

## SINGLE SOURCE CERTIFICATION

Authority is requested to make the following purchase under the provision of USF System Regulation USF4.02010(IV)(A)(2)(b) as a non-competitive purchase available from only one source. By submitting this form, department acknowledges that existing [exemptions](#) will not apply to this purchase. Single source requests exceeding \$150,000 must be signed by a Procurement Director and posted publicly for (3) business days.

DATE: 04/16/2025

ITEM(S): Isotope Ratio Mass Spectrometer

PRICE: \$ 218409.65

FUND #: TPA 10009 250000 CMS000

SUPPLIER ID: 16494662

REQUISITION#: \_\_\_\_\_

SUPPLIER NAME: Elementar Americas Inc.

FEDERAL GRANT: ☐ Y ☒ N

**In your words, describe the equipment, commodity, or contractual service. Explain how these specifications are essential to the accomplishment of your work:**

Specialized type of mass spectrometer used to measure the relative abundance of isotopes in a sample. This allows the biogeochemistry lab to measure isotopic variations in natural systems; amplifying research related to climate, water cycles, and geological processes. Specifically, the lab seeks to use this spectrometer to investigate the nitrogen-carbon-climate interaction and the relationship with biological productivity. Using an isotope variant of this machine allows for highly precise and accurate measurements.

**In your own words, describe the reason(s) the item is not subject to competition from other sources and how the stated specification(s) restrict the requisition to only one supplier. Description may include unique features/compatibility/specifications/availability/delivery time frame etc. (Note: Price is not a valid reason).**

There are specifications to the Elementar spectrometer that make it unique. It uses lyticOS software for measuring the isotopes, which is more stable for measurement than competing machines. Additionally, it allows for simultaneous measurement of 10 ion beams, increasing workflow and ensuring stable sample measurements with no degradation. While spectrometers are available by a multitude of suppliers, an Isotope Ratio Mass Spectrometer is a highly specialized piece of equipment; the lab could only find one other manufacturer, Thermo Electron, and their device was not specialized to the extent Elementar is for the lab work planned. Elementar offers lytic OS software for their spectrometer, while Thermo offers Qtegra ISDS software. Lytic is the superior choice for measuring nitrogen ion beams due to its automation and synergy with data modeling software (STATA, R, etc.). Additionally, the Elementar spectrometer allows for 6 monitoring gases and 5 inlet systems, while Thermo has a triple collector (3 inlet systems and 3 amplifiers). The nitrogen cycle monitoring requires a high volume of sampling, with a timeliness factor before the samples degrade. To further support this, Elementar offers the simultaneous measurement of 10 ion beams, while also holding 5 racks of vials in the autosampler, totaling to 70 samples held in the machine. Thermo does not offer the same capacity for sampling volume.

**In your own words, describe the due diligence conducted to validate this supplier as Single Source. Description SHOULD list all other suppliers with item(s)/service(s) with similar functions, your efforts to identify other suppliers, and why these suppliers would not qualify to submit a competitive quote.**

We had identified the needs of the lab first--which invalidated many potential suppliers--as they did not sell the IRMS, but simply offered its use through mailing in samples for measurement at a fee. Some of these suppliers include Opentrons, BioAgilytix, and Avanti Research. Similarly, other lab equipment suppliers sold spectrometers, but not IRMS specifically. These included Agilent, Bruker, and Anton Paar. This left Thermo and Elementar, with Elementar fitting the needs of the lab more closely.

DocuSigned by:

*Clifton James*

4/18/2025 | 12:19 EDT

START 4/21/2025

END 4/23/2025

Approved By (Procurement)

DATE

PUBLIC POSTING DATES

Authority: USF4.02010(IV)(A)(2)(b)

Last Modified: 05/10/2021

**OFFICE OF THE UNIVERSITY CONTROLLER, PROCUREMENT SERVICES**

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