_3$) of the USGS HCG reference materials with precisions (standard deviations) of the carbon isotopic values of <0.2 permil and hydrogen isotopic values <4.0 permil and mean values of replicate analyses within the reported uncertainty of the known values

If other than brand name, must analyze the $\text{C}_1\text{-C}_3$ components of a produced natural gas sample with precisions (standard deviations) of the carbon isotopic values of <0.2 permil and hydrogen isotopic values <4.0 permil and mean values of replicate analyses within one standard deviation of the known values

Must have a dedicated Hydrogen collector(s) for both continuous flow mode and for dual inlet mode

Differential pumping module (for high continuous flow transfer and sensitivity)

Spare parts and consumables for Delta V including spare parts for dual inlet system

Capable of analyzing carbon and hydrogen stable isotopes of methane, ethane, propane, butanes and pentanes of hydrocarbon gases.

Must include an autosampler and all equipment and peripherals required to run hydrocarbon gases. Autosampler must be equipped to accept isotubes

Spare parts for GC Isolink II

6k Va transformer and power conditioner

Fixed position ion optics

Automated diagnostics

Sensitivity of 1100 molecules per CO₂ ion in continuous flow mode

Sensitivity of 800 molecules per CO₂ ion in dual inlet mode

Fiber optic signal transmission

Loop injection of gases

Changeover valve to be mounted so that there is minimal dead volume and minimum gas path length

Dual inlet system, including capillaries is to include integrated heating

Triple collector and D/H collector must be included

Must include an ion optical element that completely removes all ions other than HD⁺

Other than brand name must have maintenance contracts available for purchase which minimally include one on site visit per year

Must include training for up to 5 PGRL staff at the time of install which will include training on all systems. This training will be considered successful once PGRL staff can analyze a hydrocarbon gas and obtain acceptable results.