The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header 5

List View

General Information | Contact | Default Values | Discount | Document Information | Clarification Request

Procurement Folder: 1782322
Procurement Type: Central Purchase Order
Vendor ID: VC0000101428
Legal Name: ELEMENTAR AMERICAS INC
Alias/DBA:
Total Bid: $39,971.99
Response Date: 10/02/2025
Response Time: 10:26
Responded By User ID: valerie.conforti
First Name: Valerie
Last Name: Conforti
Email: valerie.conforti@elementar.c
Phone: 5167782933

SO Doc Code: CRFQ
SO Dept: 1400
SO Doc ID: AGR2600000013
Published Date: 9/26/25
Close Date: 10/2/25
Close Time: 13:30
Status: Closed
Solicitation Description: READ - Combustion Oven Nitrogen Analyzer
Total of Header Attachments: 5
Total of All Attachments: 5

Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Solicitation Response

Proc Folder:	1782322
Solicitation Description:	READ - Combustion Oven Nitrogen Analyzer
Proc Type:	Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2025-10-02 13:30	SR 1400 ESR10012500000002395	1

VENDOR

VC0000101428
ELEMENTAR AMERICAS INC

Solicitation Number: CRFQ 1400 AGR2600000013

Total Bid: 39971.98999999999796273186802 **Response Date:** 2025-10-02 **Response Time:** 10:26:04

Comments:

FOR INFORMATION CONTACT THE BUYER
Larry D McDonnell
304-558-2063
larry.d.mcdonnell@wv.gov

Vendor
Signature X **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Nitrogen Combustion Analyzer - Shipping and Installation	1.00000	EA	39971.990000	39971.99

Comm Code	Manufacturer	Specification	Model #
41113049			

Commodity Line Comments: unit price $58,649.21 with 35% discount
$1850 shipping charges.

Extended Description:

See attached documentation for further details.

Elementar Americas Inc. | 119 Comac Street | Ronkonkoma | NY 11779

Mr. Larry McDonnell
Buyer
West Virginia Department of Agriculture
313 GUS R DOUGLASS LN BLDG 11
CHARLESTON WV 25312-6968
USA

Quote

Number	**17985**
Date	Oct 1, 2025
Reference	
Valid from	Oct 1, 2025
Valid to	Dec 30, 2025
Account ID	1063807

Name	Valerie Conforti
E-Mail	valerie.conforti@elementar.com

Shipping address
West Virginia Department of Agriculture
313 GUS R DOUGLASS LN BLDG 11
CHARLESTON WV 25312-6968
USA

Conditions:

Terms of payment:	Within 30 days without deduction
Terms of delivery:	Free on Board Destination
Further informations	

Weights - Volume:

Net weight:	85.202	KG	Gross weight:	85.202 KG

Pos.	Product No.	Description	Quantity	Value
1000	200011512	rNex	1.0 Piece	58,649.21 USD
		rapid N exceed – Elemental analyzer for nitrogen determination. Includes initial outfit kit (all items necessary for installation and operation) and starter kit (all necessary consumables for installation and initial operation).		

Sum of positions	58,649.21 USD
Special discount	-20,527.22 USD
Freight charges	1,850.00 USD
Total Amount	**39,971.99 USD**

Unless agreed in writing elsewhere, the General Terms and Conditions of Elementar Americas, Inc. apply in the latest version. These can be found here:

https://www.elementar.com/en-us/general-terms-conditions

Exhibit A - Pricing Page
Combustion Oven Nitrogen Analyzer
CRFQ AGR26*13

Section No.	Description	Model #/Brand Name	Quanity	Unit Price	Extended Amount
3.1.1	Nitrogen Combustion Analyzer, Shipping and Installation	rapid N exceed/Elementar	1	$ 39,971.99	$ 39,971.99
	Failure to use this form may result in disqualification			**GRAND TOTAL**	$ 39,971.99
	Bidder / Vendor Information				
Name:	Valerie Conforti				
Address:	119 Comac Street				
	Ronkonkoma, NY 11520				
Phone:	5167782933				
Email Address:	valerie.conforti@elementar.com				
Authorized Signature:					

The rapid N exceed uses CO2 carrier gas which is more affordable and easier to procure than Helium or Argon.

The rapid N exceed analyzes 100% of the combusted gases of the sample, unlike Leco which uses gas splitting. This allows for smaller sample sizes, better precision, and lower detection limits.

In our method, oxygen is dosed directly onto the sample using an oxygen lance. It is turned on for a short time during combustion, at a flow dictated by the method chosen in the software. Other manufacturers mix oxygen into the carrier gas stream for less effective combustion and higher oxygen use. We use less than 0.3L of oxygen per analysis.

The rapid N exceed utilizes Regainer/Reductor patented technology. The Regainer will absorb any excess oxygen from combustion and allow longer lifetime of the Reductor, our prepacked reduction tube. This way, we can get up to 2000 runs out of the Reductor.

The rapid N exceed does not require the furnace to be cooled down for maintenance. You may do maintenance with the furnace hot to reduce downtime. The Velp NDA 702 requires cool down.

The furnace rolls completely out for easy tube exchange- unlike other instruments which require removal of the auto sampler to perform maintenance. The Leco and Velp instruments require autosampler removal.

All connections for maintenance in the rapid N exceed are ball and pan fittings held together by clamp connections. These are very easy to remove and quickly do maintenance. For other manufacturers, you will need to use tools to do maintenance.

The rapid N exceed uses durable steel tubes in the furnace, which can be emptied and reused a few times. Other manufacturers like Velp use a ceramic combustion tube which is fragile.

The rapid N exceed can utilize a standard 120V outlet, which makes deployment easier. The Velp and Leco units require 230V.

We can run our instrument using a standard desktop computer and the software is compatible with Windows 11.

rapid N exceed®

Analyzer for fast and absolutely safe measurement of nitrogen or protein according to the Dumas combustion method with samples sizes up to 1 g. Novel EAS REGAINER® technology ensures binding of excess oxygen without reduction metals. The EAS REDUCTOR® tube lifetime is approx. 2000 samples**. The rapid N exceed is the most compact high performance elemental analyzer for real organic macro samples with a measuring range of up to 500 mg N absolute.

Elemental combustion analyzer

Analyzer	
Concentration analysis of	Nitrogen
Operating modes	N
Design	Compact benchtop with single power supply
Sample introduction	Zero blank patented ball valve system with nickel flap
Furnace design	Triple furnace system, 10 years warranty
Detector type	High sensitivity thermal conductivity detector
Control	Fully digital via external PC (no additional control panel required)

Sample Introduction	
Construction	One block, auto-aligned sample introduction system with integrated carousel
Access	Inert gas free easy access, no purging of sample carousel required
Movement control	Fully electrical
Carousel type	Non-stacked 60, 80* or 120* position sampler
Solid sampling system	Compact integrated patented ball valve with nickel flap

Furnace	
Type	Slide-out, triple vertical furnace system for usage of both 28 mm inner diameter steel reaction tubes
Furnace	Resistive heater element with 1200 °C maximum temperature
Electrical supply	48 Volt safety design for entire instrument including furnaces
Control	Automatic power output adjustment (no hardware change required)
Combustion/reduction reactor	Separated straight steel and EAS REDUCTOR® tube
Oxygen binding	EAS REGAINER® to remove excess oxygen metal free from gas stream
Post-combustion reactor**	Straight steel tube with copper oxide, platinum catalyst and EAS REGAINER® filling
Ash removal	Steel, easy-removal ash crucible
Reactor stability	No need for cooling down during routine maintenance
Carrier gas	Carbon dioxide
Connections	Quick swap clamp connections for fast changing with no tools required

Gas Separation	
Type	Chromatography-free, aliquot-free whole gas analysis
Operating principle	Chemical separation and physical water removal with chemical fine drying
CO_2 scrubber	Not required
Water removal	3 step gas drying utilizing condensor, gas membrane drying and chemical fine drying

System Data Sheet

rapid N exceed®

Detectors / Electronics	
Type	Thermal Conductivity Detector (TCD)
Design	Thermistor, oxygen proof, imbalanced flow, double channel
Detection limit**	< 20 ppm (TCD)
Calibration	Multipoint, multirange, matrix-independent calibration
Analysis time**	~3-4 min
Electronics	Fully digital, fully integrated in unit, no external control panels
Security norms	EU machinery directive 2006/42/EG

Software	
Operating system	Windows® 10 Pro Multi-Language or higher
Analyzer software	Winvar proprietary software
Features	Automatic leak finding software Intelligent error indicator with sophisticated self-diagnostics Auto sleep and wake-up Statistical calculations Indication service cycle LIMS integration 21 CFR part 11 compliant* Comprehensive documentation for fast part identification
Data Storage	Non manipulated storage of experimental raw data and peak graphics
Balance	Automatic read out of weighing data*

* requires optional configuration **depending on sample type, analysis mode and configuration

Measuring Range and Technical Specifications

nitrogen:	0 - 500 mg absolute (0 - 100%)
standard deviation**:	< 0.05% absolute (250 mg aspartic acid)
weight:	approx. 80 kg
electrical connections:	100/110/200/230 V, 50/60 Hz, 1.8 kW
oxygen consumption**:	approx. 0.4 l / analysis
required gases:	carbon dioxide and oxygen only
dimensions:	48 x 55 x 57 cm (W x D x H)

04 / 2025 A

Elementar Analysensysteme GmbH
Elementar-Straße 1 · 63505 Langenselbold (Germany)
Phone: +49 (0) 6184 9393-0 | info@elementar.com | www.elementar.com

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EXCELLENCE IN ELEMENTS

TECHNICAL NOTE

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EXCELLENCE IN ELEMENTS

Easy maintenance for reliable operation of Elementar's N/protein analyzers

Introduction

Traditionally, combustion instruments use heated metals such as copper or tungsten to bind excess oxygen and reduce formed nitrogen oxides to N_2. This method results in typical lifetimes of the reduction metal of only 200 – 300 samples for whole gas analysis.

Elementar's patented EAS REGAINER® technology, utilized in the N/protein analyzers rapid N exceed® and rapid MAX N exceed, increases the lifetime of the reduction metal, which clearly reduces and simplifies the maintenance of the instruments. The benefit of the EAS REGAINER technology is that the EAS REDUCTOR®, which reduces nitrogen oxides formed during combustion to N_2, is regenerated continuously during the operation of the instrument by the inexpensive EAS REGAINER. The proprietary EAS REGAINER is a non-toxic, non-hazardous material specifically reacting with oxygen. As a by-product reducing gases are formed, which are purged into the EAS REDUCTOR and regenerate metal oxides (formed via the reduction of NO_x to N_2) back to the active metal. This enables the analysis of more than 2000 samples (depending on the instrument and sample type) before the reduction metal has to be exchanged.

For a trouble-free operation of the rapid N exceed and rapid MAX N exceed with a long lifetime of the EAS REDUCTOR, it is important to maintain the instrument correctly. This Technical Note demonstrates the few easy maintenance steps which should be carried out regularly to assure a long lifetime of the EAS REDUCTOR.

N/PROTEIN ANALYZERS

rapid N exceed®
rapid MAX N exceed

Simple steps for maintaining the EAS REGAINER

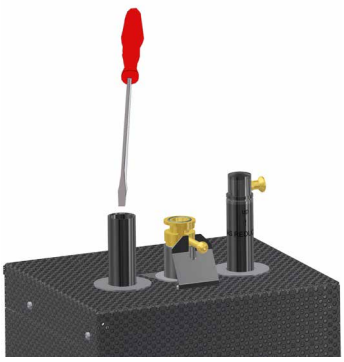
For a long lifetime of the EAS REDUCTOR it is crucial to properly check and refill the EAS REGAINER regularly. During operation of the instrument, the EAS REGAINER will be consumed and this process happens at a certain height in the post-combustion tube. This may result in the formation of air pockets, if the remaining regainer material does not fall down to fill the void. For this reason, we recommend checking the EAS REGAINER every 250 measurements. It does not suffice to just check the height of the remaining EAS REGAINER by sight. It is essential to thoroughly poke into the remaining EAS REGAINER to ensure that no air pockets remain before re-filling.

rapid N exceed

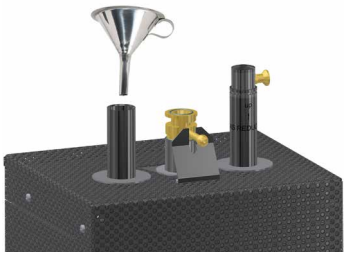
For the rapid N exceed, we recommend to check the EAS REGAINER along with cleaning the nickel flap and emptying the ash crucible. The following steps will guide you through this 3-fold maintenance for the rapid N exceed instrument:

1. Slide out the furnace and remove the post-combustion tube plug.

2. Thoroughly poke into the EAS REGAINER remaining in the post-combustion tube with a screwdriver or similar tool to ensure there are no air pockets.



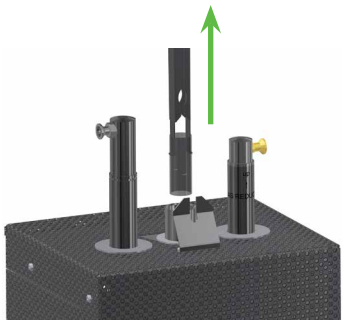
3. Fill up the EAS REGAINER using a metal funnel. The post-combustion tube should be left with a gap at the top large enough for the plug to be reinserted (about 4 cm or 1.5 inch).



4. Check the brass wool in the post-combustion tube plug. If necessary, replace the brass wool.

5. Clean and grease the O-rings of the plug and reinsert the plug into the top of the post-combustion tube.

6. Remove the combustion tube plug and use the gripper tongs to remove the ash crucible from the combustion tube.



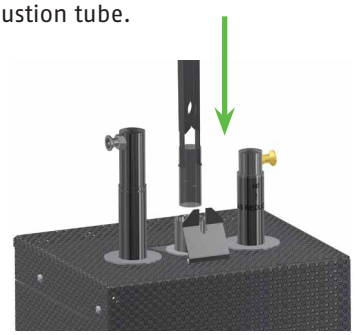
7. Remove the oxygen lance and clean the nickel flap with an appropriate brush, such as a brass brush.

8. Clean and grease the O-rings for the plug.

9. Reinsert the oxygen lance or use a new one if necessary.

10. Scrape out the ash crucible using a screwdriver or similar tool.

11. Use the gripper tongs to gently place the new crucible in the combustion tube.



12. Reinsert the plug into the top of the combustion tube. Be sure the O-ring atop the plug is in place.

rapid MAX N exceed

For the rapid MAX N exceed, maintenance of the EAS REGAINER should also be done every 250 measurements. Carry out the following steps for re-filling the EAS REGAINER:

1. Wait for the sample holder to exit the combustion tube and come to a stop. Remove the sample cover as instructed.

2. Prepare to pull out the furnace by removing the two thumb screws holding the combustion tube flange in place and removing the eight indicated ball-pan connection clamps.

3. Gently slide the furnace out on its rails and remove the top plug from the post-combustion tube.

4. Thoroughly poke through the remaining EAS REGAINER to ensure that no air pockets have formed.

5. Using a metal funnel, re-fill the EAS REGAINER to the appropriate height. Then reinsert the top plug into the post-combustion tube.

6. Push the furnace back in and reconnect the ball-pan connections and the combustion tube flange screws.

Troubleshooting made easy

If you are experiencing a problem with your instrument, perform the following actions in the listed sequence to identify the problem as quick and efficient as possible:

1. Check the instrument status
2. Check the quality of blanks
3. Check standard samples

The following link to Elementar's online training website, will direct you to a PDF file which will guide you through each of the above-mentioned steps and give you measures to help solve your problem. Additionally, you will find two videos showing the simple steps on how to re-fill the EAS REGAINER for the rapid N exceed and the rapid MAX N exceed. Log in or sign up for an account to Elementar's eLearning website to get full access to all materials.

https://training.elementar.de/mod/page/view.php?id=7646

Identifying the end of the lifetime of the EAS REDUCTOR

Correct maintenance of the EAS REGAINER is essential for a long lifetime of the EAS REDUCTOR. Expected lifetimes of the EAS REDUCTOR with correct maintenance are up to 2000 and 1000 analyses for the rapid N exceed and the rapid MAX N exceed, respectively.

The following features are indications of a consumed EAS REDUCTOR and signify that it needs to be replaced:

1. Instable baseline
2. Double peak
3. Breakthrough

Please note that when only one of these features is observed, it does not automatically mean that the EAS REDUCTOR is consumed. There may be a different reason for its occurrence which you can read about in more detail under the link to Elementar's online training website mentioned above.

Below you can find a measurement sequence of the rapid N exceed which shows the end of the lifetime of the EAS REDUCTOR. At first, a normal measurement is shown with a flat baseline at around 100 (Figure 1a). A second peak slowly appears (b and c) and can be seen distinctly (d) when the EAS REDUCTOR is consumed in addition with an instable baseline. If the EAS REDUCTOR is not replaced and measurements are continued, you will eventually see a breakthrough of the signal (e).

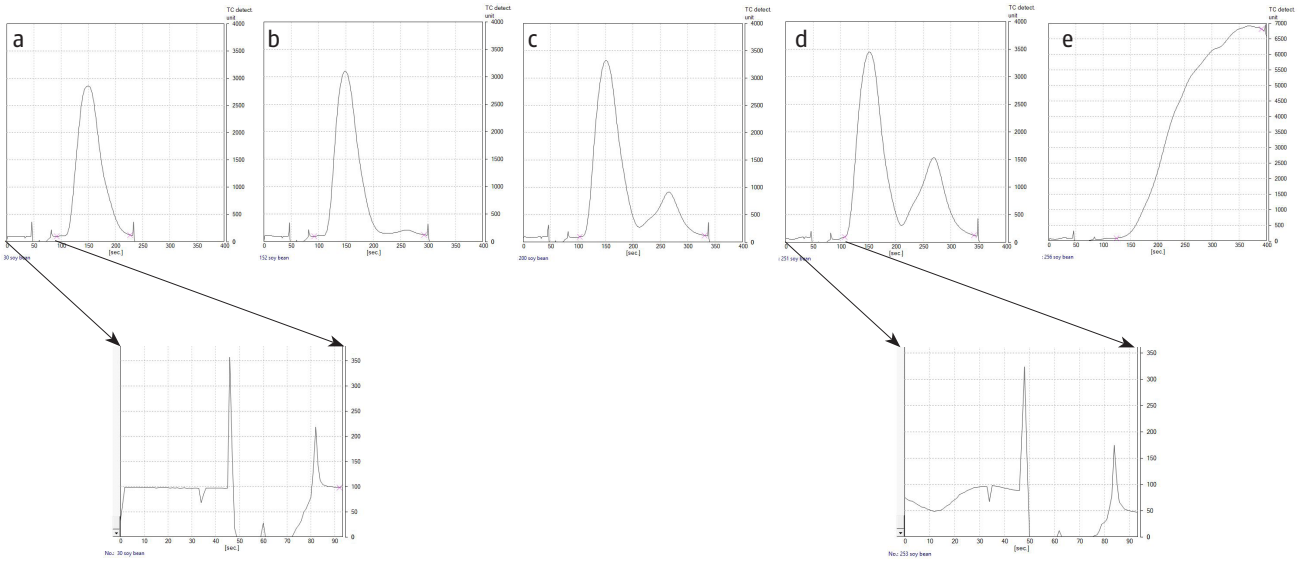


Figure 1. Measurement sequence showing the effect of a consumed EAS REDUCTOR: (a) normal measurement with flat baseline, (b) slight tailing, (c) double peak appears, (d) distinct double peak and instable baseline, (e) breakthrough of oxygen.

Elementar – your partner for excellent elemental analysis

Elementar is the world leader in high performance analysis of organic and inorganic elements. Continuous innovation, creative solutions and comprehensive support form the foundation of the Elementar brand, ensuring our products continue to advance science across agriculture, chemical, environmental, energy, materials and forensics markets in more than 80 countries.

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Art.-No. 05 005 614, 11/2019 A