

## **SRM University-AP, Andhra Pradesh**

### **Minutes of the meeting of Technical Discussion on CHNSO analyzer**

The Technical Discussion meeting with the vendors for the CHNSO analyzer was held on 10-02-2023 at 02:30 PM virtually. The following faculty members of the Department of Environmental Science (SEAS) attended the meeting

1. Dr. Javid Ahmad Dar, Department of Environmental Science – Convener of the meeting
2. Dr. Shoji Thottathil, Department of Environmental Science
3. Dr. Deep Raj, Department of Environmental Science
4. Dr. Satyam Verma, Department of Environmental Science
5. Dr. Kousik Das, Department of Environmental Science
6. Dr. Deblina Dutta, Department of Environmental Science

**Agenda:** The agenda of the meeting was to discuss the technical feasibilities of the instrument (CHNSO analyzer) with the vendors.

- Dr. Javid welcomed all the vendors for the detailed discussion on the technical feasibility of the CHNSO analyzer. The three vendors who were invited for the Technical Discussion of the instrument were:
  1. Swan Scientific LLP – Hyderabad, Telangana
  2. Shiva Global Teknosys – Ghaziabad, Uttar Pradesh, and
  3. Elementar – Gurugram, Haryana
- Mr. Sandeep Singh and Mr. Prasad from Swan Scientific LLP presented the instrument (Elemental Analyzer – Model No.: EMA502).
- Dr. Prashant Dutt, General Manager, Shiva Global Teknosys, gave presentation on the instrument (EuroVector – Euro EA 3100), and
- Mr. Narasimha Murthy, Elementar, presented the instrument (Elementar – UNICUBE).
- After the presentations by all the vendors, Faculty members had a detailed discussion with the vendors about the instrument. The vendors answered all the

queries/doubts and other clarifications raised by the faculty members during the discussion.

The technical specifications of CHNSO analyzer discussed with all the three vendors are as follows:

S. No	Specification	Elementar	Shiva Global Teknosys	Swan Scientific LLP
1	Instrument	Elementar-UNICUBE	Euro-Vector Model EuroEA3100	Elemental Analyzer Model No:EMA502,
2	Make	Germany	Euro-Vector Srl, Italy	Velp Scientific, Italy
3	Auto-sampler	With 120 positions	With 80 positions	With 117 positions
4	Micro-balance	Mettler-Toledo WXTS	Mettler-WXTS30U	Not mentioned which type
5	Analysis time	8 min for simultaneous CHNS determination	6 minutes for CHNS determination	12 minutes for CHNS determination
6	Detection limit	< 50 ppm to 100%	< 50 ppm to 100%	< 50 ppm to 100%
7	Analytical range	0.01 - 50 mg	0.01 - 50 mg	0.01 - 20 mg
8	Separation time	8 minutes	6 minutes	12 minutes
8	No. of blanks used for the calibration	Zero blank	Zero blank	Double blank
9	Types of samples support	Solid & liquid	Solid & liquid	Solid & liquid
10	Column for CHNS analysis	TPD	GC PTEF	TCD
11	Starter-Kit	2000 kits	2000 kits	2000 kits
12	Furnace	With 950°C, maximum temperature 1200 °C	1100°C, Turboflash - 1800°C	With 1060 °C.
13	Operating modes	CHNS, CNS, CHN, CN, N, S & O	CHNS, CNS, S, CHN, CN, N & O	Not mentioned
14	No. of installations across the country	200	130	10
15	Warranty	1 year	2 year	1 year
	Remarks	Suggested - L1	Suggested - L2	Suggested - L3

#### Recommendations by the Faculty Members

- Based on Technical feasibility, Description of the instrument, Customer technical support system, previous installation record, feasibility to analyse both solid and liquid samples, Warranty, and Service, all the Faculty Members, Department of Environmental Science have unanimously suggested the **Elementar - CHNSO analyzer for the procurement.**

*[Handwritten Signature]*

The following faculty members suggested the Elementar – UNICUBE, CHNSO analyzer instrument for the procurement.



Dr. Karthik Rajendran  
Associate Professor & Head  
Dept. of Env. Sci., SRM University-AP



Dr. Shoji D Thottathil  
Assistant Professor  
Dept. of Env. Sci., SRM University-AP



Dr. Pankaj Pathak  
Assistant Professor  
Dept. of Env. Sci., SRM University-AP



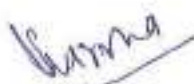
Dr. Javid Ahmad Dar  
Assistant Professor  
Dept. of Env. Sci., SRM University-AP



Dr. Koushik Das  
Assistant Professor  
Dept. of Env. Sci., SRM University-AP



Dr. Deep Raj  
Assistant Professor  
Dept. of Env. Sci., SRM University-AP



Dr. Satyam Verma  
Assistant Professor  
Dept. of Env. Sci., SRM University-AP



Dr. Deblina Dutta  
Assistant Professor  
Dept. of Env. Sci., SRM University-AP



## Quote

**To,**

SRM University AP  
Neerukonda, Mangalagiri Mandal, Guntur District,  
Mangalagiri  
GUNTUR 522240  
INDIA

**Number**

3153

**Date**

Jan 19, 2023

**Reference**

As per online enquiry

**Valid from**

Jan 19, 2023

**Valid to**

Jan 31, 2023

**Account ID**

1106917

**Phone**

+91 9910994775

**E-mail**

Narasimha.murthy@elementar.com

SRM University AP  
Neerukonda, Mangalagiri Mandal, Guntur District,  
Mangalagiri  
GUNTUR 522240 INDIA

Pos.	Product No.	Description	Quantity	Value
1000	200006875	<b>UNICUBE CHNS instrument package</b>  High performance elemental analyser for simultaneous CHNS analyses. Includes installation kit (containing all items for installation and maintenance as well as for sample preparation). Integrated 120 positions autosampler as standard. Contents:  1 piece UNICUBE with mode kit CHNS 1 piece Initial outfit kit UNICUBE 1 piece Sample carousel/Auto sampler, 120 positions, red, (with sample cover)	01	31,200.00 EUR
2000	200004299	<b>Starter kit UNICUBE</b>  includes all necessary consumables sufficient to analyse <b>1000 CHNS</b> sample analyses. Automatically included in the basic instrument (unicu-CHNS-120).	01	Included
3000	200014001	<b>Mettler-Toledo WXT5 micro balance, new model</b>  Readability 0.001 mg with V 24/RS 232 interface. Incl. cable to connect to elementar analyzer.	01	Included
4000	200000740	<b>Maintenance kit for UNICUBE</b> Content: all wear parts which have to be exchanged in conjunction with a maintenance call.	01	Included
		<b>Consumables required for additional 1,000 sample analysis</b>		
5000	200014555	Ash finger, 60 mm, slotted	04	Included
6000	200011820	Support tube, $\varnothing = 65$ mm	02	Included
7000	200004159	O2 lance, 150 mm	01	Included
8000	200009795	Tin foil for elemental analysis, 35 x 35 mm, 1000 pcs./package	01	Included
9000	200014271	Copper for elemental analysis, wires, 100 gm	04	Included
10000	200008986	Tungsten(VI)-oxide for elemental analysis	01	Included
11000	180005768	Combustion tube (quartz) labeled	01	Included

<b>Total discounted Exworks:</b>	<b>31,200.00 EUR</b>
<b>Packing &amp; Forwarding Charges:</b>	<b>200.00 EUR</b>
<b>Total FCA Frankfurt:</b>	<b>31,400.00 EUR</b>
<b>Air Freight &amp; Insurance Charges:</b>	<b>600.00 EUR</b>
<b>Total CIP Chennai:</b>	<b>32,000.00 EUR</b>

### **Terms & Conditions**

<b>Validity</b>	60 days from the date of offer.
<b>HSN Code</b>	9027
<b>Warranty</b>	12 months from the date of installation and commissioning except for parts subject to wear and tear. Please note that the warranty does not cover physical damage, glass wares, any other damage that occurred due to, natural calamities etc. Glass parts, consumables and other wear and tear parts are not covered under warranty. 10 years warranty on the furnace and 10 years warranty on the TCD.
<b>Installation &amp; Training</b>	Free installation & training at the site by our factory-trained engineers.
<b>Payment Terms</b>	100% through confirmed Letter of credit in favor of Elementar Analysensysteme GmbH, Germany
<b>Delivery Time</b>	18 to 19 weeks from the date of receipt of LC.
<b>Country of Origin</b>	Germany
<b>Note</b>	Order should be placed in the name of Elementar Analysensysteme GmbH Elementar-Straße 1, D-63505 Langenselbold Germany

**For Elementar India Pvt. Ltd.**

## Quote

To,  
 SRM University AP  
 Neerukonda, Mangalagiri Mandal, Guntur District,  
 Mangalagiri  
 GUNTUR 522240  
 INDIA

SRM University AP  
 Neerukonda, Mangalagiri Mandal, Guntur District,  
 Mangalagiri  
 GUNTUR 522240 INDIA

<b>Number</b>	<b>3162</b>
Date	Dec 12, 2022
Reference	As per online enquiry
Valid from	Dec 12, 2022
Valid to	Jan 31, 2023
Account ID	1106917
Phone	+91 9910994775
E-mail	Narasimha.murthy@elementar.com

Pos.	Product No.	Description	Quantity	Value
1000	100007623	<b>Helium Gas Cylinder</b> Helium Gas Cylinder   (46.7 Liter) with purity 99.999% gas refilling 7.0 Cu Meter	01	1,60,000.00 INR
2000	100007624	<b>Oxygen Gas Cylinder</b> Oxygen Gas Cylinder   (46.7 Liter) with purity 99.999% gas refilling 7.0 Cu Meter	01	Included
3000	100007633	<b>Double stage Gas Regulator</b> Double stage Gas Regulator   Double stage double meter stainless steel body regulator fitted with stainless diaphragm and stainless steel Pressure gauges.	02	Included
4000	100007737	<b>Liquid Press</b> Liquid Press   Capsule sealing press	01	Included

<b>Total Exworks:</b>	<b>1,60,000.00 INR</b>
<b>IGST @ 18%:</b>	<b>28,800.00 INR</b>
<b>Total FOB Destination Price:</b>	<b>1,88,800.00 INR</b>

**TERMS AND CONDITIONS**

**Warranty:** 12 months from the date of installation.

**Installation& Training:** Free installation & training at site by our factory trained engineers

**Payment Terms:** 100% Against receipt of the goods.

**Delivery Time:** 18 weeks from date of receipt of confirmed order

**Country of Origin:** India

**Note:** Order should be placed in the name of

**Elementar India Private Limited  
204, Block-1, DLF Corporate Park,  
MG Road, Gurugram – 122002,  
Haryana, INDIA**

**For Elementar India Pvt. Ltd.**



Final Quotation

To, SRM University - AP SRM Trust AP, Bank colony, Vijayawada Neerukonda, Mangalagin Mandal, Gudur Dist Andhra Pradesh – 522240, India	Quotation No.: SGT/EV/0079R/2022-23/PD Dated: 19 <sup>th</sup> January '2023		
Reference: : <u>Dr. Javid Ahmad Dar -Assistant Professor, Dept. of Environmental Science,</u> <u>Mobile: +91-6005133959, Email: javiddar29@gmail.com</u>			
Description	Qty.	Unit Price in Euro (€)	Total Price in Euro (€)
<b>EuroVector Srl Italy Elemental Analyzer model EuroEA3100, Fully Computer and Microprocessor Controlled Analyzer for the determination of CHNS-O Including Auto Sampler.</b>			
<b>1. Euro EA 3100 Elemental Analyzer Basic unit, Includes –</b>			
<b>Functional Unit:</b> Fully Computer and Microprocessor controlled Elemental Analyzer configured as Single Furnace or Double Furnace for the Quantitative Determination of CHNS & Oxygen using Gas Chromatographic Column Separation and Thermal Conductivity Detection.  EuroEA3100 series of Elemental Analyser is based on TurboFlash™ Combustion Principle, a patented technology to fully combust a large variety of samples matrices. Gas Species produced from the combustion are time separated by a GC column and detected by a super sensitive Thermal Conductivity Detector  The system analyses Organic, Inorganic and metal organic component on solid viscous and liquid non-volatile samples. The system offers high flexibility in Analytical Mode throughout the use of different configuration Kits as Selectable operating mode: CHNS, CNS, S, CHN, CN, N & O.  Highly stable thermo regulated oven allows for reliable separations by GC Column of the 4 gas species produced in the Combustion Reactor and to detect gas peaks using a Supersensitive TCD granting baseline stability using Helium carrier for analytical and reference arm.  <u>Euro EA 3100 is Fully PC controlled unit, all the instrument parameter like leak test, Auto Ready, Diagnostics, method can be set from PC key board.</u>  Euro EA 3100 has Pressurized oxygen jet injection on the sample directly, for any volume independently from carrier gas velocity for fullest combustion of sample. It has the programmable oxygen dosing time and digestion temperature as standard feature.  The Euro EA 3100 have pressure/flow control meter for carrier gas, it includes <u>Auto diagnostics</u> , digital clock, automatic wakeup routine, start up, stand by, shut down facility. The time set for stand by and Auto ready are permanently displayed on monitor as strip in the window monitor. The actual Furnace temperature get decreases by 40% of the set furnace temperature in Stand-By Mode. The Carrier Gas Flow get decreases by to 5 ml/min in Stand-By Mode.	01	26,000.00	26,000.00

**Max Furnace Temperature 1100°C****Turbo Flash Combustion Temperature 1800°C**

The instrument includes a highly advanced and flexible furnace design that allows for in situ Dynamic Flash combustion at 1800° C for full combustion of a wide variety of sample taking advantage from patented TurboFlash® combustion technology injection pressurized oxygen at pressure/Flow Independent from carrier gas pressure/flow.

**Detector:** Supersensitive TCD (1 µgm detector response 1500 counts)

**Analytical Measuring Range:** From 0.01% (50 ppm) to 100%

**Sensitivity:** Less than 1.0 microgram for C, H, N, S & O.

**Accuracy:** 0.15% absolute & 0.15% relative with organic substance depending upon % element content of samples with Helium as carrier gas and 0.30% absolute & 0.30% relative with organic substance depending upon % element content of samples with argon as Carrier Gas.

**Precision:** 0.20 to 0.05% RSD (based on 3 Sigma using 1-5 mg certified organic test substance) with Helium as carrier gas and 0.50 to 0.1% RSD (using 1-5 mg certified organic test substance) with Argon as carrier gas, Depend up on the Sample matrix.

**Analysis time:** CHN less than 3 minutes; CHNS less than 6 minutes; oxygen less than 3 minutes; CN less than 2 minutes; S less than 3 minutes;

N less than 90 seconds. The analysis times are declared with full peak separation between the elements on Chromatographic column. The EA3100 can auto-optimize the time required for a particular analysis, if required upon selection.

**Sample size:** from 0.01mg to as much as can be filled on 5x9mm or 10x10 mm tin or silver caps for maximum accuracy in CHN/CHNS mode with low carbon contain samples. It can further accept the higher amount of samples through different shape of folding materials say for disks and cones, compatible with carousel cavities.

**Patented Turbo Flash technology** provide the most advanced patented Turbo Flash Combustion technology which involves pressurized oxygen injection technique program independently from carrier pressure/flow for full combustion "in situ" allowing for the most effective combustion related to 1800°C. The system has automatic facility for optimize oxygen injection, volume set via software and dosing rate thru pressure or time independently selectable via software for better and optimum combustion.

**Solid & Liquid samples:** The system is able to handle solid and liquid samples.

**Chromatographic display:** provides Permanent display of the Chromatogram which provides indications on conditions of the catalyst, column performance by peak shape and baseline

<p>stability. Real Time Chromatogram provides on the instrument is a valuable tool and eliminate the need of run counter to monitor the activities of reagent and other components. It functions by monitoring baseline and viewing the chromatogram helps in determining the overall operation of the analyzer irrespective of samples nature.</p> <p><b>Extensive diagnostic:</b> Built in extensive diagnostic routines continuously monitor electronic and pneumatic components, assuring unattended operation, high mean time between failure, optimum instrument performance.</p> <p><b>Gas Leak Test:</b> The sensitivity of an intelligent electronics pressure probe allows EuroEA3100 to complete the automatic push button leak test procedure quickly and accurately.</p> <p><b>IRMS Compatibility:</b> The system is able to be interfaced to Mass Spectrometer namely IRMS (Isotopic Ratio Mass Spectrometer to analyze Isotopic composition of elements.)</p> <p><b>Standard Parts</b> including various olives and fittings, fuses, porous frit, different kind of O-rings, snoop, tubing</p> <p><b>Tool Kit Bag</b> with the few spanners, Allen keys, screw Driver, Spatula for Micro Analysis-2xTweezers for arranging sample in tin caps in round balls. The Tweezers for forming, folding &amp; Sealing the solid samples in Tin or silver boats.</p>		
<b>2. WEAVER.NET Software for Elemental Analysis.</b>		
<p><b>Weaver™</b> Software for Control, Integration &amp; Result Reporting  <b>Weaver™</b> is the most complete software dedicated to Elemental Analysis. <b>Weaver™</b> supervises full automatic instrument control, also allowing for data reprocessing, preventive maintenance prompting, gas leak test and full diagnostic.</p> <p>Routine functions are immediately available through a set of quick settings buttons always on view, while one single window provides access to all operations, from analysis setup and progress, to data reprocessing and printout reporting Elemental Analysis (EA).</p> <p><b>Weaver™</b> is a major step forward for completeness and ease of use, and provides the most elegant solutions in all functionalities, key to EA Instrumentation.</p> <ul style="list-style-type: none"> <li>• Permanent display of all parameters for continuous monitoring of EA operation.</li> <li>• Neat grouping of functionality in the main menu: Instrument – Analysis – Reprocessing</li> <li>• Easily available sets of Instrument and Integration parameters for Auto Run.</li> <li>• Automatic Name selection for Methods and Auto Run provides immediate retrieval.</li> <li>• Automatic downloading of all parameters from a list of Auto Run or Methods.</li> <li>• Electronic import of previously performed Calibration (Auto Cal).</li> <li>• Instrument Setup without need of sample weighing, blanks or</li> </ul>	01 Included	Included

<p>calibration (Setup Run).</p> <ul style="list-style-type: none"> <li>• Facility to export to Excel, if Excel is available.</li> <li>• Availability LIMS module for direct import of sample information and results into LIMS.</li> <li>• Immediate guidance through a comprehensive set of purposely designed messages.</li> </ul> <p><b>Significant improvements for instrument operation are:</b></p> <ul style="list-style-type: none"> <li>• Full implementation of Standby, Auto Ready &amp; Auto Stand by in one window.</li> <li>• Full Diagnostic and Preventive Maintenance.</li> <li>• Effective improvement of Automatic Leak Test.</li> </ul> <p><b>Auto Run Features:</b></p> <ul style="list-style-type: none"> <li>• Automatic Weight transfer to Sample Table with Std data read from a Std Table.</li> <li>• All Auto Run parameters fully contained within one two-page window.</li> <li>• Fast creation of Auto Run names from a pre-programmed two-field list.</li> <li>• Easy retrieval of Auto Runs through extensive capability of name sorting.</li> <li>• Powerful Auto Run Queue for running sample sets requiring different parameters.</li> <li>• Continuous appending of the Sample Table during Auto Run acquisition.</li> </ul> <p><b>Reprocessing offers most useful features and options:</b></p> <ul style="list-style-type: none"> <li>• Automatic opening of Results window offering Reprocessing and Reporting facilities.</li> <li>• Optimisation of Calibration data for each element with full view of all information and results for individual calibration points.</li> <li>• All reprocessing attempts can be saved in separate files, for selection of best parameters set.</li> <li>• Fast scroll facility through all the chromatograms and individual results within one Auto Run.</li> <li>• Extensive graphics features to facilitate reprocessing.</li> </ul> <p><b>Statistical analyses:</b></p> <ul style="list-style-type: none"> <li>• Statistics provide a method or basis to better understand the produced data. The Weaver SW offers a choice of Average, Standard Deviation, Variance and Relative Standard Deviation analysis.</li> </ul> <p><b>Weaver™ Multi-Instrument</b> acquisition mode offers a new approach in Elemental Analysis, highly increasing productivity. CHNS and O can now be analyzed <b>simultaneously</b> from different instruments controlled by one single <b>Weaver™</b> instance</p> <p><b>Weaver™</b> - in complete compliance to CFR 21 Part.11 : It is fully compliant to USFDA:CFR - Code of Federal Regulations Title 21, PART11: Electronic Records; Electronic Signatures; Audit Trail, on demand optionally.</p>			
<b>3. Auto sampler</b>			
<p><b>Ash Less Auto Sampler</b>, 80 positions, "Instant Zero Blank" providing elimination of air contamination, is micro-pneumatic actuated, Internal diameter 8 mm, suitable to accommodate the common,5x9mm and 10x10mm tin capsules for solids, viscous and liquid samples, accept different shape of folding materials say for disks and cones, compatible with carousel</p>	01	8,500.00	8,500.00

## Quote

To,  
 SRM University AP  
 Neerukonda, Mangalagiri Mandal, Guntur District,  
 Mangalagin  
 GUNTUR 522240  
 INDIA

<b>Number</b>	<b>3162</b>
Date	Jan 24, 2023
Reference	As per Meeting
Valid from	Jan 24, 2023
Valid to	Jan 31, 2023
Account ID	1106917
Phone	+91 9910994775
E-mail	Narasimha.murthy@elementar.com

SRM University AP  
 Neerukonda, Mangalagiri Mandal, Guntur District,  
 Mangalagin  
 GUNTUR 522240 INDIA

Pos.	Product No.	Description	Quantity	Value
1000	200006875	<b>UNICUBE</b> with instrument package  High performance elemental analyser for simultaneous CHNS analyses. Includes installation kit (containing all items for installation and maintenance as well as for sample preparation). Integrated 120 positions autosampler as standard.  Contents:  1 piece UNICUBE with mode kit CHNS  1 piece Initial outfit kit UNICUBE 1 piece Sample carousel/Auto sampler, 120 positions, red, (with sample cover)	01	31,90,000.00 INR
2000	200004299	<b>Starter kit UNICUBE</b>  Includes all necessary consumables sufficient to analyse 1000 CHNS sample analyses. Automatically included in the basic instrument (Unicu-CHNS-120).	01	Included
3000	200014001	<b>Mettler-Toledo WXTS micro balance, new model</b>  Readability 0.001 mg with V 24/RS 232 interface. Incl. cable to connect to elementar analyzer.	01	Included
4000	200000740	<b>Maintenance kit for UNICUBE</b> Content: all wear parts which have to be exchanged in conjunction with a maintenance call.	01	Included
		<b>Consumables required for additional 1,000 sample analysis</b>		
5000	200014555	Ash finger, 60 mm, slotted	04	Included
6000	200011823	Support tube, L = 65 mm	02	Included
7000	200004159	O2 lance, 150 mm	01	Included
8000	200009795	Tin foil for elemental analysis, 35 x 35 mm, 1000 pcs./package	01	Included
9000	200014271	Copper for elemental analysis, wires, 100 gm	04	Included
10000	200008986	Tungsten(VI)-oxide for elemental analysis	01	Included
11000	100005768	Combustion tube (quartz) labeled	01	Included
		<b>Local Accessories</b>		
12000	100007737	<b>Liquid Press</b>	01	Included

		Liquid Press   Capsule sealing press		
13000	100007623	<b>Helium Gas Cylinder</b> Helium Gas Cylinder   (46.7 Liter) with purity 99.999% gas refilling 7.0 Cubic Meter	01	Included
14000	100007624	<b>Oxygen Gas Cylinder</b> Oxygen Gas Cylinder   (46.7 Liter) with purity 99.999% gas refilling 7.0 Cubic Meter	01	Included
15000	100007633	<b>Double stage Gas Regulator</b> Double stage Gas Regulator   Double stage double meter stainless steel body regulator fitted with stainless diaphragm and stainless steel Pressure gauges.	02	Included

**Total Exworks: 31,90,000.00 INR**

**IGST @ 18%: 5,74,200.00 INR**

**Total FOR Destination Price: 37,64,200.00 INR**

### Terms & Conditions

Validity	90 days from the date of offer.
HSN Code	9127
Warranty	<b>12 months</b> from the date of installation and commissioning except for parts subject to wear and tear. Please note that the warranty does not cover physical damage, glass wares, any other damage that occurred due to, natural calamities etc. Glass parts, consumables and other wear and tear parts are not covered under warranty. 10 years warranty on the furnace and 10 years warranty on the TCD.
Installation & Training	Free Installation & training at the site by our factory-trained engineers.
Payment Terms	100% after delivery.
Delivery Time	18 to 19 weeks from the date of receipt of confirmed PO.
Country of Origin	Germany
Note	Order should be placed in the name of Elementar India Pvt Ltd 704, Block-1, DLF Corporate Park, MG Road, Gurugram - 122002, Haryana, INDIA

**For Elementar India Pvt. Ltd.**

Narasimha Murthy







Dated: 24<sup>th</sup> January '2023  
Ghaziabad-201 005

TEL.: +91-120 4237835, 4136648  
GSTIN: 09ACRFS4663A1ZU  
MSME: UDYAM-UP-29-0005919  
IMPORT-EXPORT CODE: 0515003883

To,  
SRM University - AP  
SRM Trust AP,  
Bank colony, Vijayawada  
Neerukonda, Mangalagiri Mandal,  
Gudur Dist  
Andhra Pradesh - 522240, India

Kind Attn: Dr. R. Sai Kiran Reddy, Purchase Department

Subject : Your requirement of Euro Vector CHNS Elemental Analyzer with Microbalance.

Dear Sir,

This refers to your requirement of above-mentioned subject.

We are pleased to submit our for **EUROVECTOR CHNS Analyzer Model Euro EA3100 with Microbalance** vide our quotation no. SGT/EV/0079R/2022-23/PD dated 10/12/2022 in Euro (€) & another offer for PC-Printers, Gas Cylinders-Regulators etc. vide our quotation no. SGT/INR/0079R/2022-23/PD dated 10/12/2022 in ₹ with detailed technical brochure & specifications.

**EUROVECTOR Srl, ITALY** is world's best CHNS/O manufacturer, emerged as No. 1 company in the short span of fifteen years. **EUROVECTOR** has seen spectacular growth in popularity, with the continuous update on new application and development as a result as on date more than 1500 satisfactory installation exist in all part of globe. Today, **EUROVECTOR** is regarded as Innovation leader in Elemental Analyzer. **EUROVECTOR** design, manufacturing and sell the scientific instrument in the belief that market needs, Individual, expertise, catalyst, instruments and related software one the key synergic factor for the full exploitation of the power of combustion Elemental analyzer. **EURO VECTOR** has brought a concept of Analytical Help Desk thru which end user can access over 150 (Person) year of continuous pioneering and development experience in Combustion EA permanently.

**EUROVECTOR** are committed to provide you all necessary spares and consumable for at least Next 10 Years from installation & Commissioning. We, on behalf of our principal **EUROVECTOR Srl, ITALY** will inform you well in advance before official discontinuation of proposed model. The offer includes an initial supply of all necessary spare and consumable as desired by you in addition to spare lot for smooth operation.

**Training, warranty & AMC:** The instrument will be installed at your premises free of cost by our factory trained engineers and a thorough training will be imparted to your scientist and maintenance engineers covering operational, use of instrument, its accessories and software aspect for intended application as well trouble shooting, repair and maintenance of proposed equipment. The instrument offered to you carries One Year warranty. You can enter into Annual Maintenance Contract (AMC), after expiry of warranty period.

Cont. .2

SHIVA GLOBAL TEKNOLOGI (SGT) is a team of competent engineers and professional having very rich experience in field of Chromatography and Spectroscopy especially in after sales and backup support. SHIVA GLOBAL TEKNOLOGI is having all very sound network backed by their principal EUROVECTOR. We maintain & stock an adequate inventory of spare and consumable, which help the smooth running of Instrument, we sell. We on behalf of our principal EUROVECTOR hereby certify that the proposed equipment is of latest technology and can be upgrade as and when required by you. The supplied equipment will be promptly and properly serviced by our factory trained engineer with adequate back up support from EUROVECTOR Srl, ITALY.

We are sure that the all above mentioned is strictly in the line of requirement. Should you need any further details and clarifications, please feel free to contact us.

Thanking you and looking forward to serve you soon.

Yours faithfully,

For SHIVA GLOBAL TEKNOLOGI,



**Dr. Prashant Dutt**  
General Manager  
Mobile: 9810313185



To, SRM University - AP SRM Trust AP, Bank colony, Vijayawada Neerukonda, Mangalagiri Mandal, Gudur Dist Andhra Pradesh - 522240, India	Quotation No.: SGT/EV/0079R/2022-23/PD Dated: 19 <sup>th</sup> January '2023		
Reference: : Dr. Javid Ahmad Dar -Assistant Professor, Dept. of Environmental Science, Mobile: +91-6005133959, Email: javiddar29@gmail.com			
Description	Qty.	Unit Price in Euro (€)	Total Price in Euro (€)
<b>EuroVector Srl Italy Elemental Analyzer model EuroEA3100, Fully Computer and Microprocessor Controlled Analyzer for the determination of CHNS-O Including Auto Sampler.</b>			
<b>1. Euro EA 3100 Elemental Analyzer Basic unit, Includes -</b>			
<b>Functional Unit:</b> Fully Computer and Microprocessor controlled Elemental Analyzer configured as Single Furnace or Double Furnace for the Quantitative Determination of CHNS & Oxygen using Gas Chromatographic Column Separation and Thermal Conductivity Detection.  EuroEA3100 series of Elemental Analyser is based on TurboFlash™ Combustion Principle, a patented technology to fully combust a large variety of samples matrices. Gas Species produced from the combustion are time separated by a GC column and detected by a super sensitive Thermal Conductivity Detector  The system analyses Organic, Inorganic and metal organic component on solid viscous and liquid non-volatile samples. The system offers high flexibility in Analytical Mode throughout the use of different configuration Kits as Selectable operating mode: CHNS, CNS, S, CHN, CN, N & O.  Highly stable thermo regulated oven allows for reliable separations by GC Column of the 4 gas species produced in the Combustion Reactor and to detect gas peaks using a Supersensitive TCD granting baseline stability using Helium carrier for analytical and reference arm.  <u>Euro EA 3100 is Fully PC controlled unit, all the instrument parameter like leak test, Auto Ready, Diagnostics, method can be set from PC key board.</u>  Euro EA 3100 has Pressurized oxygen jet injection on the sample directly, for any volume independently from carrier gas velocity for fullest combustion of sample. It has the programmable oxygen dosing time and digestion temperature as standard feature.  The Euro EA 3100 have pressure/flow control meter for carrier gas, it includes <u>Auto diagnostics</u> , digital clock, automatic wakeup routine, start up, stand by, shut down facility. The time set for stand by and Auto ready are permanently displayed on monitor as strip in the window monitor. The actual Furnace temperature get decreases by 40% of the set furnace temperature in Stand-By Mode The Carrier Gas Flow get decreases by to 5 ml/min in Stand-By Mode.	01	26,000.00	26,000.00

**Max Furnace Temperature**1100°C

**Turbo Flash Combustion Temperature**1800°C

The instrument includes a highly advanced and flexible furnace design that allows for in situ Dynamic Flash combustion at 1800° C for full combustion of a wide variety of sample taking advantage from patented TurboFlash® combustion technology injection pressurized oxygen at pressure/Flow independent from carrier gas pressure/flow.

**Detector:** Supersensitive TCD (1 µgm detector response 1500 counts)

**Analytical Measuring Range:** From 0.01% (50 ppm) to 100%

**Sensitivity:** Less than 1.0 microgram for C, H, N, S & O.

**Accuracy:** 0.15% absolute & 0.15% relative with organic substance depending upon % element content of samples with Helium as carrier gas and 0.30% absolute & 0.30% relative with organic substance depending upon % element content of samples with argon as Carrier Gas.

**Precision:** 0.20 to 0.05% RSD (based on 3 Sigma using 1-5 mg certified organic test substance) with Helium as carrier gas and 0.50 to 0.1% RSD (using 1-5 mg certified organic test substance) with Argon as carrier gas, Depend up on the Sample matrix.

**Analysis time:** CHN less than 3 minutes; CHNS less than 6 minutes; oxygen less than 3 minutes; CN less than 2 minutes; S less than 3 minutes;

N less than 90 seconds. The analysis times are declared with full peak separation between the elements on Chromatographic column. The EA3100 can auto-optimize the time required for a particular analysis, if required upon selection.

**Sample size:** from 0.01mg to as much as can be filled on 5x9mm or 10x10 mm tin or silver caps for maximum accuracy in CHN/CHNS mode with low carbon contain samples. It can further accept the higher amount of samples through different shape of folding materials say for disks and cones, compatible with carousel cavities.

**Patented Turbo Flash technology** provide the most advanced patented Turbo Flash Combustion technology which involves pressurized oxygen injection technique program independently from carrier pressure/flow for full combustion "in situ" allowing for the most effective combustion related to 1800°C. The system has automatic facility for optimize oxygen injection, volume set via software and dosing rate thru pressure or time independently selectable via software for better and optimum combustion.

**Solid & Liquid samples:** The system is able to handle solid and liquid samples.

**Chromatographic display:** provides Permanent display of the Chromatogram which provides indications on conditions of the catalyst, column performance by peak shape and baseline

<p>stability. Real Time Chromatogram provides on the instrument is a valuable tool and eliminate the need of run counter to monitor the activities of reagent and other components. It functions by monitoring baseline and viewing the chromatogram helps in determining the overall operation of the analyzer irrespective of samples nature.</p> <p><b>Extensive diagnostic:</b> Built in extensive diagnostic routines continuously monitor electronic and pneumatic components, assuring unattended operation, high mean time between failure, optimum instrument performance.</p> <p><b>Gas Leak Test:</b> The sensitivity of an intelligent electronics pressure probe allows EuroEA3100 to complete the automatic push button leak test procedure quickly and accurately.</p> <p><b>IRMS Compatibility:</b> The system is able to be interfaced to Mass Spectrometer namely IRMS (Isotopic Ratio Mass Spectrometer to analyze Isotopic composition of elements.)</p> <p><b>Standard Parts</b> including various olives and fittings, fuses, porous frit, different kind of O-rings, snoop, tubing</p> <p><b>Tool Kit Bag</b> with the few spanners, Allen keys, screw Driver, Spatula for Micro Analysis-2xTweezers for arranging sample in tin caps in round balls. The Tweezers for forming, folding &amp; Sealing the solid samples in Tin or silver boats.</p>			
<p><b>2. WEAVER.NET Software for Elemental Analysis.</b></p>			
<p><b>Weaver™ Software for Control, Integration &amp; Result Reporting</b>  <b>Weaver™</b> is the most complete software dedicated to Elemental Analysis. <b>Weaver™</b> supervises full automatic instrument control, also allowing for data reprocessing, preventive maintenance prompting, gas leak test and full diagnostic.</p> <p>Routine functions are immediately available through a set of quick settings buttons always on view, while one single window provides access to all operations, from analysis setup and progress, to data reprocessing and printout reporting Elemental Analysis (EA).</p> <p><b>Weaver™</b> is a major step forward for completeness and ease of use, and provides the most elegant solutions in all functionalities, key to EA Instrumentation.</p> <ul style="list-style-type: none"> <li>• Permanent display of all parameters for continuous monitoring of EA operation.</li> <li>• Neat grouping of functionality in the main menu: Instrument – Analysis –Reprocessing</li> <li>• Easily available sets of Instrument and Integration parameters for Auto Run.</li> <li>• Automatic Name selection for Methods and Auto Run provides immediate retrieval.</li> <li>• Automatic downloading of all parameters from a list of Auto Run or Methods.</li> <li>• Electronic import of previously performed Calibration (Auto Cal).</li> <li>• Instrument Setup without need of sample weighing, blanks or</li> </ul>	<p>01</p>	<p><b>Included</b></p>	<p><b>Included</b></p>

<p>calibration (Setup Run).</p> <ul style="list-style-type: none"> <li>• Facility to export to Excel, if Excel is available.</li> <li>• Availability LIMS module for direct import of sample information and results into LIMS.</li> <li>• Immediate guidance through a comprehensive set of purposely designed messages.</li> </ul> <p><b>Significant improvements for instrument operation are:</b></p> <ul style="list-style-type: none"> <li>• Full implementation of Standby, Auto Ready &amp; Auto Stand by in one window.</li> <li>• Full Diagnostic and Preventive Maintenance.</li> <li>• Effective improvement of Automatic Leak Test.</li> </ul> <p><b>Auto Run Features:</b></p> <ul style="list-style-type: none"> <li>• Automatic Weight transfer to Sample Table with Std data read from a Std Table.</li> <li>• All Auto Run parameters fully contained within one two-page window.</li> <li>• Fast creation of Auto Run names from a pre-programmed two-field list.</li> <li>• Easy retrieval of Auto Runs through extensive capability of name sorting.</li> <li>• Powerful Auto Run Queue for running sample sets requiring different parameters.</li> <li>• Continuous appending of the Sample Table during Auto Run acquisition.</li> </ul> <p><b>Reprocessing offers most useful features and options:</b></p> <ul style="list-style-type: none"> <li>• Automatic opening of Results window offering Reprocessing and Reporting facilities.</li> <li>• Optimisation of Calibration data for each element with full view of all information and results for individual calibration points.</li> <li>• All reprocessing attempts can be saved in separate files, for selection of best parameters set.</li> <li>• Fast scroll facility through all the chromatograms and individual results within one Auto Run.</li> <li>• Extensive graphics features to facilitate reprocessing.</li> </ul> <p><b>Statistical analyses:</b></p> <ul style="list-style-type: none"> <li>• Statistics provide a method or basis to better understand the produced data. The Weaver SW offers a choice of Average, Standard Deviation, Variance and Relative Standard Deviation analysis.</li> </ul> <p><b>Weaver™ Multi-Instrument</b> acquisition mode offers a new approach in Elemental Analysis, highly increasing productivity. CHNS and O can now be analyzed <b>simultaneously</b> from different instruments controlled by one single <b>Weaver™</b> instance.</p> <p><b>Weaver™</b>- in complete compliance to CFR 21 Part.11 ; It is fully compliant to USFDA:CFR - Code of Federal Regulations Title 21, PART11: Electronic Records: Electronic Signatures; Audit Trail, on demand optionally.</p>			
<p><b>3. Auto sampler</b></p> <p><b>Ash Less Auto Sampler</b>, 80 positions, "Instant Zero Blank" providing elimination of air contamination, is micro-pneumatic actuated, Internal diameter 8 mm, suitable to accommodate the common, 5x9mm and 10x10mm tin capsules for solids, viscous and liquid samples, accept different shape of folding materials say for disks and cones, compatible with carousel</p>	01	8,500.00	8,500.00

cavities are also used, including CU-10 Control Box for micro-pneumatic auto sampler's interface to EA3000 & Super-silent mini air compressor for CU-10 Series. The ash Removal Device eliminating limitations common to Samplers available in the market.

The system is featuring:

- Smooth operation and immediate activation (full purge instantaneous).
- True Zero Blank Eliminating Nitrogen from air contamination
- Appending samples during Auto Run.
- The compact Unit is easy removed and exhausted reactor change in sec
- Allows of different size of caps.
- Jamming effects on small 3.5x5mm is eliminated.

Quartz Liner For 18MM Reactor (200mm) Pack of Two,	01	Included	Included
4. <u>Air Compressor 30TC</u>	01	Included	Included
5. <u>Solid sample preparation kit</u>	01	Included	Included
<b>6. <u>Start up Kit for CHNS(S) Analyses:</u></b>			
Configuration Kit for <u>CHNS(S)</u> suitable for samples for solids & liquids samples which comprises reactors, tin capsules, standards water traps, Quartz Wool	01	2,550.00	2,550.00
<b>6a. <u>Column for CHNS Analysis</u></b>			
GC column PTFE-2m-CHNS	01	Included	Included
<b>7. <u>CHN Consumable Kit :</u></b>			
Consumables Kit for a set of 1000 consumables of CHN for solids & liquids samples.	02	1,400.00	2,800.00
<b>8. <u>Microbalance</u></b>			
Micro Balance with Automatic Weight Transfer facility <b>Mettler, model WXTS3DU</b> , six places, 1ug Sensitivity & better than 1ug precision with Automatic weight transfer facility as per requirement.	01	12,000.00	12,000.00
<b>Total Ex-works value:</b>			<b>€ 51,850.00</b>
<b>Less: <u>Total Discount, inclusive of discount offered during Techno-Commercial Negotiation Meeting</u></b>			<b>€ 19,550.00</b>
<b>Discounted Ex-works value:</b>			<b>€ 32,300.00</b>
<b>Add: Packing &amp; forwarding charges:</b>			<b>€ 250.00</b>
<b>F.C.A. Any Port in Italy:</b>			<b>€ 32,550.00</b>
<b>Add. Airfreight &amp; Insurance:</b>			<b>€ 450.00</b>
<b>Total C.I.P. Chennai:</b>			<b>€ 33,000.00</b>

**(Total CIP Value Chennai in Euro Thirty-Three Thousands only)**

Yours faithfully,

For SHIVA GLOBAL TEKNO SYS,



**Dr. Prashant Dutt**

General Manager

Mobile: 9810313185

**Terms & Conditions**

1.	<b>VALIDITY</b>	:	90 Days
2.	<b>DELIVERY</b>	:	14 - 16 weeks from the date of establishing confirm and Irrevocable Letter of Credit in favor of our Principals.
3.	<b>PAYMENT TERMS</b>	:	Confirmed Irrevocable Letter of Credit for 100% of Invoice value in Favor of <b>EuroVector Srl, Via F.lliCuzio, 42 27100 Pavia (PV), Italy</b>
4.	<b>COUNTRY OF ORIGIN</b>	:	Italy-European Union
5.	<b>PORT OF SHIPMENT</b>	:	MILAN
6.	<b>OUR PRINCIPALS</b>	:	EuroVector Srl Via F.lliCuzio, 42 27100 Pavia (PV), Italy <a href="http://www.eurovector.it">http: www.eurovector.it</a> Tel.: 0039.0385.747010 / Fax: 0039.0385.749196 e-mail: <a href="mailto:eurovector@eurovector.it">eurovector@eurovector.it</a>
7.	<b>BANKERS</b>	:	Intesa Sanpaolo Spa Milano Via Valparaiso IBAN IT 23 E030 6909 4690 0000 3545 048 SWIFT: BC IT IT MM
8.	<b>WARRANTY</b>	:	24 months from the date of installation or 27 months from the date of shipment, whichever is earlier. EuroVector warrants all its products as free from all defects in materials and workmanship under normal uses and service for a period of 24 months for manufacturing & mechanical defects, electrical or electronic defects subject to the compliance of Standard Operating Protocol.
9.	<b>AFTER SALES SERVICES</b>	:	We can offer you the Annual Maintenance contract -Labor only or Comprehensive Annual Maintenance contract - Including Spares & Labor after the expiry of one-year Standard Warranty Period.
10.	<b>CUSTOM DUTY</b>	:	NIL against HSN Code 90278090 for CHNS Or Elemental Analyzer
11.	<b>INTEGRATED SERVICE TAX</b>	GOODS & :	Excluded @ 18%, to be borne by SRM University - AP
12.	<b>CUSTOM CLEARANCE CHARGES</b>	:	Will be borne by SRM University - AP
13.	<b>DOOR DELIVERY CHARGES</b>	:	Will be borne by SRM University - AP
14.	<b>INSTALLATION</b>	:	We will install the system <b>Free of Charge</b> at your site.
15.	<b>TRAINING</b>	:	On-site training on all aspect including operational, troubleshooting & application will be provided during & after installation.
16.	<b>SPARE PARTS</b>	:	We always keep adequate stock of spares, consumables with us and easily available in Indian Rupees.



Yours faithfully,  
For **SHIVA GLOBAL TEKNOLOGI**,

**Dr. Prashant Dutt**  
General Manager  
Mobile: 9810313185



**Quotation for Domestic Supply in Indian Currency**

To, SRM University - AP SRM Trust AP, Bank colony, Vijayawada Neerukonda, Mangalagiri Mandal, Gudur Dist, Andhra Pradesh - 522240, India		Quotation No.: SGT/INR/0079R/2022-23/PO Dated: 19 <sup>th</sup> January 2023	
Description	Qty.	Unit Price In Rupees (In ₹)	Total Price in Rupees (In ₹)
Combustion Gas-Oxygen Cylinder (Filled-99.999% Purity)	01	₹ 57,500.00	₹ 57,500.00
Carrier Gas-Hellum Cylinder (Filled-99.999% Purity)	01	Included	Included
Regulator for Combustion gas & Carrier gas cylinders	02	Included	Included
Total Value :			₹ 57,500.00
Add:18% GST:			Included
FOR SRM-AP University Value:			₹ 57,500.00

PC Specification: i5 PC with Color Inkjet printer. As per your Instrument requirement.	01	To be purchased by SRM University	To be purchased by SRM University
Liquid Sample Preparation Accessory - For Liquid Samples: Device for cold sealing of volatile samples under purging.	01	Will be offered Free of Charge during installation	Will be offered Free of Charge during installation

**TERMS & CONDITIONS**

- |  |   |   |
|--|---|---|
| 1. Payment Term                              | : | NEFT/RTGS Or through Demand Draft.  |
| 2. Goods and Service Tax                     | : | Included @18%.  |
| 3. Octroi                                    | : | If applicable, at actual on your A/c.   |
| 4 Kindly place your valued order in favor of | : | <b>SHIVA GLOBAL TEKNO SYS.</b><br>S-15, Block-B, Sahani Tower Complex<br>Sec-5, Rajendra Nagar, Sahibabad<br>Ghaziabad-201005, Uttar Pradesh<br>Tele.+91120 4237835, 4136648<br>Tele- Fax:+91-120-4136648<br>E-Mail: <a href="mailto:contact@shivaglobalekno sys.com">contact@shivaglobalekno sys.com</a> |
| 5. Our Banker's Details                      | : | <b>INDIAN BANK,</b><br>Branch: Rajendra Nagar, CBS Code:01643<br>75 Commercial Complex, Sector 5<br>Sahibabad, Ghaziabad -201005<br>Account Number: 6287967089<br>IFS Code: IDIB000R057<br>ACRFS4663A<br>99ACRFS4663A1ZU  |

3. PAN NO.  
4. GSTIN  
For **SHIVA GLOBAL TEKNO SYS.**



**Dr. Prashant Dutt**  
General Manager

## Appendix A: List of Abbreviations

Abbreviations are listed in the following table.

Abbreviation	Full Name
AD	Advanced Design
AE	Advanced Engineering
AF	Advanced Fabrication
AG	Advanced Graphics
AI	Advanced Information
AL	Advanced Logistics
AM	Advanced Manufacturing
AN	Advanced Networking
AO	Advanced Operations
AP	Advanced Planning
AR	Advanced Research
AS	Advanced Systems
AT	Advanced Technology
AV	Advanced Visualization
AW	Advanced Writing
AX	Advanced X-ray
AY	Advanced Y-axis
AZ	Advanced Z-axis

BA	Business Administration
BB	Business Biology
BC	Business Chemistry
BD	Business Development
BE	Business Economics
BF	Business Finance
BG	Business Geography
BH	Business History
BI	Business Information
BJ	Business Journalism
BK	Business Law
BL	Business Law
BM	Business Management
BN	Business Networking
BO	Business Operations
BP	Business Planning
BQ	Business Quality
BR	Business Research
BS	Business Systems
BT	Business Technology
BV	Business Visualization
BW	Business Writing
BX	Business X-ray
BY	Business Y-axis
BZ	Business Z-axis

Abbreviations are listed in the following table.

Abbreviation	Full Name
CA	Computer Architecture
CB	Computer Biology
CC	Computer Chemistry
CD	Computer Design
CE	Computer Engineering
CF	Computer Fabrication
CG	Computer Graphics
CH	Computer History
CI	Computer Information
CJ	Computer Journalism
CK	Computer Law
CL	Computer Law
CM	Computer Manufacturing
CN	Computer Networking
CO	Computer Operations
CP	Computer Planning
CQ	Computer Quality
CR	Computer Research
CS	Computer Systems
CT	Computer Technology
CV	Computer Visualization
CW	Computer Writing
CX	Computer X-ray
CY	Computer Y-axis
CZ	Computer Z-axis

DA	Design Architecture
DB	Design Biology
DC	Design Chemistry
DD	Design Development
DE	Design Economics
DF	Design Finance
DG	Design Geography
DH	Design History
DI	Design Information
DJ	Design Journalism
DK	Design Law
DL	Design Law
DM	Design Manufacturing
DN	Design Networking
DO	Design Operations
DP	Design Planning
DQ	Design Quality
DR	Design Research
DS	Design Systems
DT	Design Technology
DV	Design Visualization
DW	Design Writing
DX	Design X-ray
DY	Design Y-axis
DZ	Design Z-axis

Ref: 300R3-SC/C/S/VELP /2023  
Date: 25-01-2023



To  
**SRM University**  
Neerukonda Mangalagiri, Guntur.  
Andhra Pradesh, India. 522240.

## SWAN SCIENTIFIC LLP

Plot No: 922 & 936, Swami Ayyappa Co-Op Society, Madhapur  
Hyderabad - 500081, Telangana, India  
Ph: +91 - 40 - 4021 6184 / 85, Fax : 40216183  
Email : info@swanscientific.in Website : www.swanscientific.in

Dear Sir,

**Sub: Offer for Elemental Analyser**

**Ref: As per your discussions had with our Mr. K. N.S.G Prasad – (DGM-Sales & Service)**

We thank you for the above referred discussions and the below is our offer for **Elemental Analyser** manufactured by our principals for whom we are the authorized distributors in India.

### Offer for Elemental Analyser

Make: Velp Scientifica, Italy

S.No.	Item Description	Unit Price in Euro.	Qty.	Unit Price in Euro.
1.0	<b>Elemental Analyser</b> <b>Model No: EMA502</b> <b>Part No: F30800100</b> <b>HSN No: 90271010</b> <b>Make: Velp Scientifica, Italy</b>  <b>Specifications:</b> <b>METHOD OF ANALYSIS: CHNS:</b> Combustion and O. Pyrolysis <b>ANALYSIS TIME: CHNS: from 12 minutes</b> <b>and</b> O from 6 minutes <b>DETECTOR: TCD (Thermal Conductivity</b> <b>Detector)</b> <b>SAMPLE WEIGHT: Up to 100mg (depending</b> <b>on C content)</b> <b>AUTOSAMPLER CAPACITY: Up to 4 discs,</b> <b>30</b> <b>positions each (up to 117 samples)</b> <b>ANALYTICAL RANGE C: 0.001 – 20mg with</b> <b>Helium; and 0.01 – 20mg with Argon</b> <b>ANALYTICAL RANGE H: 0.001 – 5mg with</b> <b>Helium; and 0.01 – 5mg with Argon</b> <b>ANALYTICAL RANGE N: 0.001 – 20mg with</b> <b>Helium; and 0.01 – 20mg with Argon</b> <b>ANALYTICAL RANGE S: 0.01 – 5mg with</b> <b>Helium</b> <b>ANALYTICAL RANGE O: 0.005 – 6 mg with</b> <b>Helium</b> <b>CARRIER GAS: Helium or Argon (Argon for</b> <b>CHN</b> <b>determination)</b> <b>CONNECTIVITY: USB; RS232</b> <b>EMA502 Elem. Micro Analyzer 230V/50-60Hz</b>	<b>CIF Price:</b> <b>Euro (€). 23,000</b>	<b>1No.</b>	<b>CIF Price:</b> <b>Euro (€). 20,400</b>

S.No.	Item Description	Unit Price in Rs.	Qty.	Total Price In Rs.
2.0	Micro balance, i5 PC with Color Inkjet printer, Combustion Gas-Oxygen Cylinder (Filled- 99.999% Purity), Carrier Gas-Helium Cylinder (Filled-99.999% Purity), Regulator for Combustion gas & Carrier gas cylinder. Liquid Sample Preparation Accessory For Liquid Samples: Device for cold sealing of volatile samples under purging.	Rs. 10,00,000	1No.	Rs. 9,80,000

#### **TERMS AND CONDITIONS FOR INDIAN RUPEES**

1. **PRICES** : FOR, Final Destination
2. **GST (For Import)** : **NA.**  
**GST (For Indigenous)** : 18% extra on quoted prices.
3. **PAYMENT (For Import)** : 100% TT transfer (or) 100% Irrevocable L/C prior to dispatch.  
**PAYMENT (For Indigenous)** : 100% Payment against delivery for Item 2.
4. **CUSTOMER SCOPE** : L/C Charges to be paid by customer.
5. **DELIVERY** : 10-12 Weeks from the date of receipt of Purchase Order.
6. **VALIDITY** : 30 Days
7. **WARRANTY** : 24 months from the date of supply. This warranty does not include consumables, batteries, Glassware, etc.
8. **ORDER PLACEMENT** : In the name of Swan Scientific LLP
9. **GST Number** : 36ACNFS0660D126

**Note: Kindly mention your GST number on PURCHASE ORDER**

Thanking you and anticipating your favorable orders at earliest

**Yours truly,  
For Swan Scientific LLP**

*(Shiva.R)*

**Shiva Shankar.R  
Marketing Co-Ordinator**

### **TERMS AND CONDITIONS FOR INDIAN RUPEES**

- |                          |   |  |
|--------------------------|---|--|
| 1. PRICES                | : | FOR, Final Destination.  |
| 2. GST (For Import)      | : | NA.  |
| GST (For Indigenous)     | : | 18% extra on quoted prices.  |
| 3. PAYMENT ((For Import) | : | 100% TT transfer (or) 100% Irrevocable L/C prior to dispatch.  |
| PAYMENT (For Indigenous) | : | 100% Payment against delivery for Item 2.  |
| 4. CUSTOMER SCOPE        | : | L/C Charges to be paid by customer.  |
| 4 DELIVERY               | : | 10-12 weeks from the date of receipt of Purchase Order   |
| 5. VALIDITY              | : | 30 Days  |
| 6. WARRANTY              | : | 24monthsfrom the date of supply. This warranty does not include consumables, batteries, Glassware, etc.. |
| 7. ORDER PLACEMENT       | : | In the name of Swan Scientific LLP.  |
| 8. GST Number            | : | 38ACNFS0660D1Z6  |

**Note: Kindly mention your GST number on PURCHASE ORDER**

Thanking you and anticipating your favorable orders at earliest

**Yours truly,  
For Swan Scientific LLP**

*Shiva Shankar.R*

**Shiva shankar.R  
Marketing Co-Ordinator**



Ref: 300R-SC/C/S/VLP /2023

Date: 24-01-2023



To

**SRM University**

Neerukonda Mangalagiri, Guntur.

Andhra Pradesh, India. 522240.

## SWAN SCIENTIFIC LLP

Plot No. 922 & 935, Swami Ayyappa Co-Op Society, Madhapur,

Hyderabad - 500081, Telangana, India.

Ph: +91 - 40 - 4021 6184 / 85, Fax: 40216183.

Email: info@swanscientific.in ; Website: www.swanscientific.in

Dear Sir,

**Sub: Offer for Elemental Analyser.**

**Ref: As per your discussions had with our Mr. K. N.S.G Prasad – (DGM-Sales &Service).**

We thank you for the above referred discussions and the below is our offer for **Elemental Analyser** manufactured by our principals for whom we are the authorized distributors in India.

### Offer for Elemental Analyser

Make: Velp Scientifica, Italy

S.No.	Item Description	Unit Price In Rs.	Qty.	Unit Price In Rs.
1.0	<b>Elemental Analyser</b> <b>Model No: EMA502</b> Part No: F30800100 HSN No: 90271010 Make: Velp Scientifica, Italy  <b>Specifications:</b> METHOD OF ANALYSIS: CHNS: Combustion and O: Pyrolysis ANALYSIS TIME: CHNS: from 12 minutes and O: from 6 minutes DETECTOR: TCD (Thermal Conductivity Detector) SAMPLE WEIGHT: Up to 100mg (depending on C content) AUTOSAMPLER CAPACITY: Up to 4 discs. 30 positions each (up to 117 samples) ANALYTICAL RANGE C: 0.001 – 20mg with Helium; and 0.01 – 20mg with Argon ANALYTICAL RANGE H: 0.001 – 5mg with Helium; and 0.01 – 5mg with Argon ANALYTICAL RANGE N: 0.001 – 20mg with Helium; and 0.01 – 20mg with Argon ANALYTICAL RANGE S: 0.01 – 6mg with Helium ANALYTICAL RANGE O: 0.005 – 6 mg with Helium CARRIER GAS: Helium or Argon (Argon for CHN determination) CONNECTIVITY: USB; RS232 EMA502 Elem. Micro Analyzer 230V/50-60Hz  <b>Indigenous Items:</b> Micro balance, i5 PC with Color Inkjet printer, Combustion Gas-Oxygen Cylinder (Filled- 99.999% Purity). Carrier Gas-Helium Cylinder (Filled-99.999% Purity). Regulator for	<b>Rs. 30,00,000</b>	<b>1No.</b>	<b>Rs. 30,00,000</b>

	Combustion gas & Carrier gas cylinder, Liquid Sample Preparation Accessory For Liquid Samples: Device for cold sealing of volatile samples under purging.			
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#### TERMS AND CONDITIONS FOR INDIAN RUPEES

1. PRICES : FOB, Final Destination
2. GST : 18% extra on quoted prices.
3. PAYMENT : 100% Payment against delivery.
4. DELIVERY : 10-12 Weeks from the date of receipt of Purchase Order.
5. VALIDITY : 30 Days
6. WARRANTY : 24 months from the date of supply. This warranty does not include consumables, batteries, Glassware, etc.
7. ORDER PLACEMENT : In the name of Swan Scientific LLP.
8. GST Number : 36ACNFS0660D126

**Note: Kindly mention your GST number on PURCHASE ORDER**

Thanking you and anticipating your favorable orders at earliest

Yours truly,  
For Swan Scientific LLP

*(Shiva Shankar.R)*

**Shiva Shankar.R**  
**Marketing Co-Ordinator**



# Quotation



## SWAN SCIENTIFIC LLP

Plot No. 107 & 108, SwarnArya, 1<sup>st</sup> Floor, 1<sup>st</sup> Main Road,  
Vijayalakshmi, 520003, Tiruvallur District,  
Tamil Nadu - 600 003, India.  
Ph: +91 40 4021 0121, 55 Fax: +91 216185  
Email: info@swan-scientific.com, sales@swan-scientific.com

To,  
**M/s. SRM University**  
Department - Environmental Science  
Neerukonda Mangalagiri, Guntur, Andhra Pradesh,  
India. 522240

Quotation No. **PRO001021**  
Date **14.12.2022**

**Sub : Offer for Elemental Analyser**

**Reference : As per your discussions had with our Mr. K. N.S.G Prasad – (DGM-Sales &Service)**

Dear Sir/Madam,

We are pleased to submit our offer for the same for your kind consideration which is as under:

Sr No	Description	Qty.	Unit	Sales Price (₹)	Total (₹)
1	<b>Elemental Analyser</b> Model No: EMA502 Part No: F30800100 HSN No: 90271010 Make: Velp Scientifica, Italy Specifications: METHOD OF ANALYSIS: CHNS: Combustion and O: Pyrolysis ANALYSIS TIME: CHNS: from 12 minutes and O: from 6 minutes DETECTOR: TCD (Thermal Conductivity Detector) SAMPLE WEIGHT: Up to 100mg (depending on C content) AUTOSAMPLER CAPACITY: Up to 4 discs, 30 positions each (up to 117 samples) ANALYTICAL RANGE C: 0.001 – 20mg with Helium; and 0.01 – 20mg with Argon ANALYTICAL RANGE H: 0.001 – 5mg with Helium; and 0.01 – 5mg with Argon ANALYTICAL RANGE N: 0.001 – 20mg with Helium; and 0.01 – 20mg with Argon	1	No.	32,50,000.00	32,50,000.00

Sr No	Description	Qty.	Unit	Sales Price (₹)	Total (₹)
	<p>ANALYTICAL RANGE S: 0.01 – 6mg with Helium  ANALYTICAL RANGE O: 0.005 – 6 mg with Helium  CARRIER GAS: Helium or Argon (Argon for CHN determination)  CONNECTIVITY: USB; RS232  EMA302 Elem. Micro Analyzer 230V/50-60Hz</p> <p>Included:  Micro balance, i5 PC with Color Inkjet printer  Combustion Gas-Oxygen Cylinder (Filled-99.999% Purity), Carrier Gas-Helium Cylinder (Filled-99.999% Purity), Regulator for Combustion gas &amp; Carrier gas cylinder, Liquid Sample Preparation Accessory For Liquid Samples Device for cold sealing of volatile samples under purging.</p>				
Total (₹)					32,50,000.00

**Total in Words (₹) :** Thirty-two Lakh Fifty Thousand Only

#### TERMS & CONDITIONS FOR INDIAN RUPEES

- |                                  |  |
|----------------------------------|--|
| 1) Prices                        | : FOR, final destination   |
| 2) Packing & Forwarding          | : Included   |
| 3) Freight & Insurance           | : Included   |
| 4) GST                           | : 18% Extra on quoted prices.  |
| 5) Payment                       | : 50% Payment advance and 50% against delivery.  |
| 6) Delivery                      | : 12-14 weeks from the date of Order Acknowledgement   |
| 7) Validity of the offer         | : 30 Days from the quote dates.  |
| 8) Warranty                      | : 12 months from the date of supply.<br>This warranty does not include consumables, batteries, Glassware, etc. |
| 9) CAMC                          | : NA   |
| 10) Installation & Commissioning | : Free of Cost by Swan.  |
| 11) Order Placement              | : In the name of Swan Scientific Pvt. Ltd. Hyderabad   |
| 12) Company Details              | : PAN: ACNFS0660D. GST: 36ACNFS0660D126  |
| 13) Post order                   | : NA,  |
| 14) Force majeure                | : NA   |

Should you need any further information please do contact us.

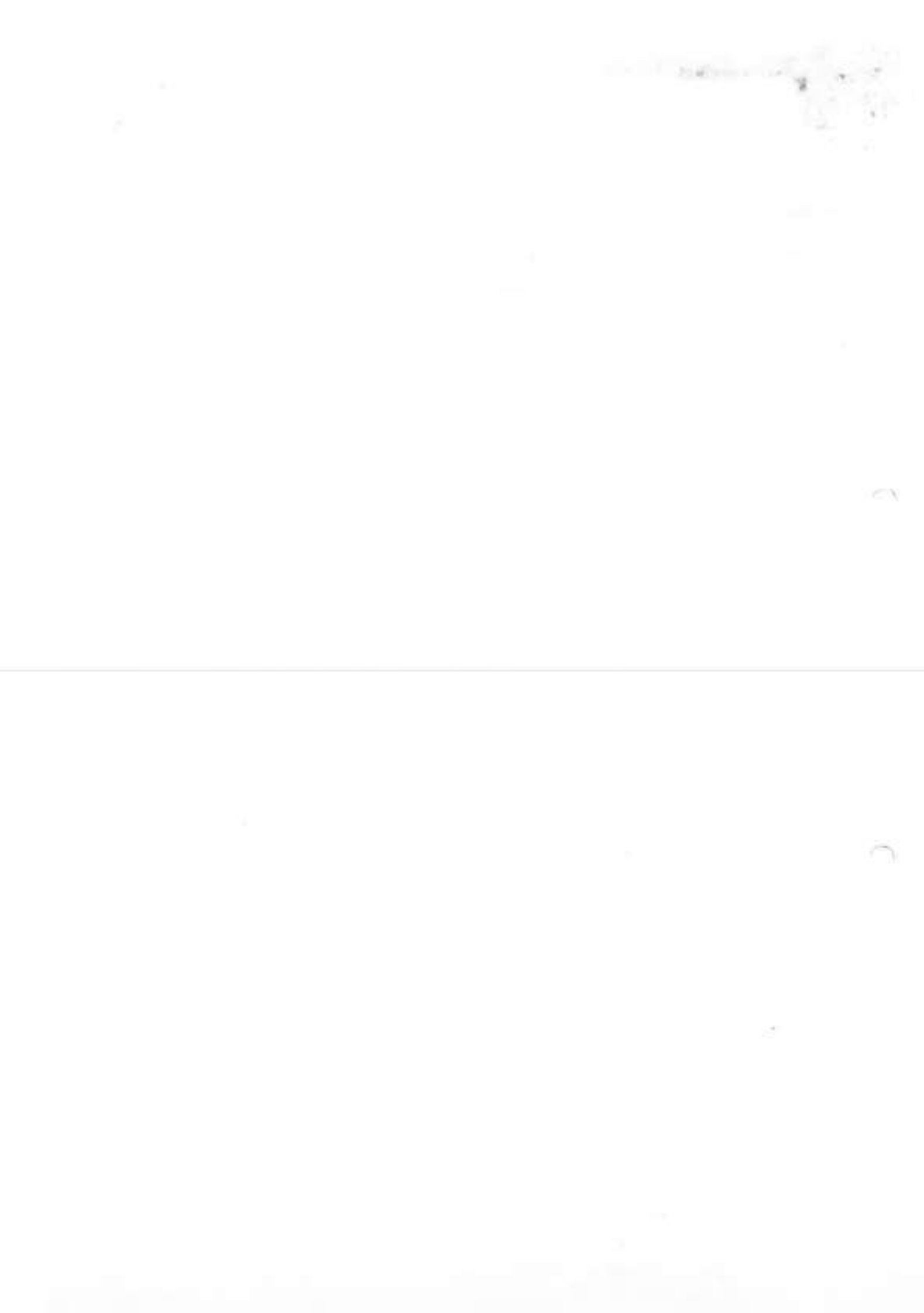
Thanking you and looking for your favorable response.

Yours sincerely,  
For Swan Scientific Pvt. Ltd.



R. Silva Shankar  
Marketing Coordinator Swan Scientific  
Mobile No. : 9642811122

**This is software generated quotation.**



# SHIVA GLOBAL TEKNOSYS

(An ISO 9001:2015 Certified Company)



TEL.: +91-120 4237835, 4136648  
GSTIN: 09ACRFS4663A1ZU  
MSME: UDYAM-UP-29 0005919  
IMPORT-EXPORT CODE: 0515003883

Dated: 10<sup>th</sup> December 2022  
Ghaziabad-201 005

To,  
SRM University - AP  
SRM Trust AP,  
Bank colony, Vijayawada  
Neerukonda, Mangalagiri Mandal,  
Gudur Dist  
Andhra Pradesh - 522240, India

present

Kind Attn: Dr. Javid Ahmad Dar -Assistant Professor, Dept. of Environmental Science,  
Mobile: +91-6005133959, Email: javiddar29@gmail.com

Subject : Your requirement of Euro Vector CHNS Elemental Analyzer with Microbalance.

Dear Sir,

This refers to your requirement of above-mentioned subject.

We are pleased to submit our for **EUROVECTOR CHNS Analyzer Model Euro EA3100 with Microbalance** vide our quotation no. SGT/EV/0079R/2022-23/PD dated 10/12/2022 in Euro (€) & another offer for PC-Printers; Gas Cylinders-Regulators etc. vide our quotation no. SGT/INR/0079R/2022-23/PD dated 10/12/2022 in ₹ with detailed technical brochure & specifications.

**EUROVECTOR Srl, ITALY** is world's best CHNS/O manufacturer, emerged as No. 1 company in the short span of fifteen years. **EUROVECTOR** has seen spectacular growth in popularity, with the continuous update on new application and development as a result as on date more than 1500 satisfactory installation exist in all part of globe. Today, **EUROVECTOR** is regarded as Innovation leader in Elemental Analyzer. **EUROVECTOR** design, manufacturing and sell the scientific instrument in the belief that market needs, Individual, expertise, catalyst, instruments and related software one the key synergic factor for the full exploitation of the power of combustion Elemental analyzer. **EURO VECTOR** has brought a concept of Analytical Help Desk thru which end user can access over 150 (Person) year of continuous pioneering and development experience in Combustion EA permanently.

**EUROVECTOR** are committed to provide you all necessary spares and consumable for at least Next 10 Years from installation & Commissioning. We, on behalf of our principal **EUROVECTOR Srl, ITALY** will inform you well in advance before official discontinuation of proposed model. The offer includes an initial supply of all necessary spare and consumable as desired by you in addition to spare lot for smooth operation.

**Training, warranty & AMC:** The instrument will be installed at your premises free of cost by our factory trained engineers and a thorough training will be imparted to your scientist and maintenance engineers covering operational, use of instrument, its accessories and software aspect for intended application as well trouble shooting, repair and maintenance of proposed equipment. The instrument offered to you carries One Year warranty. You can enter into Annual Maintenance Contract (AMC), after expiry of warranty period

Cont...2

2:

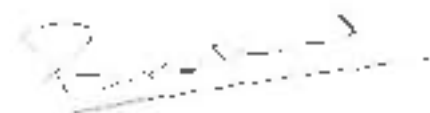
**SHIVA GLOBAL TEKNOSYS (SGT)** is a team of competent engineers and professional having very rich experience in field of Chromatography and Spectroscopy especially in after sales and backup support. **SHIVA GLOBAL TEKNOSYS** is having all very sound network backed by their principal **EUROVECTOR**. We maintain & stock an adequate inventory of spare and consumable, which help the smooth running of instrument, we sell. We on behalf of our principal **EUROVECTOR** hereby certify that the proposed equipment is of latest technology and can be upgrade as and when required by you. The supplied equipment will be promptly and properly serviced by our factory trained engineer with adequate back up support from **EUROVECTOR Srl, ITALY**.

We are sure that the all above mentioned is strictly in the line of requirement. Should you need any further details and clarifications, please feel free to contact us.

Thanking you and looking forward to serve you soon

Yours faithfully,

For **SHIVA GLOBAL TEKNOSYS**,



**Dr. Prashant Dutt**  
General Manager  
Mobile: 9810313185



To, SRM University - AP SRM Trust AP, Bank colony, Vijayawada Neerukonda, Mangalagiri Mandal, Gudur Dist Andhra Pradesh – 522240, India		Quotation No.: SGT/EV/0079R/2022-23/PD Dated: 10 <sup>th</sup> December '2022	
Reference: : Dr. Javid Ahmad Dar -Assistant Professor, Dept. of Environmental Science, Mobile: +91-8005133959, Email: javiddar29@gmail.com			
Description	Qty.	Unit Price in Euro (€)	Total Price in Euro (€)
<b>EuroVector Srl Italy Elemental Analyzer model EuroEA3100, Fully Computer and Microprocessor Controlled Analyzer for the determination of CHNS-O Including Auto Sampler.</b>			
<b>1. Euro EA 3100 Elemental Analyzer Basic unit, Includes –</b>			
<b>Functional Unit:</b> Fully Computer and Microprocessor controlled Elemental Analyzer configured as Single Furnace or Double Furnace for the Quantitative Determination of CHNS & Oxygen using Gas Chromatographic Column Separation and Thermal Conductivity Detection.  EuroEA3100 series of Elemental Analyser is based on TurboFlash™ Combustion Principle, a patented technology to fully combust a large variety of samples matrices. Gas Species produced from the combustion are time separated by a GC column and detected by a super sensitive Thermal Conductivity Detector  The system analyses Organic, Inorganic and metal organic component on solid viscous and liquid non-volatile samples. The system offers high flexibility in Analytical Mode throughout the use of different configuration Kits as Selectable operating mode: CHNS, CNS, S, CHN, CN, N & O.  Highly stable thermo regulated oven allows for reliable separations by GC Column of the 4 gas species produced in the Combustion Reactor and to detect gas peaks using a Supersensitive TCD granting baseline stability using Helium carrier for analytical and reference arm.  <u>Euro EA 3100 is Fully PC controlled unit, all the instrument parameter like leak test, Auto Ready, Diagnostics, method can be set from PC key board.</u>  Euro EA 3100 has Pressurized oxygen jet injection on the sample directly, for any volume independently from carrier gas velocity for fullest combustion of sample. It has the programmable oxygen dosing time and digestion temperature as standard feature.  The Euro EA 3100 have pressure/flow control motor for carrier gas. It includes <u>Auto diagnostics</u> , digital clock, automatic wakeup routine, start up, stand by, shut down facility. The time set for stand by and Auto ready are permanently displayed on monitor as strip in the window monitor. The actual Furnace temperature get decreases by 40% of the set furnace temperature in Stand-By Mode. The Carrier Gas Flow get decreases by to 5 ml/min in Stand-By Mode.	01	26,000.00	26,000.00

**Max Furnace Temperature 1100°C**

**Turbo Flash Combustion Temperature 1800°C**

The instrument includes a highly advanced and flexible furnace design that allows for in situ Dynamic Flash combustion at 1800° C for full combustion of a wide variety of sample taking advantage from patented TurboFlash® combustion technology injection pressurized oxygen at pressure/Flow independent from carrier gas pressure/flow.

**Detector:** Supersensitive TCD (1 µgm detector response 1500 counts)

**Analytical Measuring Range:** From 0.01% (50 ppm) to 100%

**Sensitivity:** Less than 1.0 microgram for C, H, N, S & O.

**Accuracy:** 0.15% absolute & 0.15% relative with organic substance depending upon % element content of samples with Helium as carrier gas and 0.30% absolute & 0.30% relative with organic substance depending upon % element content of samples with argon as Carrier Gas.

**Precision:** 0.20 to 0.05% RSD (based on 3 Sigma using 1-5 mg certified organic test substance) with Helium as carrier gas and 0.50 to 0.1% RSD (using 1-5 mg certified organic test substance) with Argon as carrier gas. Depend up on the Sample matrix.

**Analysis time:** CHN less than 3 minutes; CHNS less than 6 minutes; oxygen less than 3 minutes; CN less than 2 minutes; S less than 3 minutes;

N less than 90 seconds. The analysis times are declared with full peak separation between the elements on Chromatographic column. The EA3100 can auto-optimize the time required for a particular analysis, if required upon selection.

**Sample size:** from 0.01mg to as much as can be filled on 5x9mm or 10x10 mm tin or silver caps for maximum accuracy in CHN/CHNS mode with low carbon contain samples. It can further accept the higher amount of samples through different shape of folding materials say for disks and cones, compatible with carousel cavities.

**Patented Turbo Flash technology** provide the most advanced patented Turbo Flash Combustion technology which involves pressurized oxygen injection technique program independently from carrier pressure/flow for full combustion "in situ" allowing for the most effective combustion related to 1800°C. The system has automatic facility for optimize oxygen injection, volume set via software and dosing rate thru pressure or time independently selectable via software for better and optimum combustion.

**Solid & Liquid samples:** The system is able to handle solid and liquid samples.

**Chromatographic display:** provides Permanent display of the Chromatogram which provides indications on conditions of the catalyst, column performance by peak shape and baseline



<p>stability. Real Time Chromatogram provides on the instrument is a valuable tool and eliminate the need of run counter to monitor the activities of reagent and other components. It functions by monitoring baseline and viewing the chromatogram helps in determining the overall operation of the analyzer irrespective of samples nature.</p> <p><b>Extensive diagnostic:</b> Built in extensive diagnostic routines continuously monitor electronic and pneumatic components, assuring unattended operation, high mean time between failure, optimum instrument performance.</p> <p><b>Gas Leak Test:</b> The sensitivity of an intelligent electronics pressure probe allows EuroEA3100 to complete the automatic push button leak test procedure quickly and accurately.</p> <p><b>IRMS Compatibility:</b> The system is able to be interfaced to Mass Spectrometer namely IRMS (Isotopic Ratio Mass Spectrometer to analyze Isotopic composition of elements )</p> <p><b>Standard Parts</b> including various olives and fittings, fuses, porous frit, different kind of O-rings, snoop, tubing</p> <p><b>Tool Kit Bag</b> with the few spanners, Allen keys, screw Driver, Spatula for Micro Analysis-2xTweezers for arranging sample in tin caps in round balls. The Tweezers for forming, folding &amp; Sealing the solid samples in Tin or silver boats.</p>			
<b>2. WEAVER.NET Software for Elemental Analysis.</b>			
<p><b>Weaver™</b> Software for Control, Integration &amp; Result Reporting <b>Weaver™</b> Is the most complete software dedicated to Elemental Analysis. <b>Weaver™</b> supervises full automatic instrument control, also allowing for data reprocessing, preventive maintenance prompting, gas leak test and full diagnostic.</p> <p>Routine functions are immediately available through a set of quick settings buttons always on view, while one single window provides access to all operations, from analysis setup and progress, to data reprocessing and printout reporting Elemental Analysis (EA).</p> <p><b>Weaver™</b> is a major step forward for completeness and ease of use, and provides the most elegant solutions in all functionalities, key to EA Instrumentation.</p> <ul style="list-style-type: none"> <li>• Permanent display of all parameters for continuous monitoring of EA operation.</li> <li>• Neat grouping of functionality in the main menu: Instrument – Analysis –Reprocessing</li> <li>• Easily available sets of Instrument and Integration parameters for Auto Run.</li> <li>• Automatic Name selection for Methods and Auto Run provides immediate retrieval.</li> <li>• Automatic downloading of all parameters from a list of Auto Run or Methods.</li> <li>• Electronic import of previously performed Calibration (Auto Cal).</li> <li>• Instrument Setup without need of sample weighing, blanks or</li> </ul>	01	Included	Included

<p>calibration (Setup Run).</p> <ul style="list-style-type: none"> <li>• Facility to export to Excel, if Excel is available.</li> <li>• Availability LIMS module for direct import of sample information and results into LIMS.</li> <li>• Immediate guidance through a comprehensive set of purposely designed messages.</li> </ul> <p><b>Significant improvements for instrument operation are:</b></p> <ul style="list-style-type: none"> <li>• Full implementation of Standby, Auto Ready &amp; Auto Stand by in one window.</li> <li>• Full Diagnostic and Preventive Maintenance</li> <li>• Effective improvement of Automatic Leak Test</li> </ul> <p><b>Auto Run Features:</b></p> <ul style="list-style-type: none"> <li>• Automatic Weight transfer to Sample Table with Std data read from a Std Table.</li> <li>• All Auto Run parameters fully contained within one two-page window.</li> <li>• Fast creation of Auto Run names from a pre-programmed two-field list.</li> <li>• Easy retrieval of Auto Runs through extensive capability of name sorting</li> <li>• Powerful Auto Run Queue for running sample sets requiring different parameters.</li> <li>• Continuous appending of the Sample Table during Auto Run acquisition.</li> </ul> <p><b>Reprocessing offers most useful features and options:</b></p> <ul style="list-style-type: none"> <li>• Automatic opening of Results window offering Reprocessing and Reporting facilities.</li> <li>• Optimisation of Calibration data for each element with full view of all information and results for individual calibration points</li> <li>• All reprocessing attempts can be saved in separate files, for selection of best parameters set.</li> <li>• Fast scroll facility through all the chromatograms and individual results within one Auto Run.</li> <li>• Extensive graphics features to facilitate reprocessing.</li> </ul> <p><b>Statistical analyses:</b></p> <ul style="list-style-type: none"> <li>• Statistics provide a method or basis to better understand the produced data. The Weaver SW offers a choice of Average, Standard Deviation, Variance and Relative Standard Deviation analysis.</li> </ul> <p><b>Weaver™ Multi-Instrument</b> acquisition mode offers a new approach in Elemental Analysis, highly increasing productivity. CHNS and O can now be analyzed <b>simultaneously</b> from different instruments controlled by one single <b>Weaver™</b> instance.</p> <p><b>Weaver™</b> - in complete compliance to CFR 21 Part.11 , It is fully compliant to <b>USFDA:CFR - Code of Federal Regulations Title 21, PART11: Electronic Records; Electronic Signatures; Audit Trail</b>, on demand <b>optionally</b>.</p>			
<p><b>3. Auto sampler</b></p>			
<p><b>Ash Less Auto Sampler</b>, 80 positions, "Instant Zero Blank" providing elimination of air contamination, is micro-pneumatic actuated. Internal diameter 8 mm, suitable to accommodate the common, 5x9mm and 10x10mm tin capsules for solids, viscous and liquid samples, accept different shape of folding materials say for disks and cores, compatible with carousel</p>	01	8,500.00	8,500.00

(Total CIP Value Chennai in Euro Thirty-Seven Thousands Two Hundred & Fifty only)

**Dr. Prashant Dutt**  
General Manager  
Mobile: 9810313185

**Additional Expenses:** Custom Clearance Charges and Door Delivery charges approximately Rupees 40,000.00, Integrated Goods & Service Tax @ 18% of CIP value will be to SRM University Account,

**Terms & Conditions**

1.	<b>VALIDITY</b>	:	90 Days
2.	<b>DELIVERY</b>	:	14 – 16 weeks from the date of establishing confirm and Irrevocable Letter of Credit in favor of our Principals.
3.	<b>PAYMENT TERMS</b>	:	Confirmed Irrevocable Letter of Credit for 100% of Invoice value in Favor of <b>EuroVector Srl, Via F.lliCuzio, 42 27100 Pavia (PV), Italy</b>
4.	<b>COUNTRY OF ORIGIN</b>	:	Italy-European Union
5.	<b>PORT OF SHIPMENT</b>	:	MILAN
6.	<b>OUR PRINCIPALS</b>	:	<b>EuroVector Srl</b> <b>Via F.lliCuzio, 42</b> <b>27100 Pavia (PV), Italy</b> <b>http: <a href="http://www.eurovector.it">www.eurovector.it</a></b> <b>Tel.: 0039.0385.747010 / Fax: 0039.0385.749196</b> <b>e-mail: <a href="mailto:eurovector@eurovector.it">eurovector@eurovector.it</a></b>
7.	<b>BANKERS</b>	:	<b>Intesa Sanpaolo Spa</b> <b>Milano Via Valparaiso</b> <b>IBAN IT 23 E030 6909 4690 0000 3545 048</b> <b>SWIFT: BC IT IT MM</b>
8.	<b>WARRANTY</b>	:	24 months from the date of installation or 27 months from the date of shipment, whichever is earlier. EuroVector warrants all its products as free from all defects in materials and workmanship under normal uses and service for a period of 15 months for manufacturing & mechanical defects, electrical or electronic defects subject to the compliance of Standard Operating Protocol.
9.	<b>AFTER SALES SERVICES</b>	:	We can offer you the Annual Maintenance contract –Labor only or Comprehensive Annual Maintenance contract – Including Spares & Labor after the expiry of one-year Standard Warranty Period.
10.	<b>CUSTOM DUTY</b>	:	NIL against HSN Code 90278090 for CHNS Or Elemental Analyzer
11.	<b>INTEGRATED GOODS &amp; SERVICE TAX</b>	:	Excluded @ 18%, to be borne by SRM University - AP
12.	<b>CUSTOM CLEARANCE CHARGES</b>	:	Will be borne by SRM University - AP
13.	<b>DOOR DELIVERY CHARGES</b>	:	Will be borne by SRM University - AP
14.	<b>INSTALLATION</b>	:	We will install the system <b>Free of Charge</b> at your site.
15.	<b>TRAINING</b>	:	On-site training on all aspect including operational, troubleshooting & application will be provided during & after installation.
16.	<b>SPARE PARTS</b>	:	We always keep adequate stock of spares, consumables with us and easily available in Indian Rupees.

Yours faithfully,  
For **SHIVA GLOBAL TEKNO SYS**,

**Dr. Prashant Dutt**  
General Manager  
Mobile: 9810313185




**Quotation for Domestic Supply in Indian Currency**

To, SRM University - AP SRM Trust AP, Bank colony, Vijayawada Neerukonda, Mangalagin Mandal, Gudur Dist Andhra Pradesh - 522240, India		Quotation No.: SGT/INR/0079R/2022-23/PD Dated: 10 <sup>th</sup> December '2022	
Description	Qty.	Unit Price in Rupees (In ₹)	Total Price in Rupees (In ₹)
<b>PC Specification: i5 PC with Color Inkjet printer.</b> As per your Instrument requirement.	01	₹80,000.00	₹80,000.00
<b>Combustion Gas-Oxygen Cylinder (Filled-99.999% Purity)</b>	01	₹35,500.00	₹35,500.00
<b>Carrier Gas-Helium Cylinder (Filled-99.999% Purity)</b>	01	₹ 40,000.00	₹ 40,000.00
<b>Regulator for Combustion gas &amp; Carrier gas cylinders</b>	02	₹8,500.00	₹17,000.00
<b>Liquid Sample Preparation Accessory – For Liquid Samples: Device for cold sealing of volatile samples under purging.</b>	01	₹35,000.00	₹35,000.00
Total Value :			₹ 2,07,000.00
Add:18% GST:			₹ 37,260.00
FOR SRM-AP University Value:			₹2,44,260.00

**TERMS & CONDITIONS**

1. Payment Term : NEFT/RTGS Or through Demand Draft.
2. Goods and Service Tax : Included @18%.
3. Octroi : If applicable, at actual on your A/c.
4. Kindly place your valued order in favor of : **SHIVA GLOBAL TEKNO SYS,**  
S-15, Block-B, Sahani Tower Complex  
Sec-5, Rajendra Nagar, Sahibabad  
Ghaziabad-201005, Uttar Pradesh  
Tele: +91120 4237835, 4136648  
Tele- Fax: +91-120-4136648  
E-Mail: [contact@shivaglobalteknoSYS.com](mailto:contact@shivaglobalteknoSYS.com)
5. Our Banker's Details : **INDIAN BANK,**  
Branch: Rajendra Nagar, CBS Code:01643  
76 Commercial Complex, Sector 5  
Sahibabad Ghaziabad -201005  
Account Number: 6287967089  
IFS Code: IDIB000R057  
ACRFS4663A  
ACRFS4663A1ZU
3. PAN NO. :
4. GSTIN :

For **SHIVA GLOBAL TEKNO SYS,**

  
Dr. Prashant Dutt  
General Manager  
Mobile: 9810313185





## Quote

**To,**  
 SRM University AP  
 Neerukonda, Mangalagiri Mandal, Guntur District,  
 Mangalagiri  
 GUNTUR 522240  
 INDIA

<b>Number</b>	<b>3163</b>
<b>Date</b>	Dec 12, 2022
<b>Reference</b>	As per online enquiry
<b>Valid from</b>	Dec 12, 2022
<b>Valid to</b>	Dec 31, 2022
<b>Account ID</b>	1105917
<b>Phone</b>	+91 9910994775
<b>E-mail</b>	Narasimhamurthy@elementar.com

SRM University AP  
 Neerukonda, Mangalagiri Mandal, Guntur District,  
 Mangalagiri  
 GUNTUR 522240 INDIA

Pos.	Product No.	Description	Quantity	Value
1000	200006375	<b>UNICUBE 8888 instrument package</b>  High performance elemental analyser for simultaneous CHNS analyses. Includes installation of (containing all items for installation and maintenance as well as for sample preparation), Integrated 120 positions autosampler as standard.  Contents:  1 piece UNICUBE with mode kit CHNS 1 piece Initial outfit kit UNICUBE 1 piece Sample carousel/Auto sampler, 120 positions, red, (with sample loader)	01	51,20,000.00 INR
2000	200004799	<b>Starter kit for UNICUBE</b>  includes all necessary consumables sufficient to analyse 1000 CHNS sample analysis. Automatically included in the basic instrument (unicu-CHNS-120).	01	Included
3000	200014001	<b>Mettler-Toledo WXTS micro balance, new model</b>  Readability 0.001 mg with V 24/RS 232 interface. Incl cable to connect to elementar analyzer.	01	Included
4000	200000740	<b>Maintenance kit for UNICUBE</b> Content: all wear parts which have to be exchanged in conjunction with a maintenance call.	01	Included
5000	100007737	<b>Liquid Press</b> Liquid Press   Capsule sealing press	01	Included
6000	100007623	<b>Helium Gas Cylinder</b> Helium Gas Cylinder   (46.7 Liter) with purity 99.999% gas refilling 7.0 Cubic Meter	01	Included
7000	100007624	<b>Oxygen Gas Cylinder</b> Oxygen Gas Cylinder   (46.7 Liter) with purity 99.999% gas refilling 7.0 Cubic Meter	01	Included
8000	100007633	<b>Double stage Gas Regulator</b> Double stage Gas Regulator   Double stage double meter stainless steel body regulator fitted with stainless diaphragm and stainless steel Pressure gauges.	02	Included
9000	100007711	<b>i3 Branded Desktop Computer</b>	01	Included

**i3 Branded Desktop Computer | i3 Processor,  
Windows 11, Key board, mouse, LED Monitor**

<b>Total discounted Exworks:</b>	<b>51,20,000.00 INR</b>
<b>Special Discount:</b>	<b>10,75,200.00 INR</b>
<b>Discounted Ex-works:</b>	<b>40,44,800.00 INR</b>
<b>IGST @ 18%:</b>	<b>7,28,064.00 INR</b>
<b>Total FORD Price:</b>	<b>47,72,864.00 INR</b>

#### Terms & Conditions

<b>Validity</b>	90 days from the date of offer.
<b>HSN Code</b>	9027
<b>Warranty</b>	12 months from the date of installation and commissioning except for parts subject to wear and tear. Please note that the warranty does not cover physical damage, glass wares, any other damage that occurred due to, natural calamities etc. Glass parts, consumables and other wear and tear parts are not covered under warranty. <b>10 years warranty on furnace &amp; TCD Detector.</b>
<b>Installation &amp; Training</b>	Free installation & training at the site by our factory-trained engineers.
<b>Payment Terms</b>	100% against delivery and submission of the Invoice.
<b>Delivery Time</b>	15 to 16 weeks from the date of receipt of confirmed PO.
<b>Country of Origin</b>	Germany
<b>Note</b>	Order should be placed in the name of Elementar India Pvt Ltd 204, Block-1, OLF Corporate Park, MG Road, Gurugram - 122002, Haryana, INDIA

**For Elementar India Pvt. Ltd.**





# SRIVEDA LABTECH PRIVATE LIMITED

Plot no-102, South Block, Kakshim's Sree Lakshmi Palle  
Anjanagar, Opposite New Leela Cafe  
Mangalagiri, Andhra Pradesh-522502  
India  
GSTIN: 37AAZCE542631H2H  
+91-9052463331, info@sriveda-labtech.com  
www.srivedalabtech.com

ESTIMATE

Estimate # Estimate Date Expiry Date	: S/VLT-BST-0207 : 12/12/2022 : 31/12/2022	Place Of supply : Andhra Pradesh (37)
BILL To	Ship To	
<b>SRM University AP</b> Newu Konda Village, Mangalagiri Mandal Amaravathi 522502 Andhra Pradesh India GSTIN 37AAGT54359N120	Newu Konda Village, Mangalagiri Mandal, Amaravathi 522502 Andhra Pradesh India GSTIN 37AAGT54359N120	

#	Item & Description	Make	Model	Qty	Rate	Amount
1	<b>CHNSO ANALYZER</b> Bruker CHNSO-KIT-EC54024 Elemental Analyzer EC54024 with Pneumatic Auto sampler Technical Specifications: Selectable operating modes: CHNS Furnace temperature range: 300 to Max: 1100 deg C Sample size (According to the sample nature): 0.01 mg to 100 mg Measuring Range: 200 to 100% CHNS Sample type: Liquid/Solid samples Detector: High sensitivity TCD Accuracy: Less than 0.2% (using reference material) Precision: Lesser than 0.1% (using reference material) Analysis time: CHNS: 15/25 minutes, ON: 5 minutes CHN: 8 minutes. Power Supply: 230VAC ±10%, 1-10A, 50/60 Hz Gas Requirements: Helium: 99.999% Purity Oxygen: 99.999% Purity Scope of Supply:	NC TRCHNOLO GIES	EC5-4024	1.00 pcs	35,00,000.00	35,00,000.00

#	Item & Description	Make	Model	Qty	Rate	Amount
	<ul style="list-style-type: none"> <li>-ECS4004 Gas Analyzer</li> <li>-PMT50 pneumatic autosampler with 50 position carousel Software</li> <li>-PMPS Analysis kit for TDOC -ana</li> <li>-Instructions Manual</li> </ul> <p>MS# 90215893</p>					
2	<b>SEMI MICRO BALANCE</b> S&W Sample 1-gram/gram Specificat ons: Weighing Range: 80 g / 720 g Readability 0.01 mg / 0.1 mg Calibration: Auto calibration Display: graphical  MS# 06218444	SCALE-TEC	SAB 2850HR	1.00 pcs	2,25,000.00	2,25,000.00
3	<b>HELIUM GAS CYLINDER</b> S&W 10GAS-PC  MS# 1119040	PCI	HE CYLINDER	1.00 pcs	68,900.00	68,900.00
4	<b>OXYGEN GAS CYLINDER</b> S&W 10GAS-PT  MS# 1318840	PCI	O2 CYLINDER	1.00 pcs	59,100.00	59,100.00
5	<b>GAS REGULATOR</b> S&W 0REG-PL  MS# 1387900	PCI	GAS REGULATOR	2.00 pcs	6,000.00	12,000.00
6	<b>COMPUTER</b> S&W C14-DLL  MS# 04113310	DELL	COMPATIBLE	1.00 pcs	75,000.00	75,000.00
7	<b>AIR COMPRESSOR TO OPERATE AIR/DO SAMPLER</b> MS# 800-PC  MS# 800-PC	PCI	OIL FREE	1.00 pcs	85,600.00	85,600.00

Looking forward for your business.

**Terms & Conditions**

1. Payment 100% Advance along with the Purchase Order.

2. Delivery 10 Weeks from the date of Purchase Order

3. GST @ 18% Extra Applicable on Quoted Price

4. Installation Charges Free of Cost.

5. Instruments carries 1 year warranty

Warranty is not applicable for Accessories, Consumables and Glass ware (New & Temp parts)

Note: Order once placed can't be cancelled/ altered.

Sub Total	40,25,600.00
GST 18 (18%)	5,64,304.00
GST 18 (18%)	5,64,304.00
Total	91,54,208.00

Yugandhar Bala



Authorized Signature



To  
Purchase Department  
SRM University-AP,Mangalagiri  
Neerukonda Tadikonda Rd,  
Mangalagiri Mandal,Andrapradesh-522240

Kind Attn: Department of Environmental Science

Sub.: Your Requirement of "CHNS/O Analyzer"

Ref.: Personal Discussions

**QUOTATION**

S.No.	Part No.	Qty	Description	Price in Euro
01	112 06125	1	CHNS/O includes 1000 analysis kit for CHNS & 1000 analysis kit for Oxygen	Included
			<b>Accessories &amp; Consumables</b>	
02	432 30086	1	<b>Microbalance Mettler WXTS3DU</b> <ul style="list-style-type: none"> <li>• Maximum capacity: 1.2 g / 3.1 g</li> <li>• Readability: 0.001 mg / 0.01 mg</li> <li>• Repeatability (nominal) (sd): 0.001 mg (1 g) / 0.006 mg (3 g)</li> <li>• Typical Repeatability: (200 mg): 0.0008 mg</li> <li>• Linearity deviation (test load): 0.02 mg (0.5 g)</li> <li>• Minimum weight (200 mg, K=2, U=1): 0.2 mg</li> <li>• Typical setting time: &lt; 8 sec</li> </ul>	Included
03	19002565	1	Kit 1000 analysis CHNS Pre-Packed reactor FlashSmart	Included
			<b>Total Discounted CIP Price</b>	<b>Euro.47,000</b>

## **TERMS AND CONDITIONS**

**Prices :** All prices quoted are in Euro

**Purchase Order :** Purchase order should be comprehensive and should be issued before the said validity.

**Payment Terms :** By irrevocable Letter of Credit payable at sight for 100% VALUE

**Validity :** Prices are valid for 60 days

**Payment Terms :** 100% against Letter of Credit.

**Order to be placed and Letter of Credit Payable to :**

**Thermo Fisher Scientific Pte Ltd.,  
33, Marsiling Industrial Estate Road  
3 # 07-06, Singapore – 739 256**

The Hongkong and Shanghai Banking Corporation Ltd.,  
Account No : EURO : 260-437348-179  
SWIFT ADDRESS : HSHCSGSG  
71, Collyer Quay HSHC Building  
Singapore – 049 320

**Despatch :** The shipment of the equipment from the factory would be within **10-12 weeks** from the date of receipt of technical correct and confirmed purchase order. To allow time for formalities the Letter of Credit should be open for a period of five months from issuing date.

**Warranty :** The quoted Thermo Fisher system is guaranteed against defects in workmanship and materials for a period of **12 months** from the date of installation or 15 months from the date of supply against whichever is earlier.

**Installation :** Installation and on site system introduction by factory trained engineers and onsite training is included in the price. The installation and commissioning of the equipment can only commence once all equipment being confirmed on-site and written confirmation that all installation pre-requisites have been taken care of.

**Country of Origin :** Europe

**Country of Manufacture :** Europe

**LOCAL ACCESSORIES**

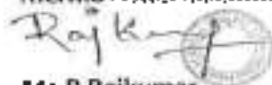
S.No.	Item Description	Qty	Price in INR
01.	Branded computer i7 with LED monitor 24" with laser printer (Mono)	1 No	Rs.1,00,000.00
02.	Gas Cylinder for Helium	1 No	Rs.33,000.00
03.	Gas Cylinder for Oxygen	1 No	Rs.20,300.00
04.	Regulator for Helium Cylinder	1 No	Rs.10,000.00
05.	Regulator for Oxygen Cylinder	1 No	Rs.10,000.00
06.	UPS 5 KVA with ½ hour back up	1 No	Rs.1,50,000.00

**TERMS AND CONDITIONS:**

1. Validity :60 days
2. GST extra @ 18%
3. Delivery : Within 8- 10 weeks after receipt of order.
4. Payment Terms : 100% against delivery

1. Invoice will be raised from THERMO FISHER SCIENTIFIC INDIA PVT. LTD., MUMBAI-76.  
The order will be placed in favour of THERMO FISHER SCIENTIFIC INDIA PVT. LTD.,  
403,404, DELPHI "D" WING, HIRANANDHANI  
BUSINESS CENTRES, POWAI, MUMBAI-76.

for and on behalf of  
Thermo Fisher Scientific India Pvt. Ltd.,



Mr. P. Rajkumar  
Area Sales Manager- South II  
Chromatography & Mass Spectrometry Division  
Mobile No. : +91-7304942795

**ThermoFisher**  
**SCIENTIFIC**

The world leader  
in serving science

Name and Address of Manufacturer :

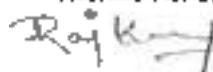

Thermo Fisher Scientific  
Hanna-Kunath-Strasse 11  
28199, Bremen  
Germany

Country of Shipment

Europe

for and on behalf of

Thermo Fisher Scientific India Pvt. Ltd.,

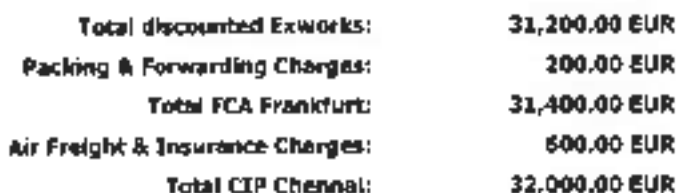
Mr. P. Rajkumar

Area Sales Manager-South II

Chromatography & Mass Spectrometry Division

Mobile No. : +91-730494279





Validity	60 days from the date of offer.
HSN Code	9027
Warranty	12 months from the date of installation and commissioning except for parts subject to wear and tear. Please note that the warranty does not cover physical damage, glass wares, any other damage that occurred due to, natural calamities etc. Glass parts, consumables and other wear and tear parts are not covered under warranty. 10 years warranty on the furnace and 10 years warranty on the TCD.
Installation & Training	Free installation & training at the site by our factory-trained engineers.
Payment Terms	100% through confirmed Letter of credit in favor of Elementar Analysensysteme GmbH, Germany
Delivery Time	18 to 19 weeks from the date of receipt of LC.
Country of Origin	Germany
Note	Order should be placed in the name of Elementar Analysensysteme GmbH Elementar-Strasse 1, D-63505 Langenselbold Germany

For Elementar India Pvt. Ltd.

818806075-B

## Quote

To,  
 SRM University AP  
 Neerukonda, Mangalagiri Mandal, Guntur District,  
 Mangalagiri  
 GUNTUR 522240  
 INDIA

<b>Number</b>	<b>3163</b>
<b>Date</b>	Jan 19, 2023
<b>Reference</b>	As per online enquiry
<b>Valid from</b>	Jan 19, 2023
<b>Valid to</b>	Jan 31, 2023
<b>Account ID</b>	1106917
<b>Phone</b>	+91 9910994775
<b>E-mail</b>	Narasimha.murthy@elementar.com

SRM University AP  
 Neerukonda, Mangalagiri Mandal, Guntur District,  
 Mangalagiri  
 GUNTUR 522240 INDIA

Pos.	Product No.	Description	Quantity	Value
1000	200006875	<b>UNICUBE 元素 instrument package</b>  High performance elemental analyser for simultaneous CHNS analyses. Includes installation kit (containing all items for installation and maintenance as well as for sample preparation). Integrated 120 positions autosampler as standard.  Contents:  1 piece UNICUBE with mode kit CHNS 1 piece Initial outfit kit UNICUBE 1 piece Sample carousel/Auto sampler, 120 positions, red, (with sample cover)	01	11,200.00 EUR
2000	200004299	<b>Starter kit UNICUBE</b>  includes all necessary consumables sufficient to analyse <b>1000 CHNS</b> sample analysis. Automatically Included in the basic instrument (unicu-CHNS-120).	01	Included
3000	200014001	<b>Mettler-Toledo WXT5 micro balance, new model</b>  Readability 0.001 mg with V 24/RS 232 interface. Incl. cable to connect to elementar analyzer.	01	Included
4000	200000740	<b>Maintenance kit for UNICUBE</b> Content: all wear parts which have to be exchanged in conjunction with a maintenance call.	01	Included
		<b>Consumables required for additional 1,000 sample analysis</b>		
5000	200014555	Ash finger, 60 mm, slotted	04	Included
6000	200011820	Support tube, L = 65 mm	02	Included
7000	200004159	O2 lance, 150 mm	01	Included
8000	200009795	Tin for elemental analysis, 35 x 35 mm, 1000 pcs./package	01	Included
9000	200014271	Copper for elemental analysis, wires, 100 gm	04	Included
10000	200008986	Iridium(VI)-oxide for elemental analysis	01	Included
11000	100005768	Combustion tube (quartz) labeled	01	Included

**Quotation for Domestic Supply in Indian Currency**

To, SRM University - AP SRM Trust AP, Bank colony, Vijayawada Neerukonda, Mangalagiri Mandal, Gudur Dist, Andhra Pradesh - 522240, India		Quotation No.: SGT/INR/0079R/2022-23/PD Dated: 19 <sup>th</sup> January '2023	
Description	Qty.	Unit Price in Rupees (In ₹)	Total Price In Rupees (In ₹)
Combustion Gas-Oxygen Cylinder (Filled-99.999% Purity)	01	₹ 57,500.00	₹ 57,500.00
Carrier Gas-Helium Cylinder (Filled-99.999% Purity)	01	Included	Included
Regulator for Combustion gas & Carrier gas cylinders	02	Included	Included
Total Value :			₹ 57,500.00
Add:18% GST:			Included
FOR SRM-AP University Value:			₹ 57,500.00

PC Specification: 15 PC with Color Inkjet printer. As per your Instrument requirement.	01	To be purchased by SRM University	To be purchased by SRM University
Liquid Sample Preparation Accessory - For Liquid Samples: Device for cold sealing of volatile samples under purging.	01	Will be offered Free of Charge during installation	Will be offered Free of Charge during installation

**TERMS & CONDITIONS**

1. Payment Term : NEFT/RTGS Or through Demand Draft
2. Goods and Service Tax : Included @18%.
3. Octrai : If applicable, at actual on your A/c.
4. Kindly place your valued order in favor of : **SHIVA GLOBAL TEKNO SYS,**  
S-15, Block-B, Sahani Tower Complex  
Sec-5, Rajendra Nagar, Sahibabad  
Ghaziabad-201005, Uttar Pradesh  
Tele:+91120 4237835, 4136648  
Tele- Fax:+91-120-4136648  
E-Mail:[contact@shivaglobaltekno sys.com](mailto:contact@shivaglobaltekno sys.com)
5. Our Banker's Details : **INDIAN BANK,**  
Branch: Rajendra Nagar, CBS Code:01643  
76 Commercial Complex, Sector 5  
Sahibabad, Ghaziabad -201005  
Account Number: 6287967089  
IFS Code: IDIB000R057  
ACRFS4663A  
CORPORATE A/c: ACRFS4663A1ZU
3. PAN NO. :  
4. GSTIN :  
For **SHIVA GLOBAL TEKNO SYS,**

**Dr. Prashant Dutt**  
General Manager





## PURCHASE ORDER

**SRM/TRUST/AP/Mar/IC/22-23/PUR-00010**
**Date: 01/03/2023**
**To,**

**M/s. Elementar Analysensysteme GmbH,**  
 Elementar-Strasse 1, D-63505  
 Langenselbold Germany  
 Phone: +91 124 4782150, Mobile: +91 9910994775  
 Email ID: narasimha.murthy@elementar.com

Billing address:	Delivery address:
SRM Trust AP, 54-15-40, R K GALLERIA, SERVICE ROAD, BANK COLONY, SRINIVASA NAGAR, Andhra Pradesh, INDIA - 520008, GST No: 37AASTS4359N1Z1D IEC No: AASTS4359N	SRM University-Ap, Amaravati Neerukonda, Mangalagiri Mandal, Guntur Dist., Andhra Pradesh, India - 522502 Phone: 0863-23431111 Contact Person: Dr. Javid Ahmad Dar, EVS Dept Email Id: javid.ahmad.dar@srmap.edu.in

**Sub:** Procurement of "CHNS-O-Elemental Analyzer"

Dear Sir,

We are herewith pleased to issue the Purchase Order, for the supply of CHNS-O-Elemental Analyzer as per the given in your Quotation (Ref No: 3163, Date: 20-2-2023)

Sl No	Description	UOM	Qty	Price (in Euro)
1.	High performance elemental analyser for simultaneous CHNS analyses. Detailed Specification as per your Annexure - I (Ref No: 3163, Date: 20-02-2023)	Set	1	€ 32,000
<b>Total Price (Euro)</b>				<b>€ 32,000</b>

The total value of the purchase order is priced as EUR € 32,000 (EUR: Thirty-Two Thousand Only)

**Payment Terms:-**

- The payment should be made in favour of M/s. Elementar Analysensysteme GmbH.
- 100% T/C

**Purchase Terms:-**

- Order placed in favour of M/s Elementar Analysensysteme GmbH
- CIP Chennai.
- Warranty: 1 Year + 1 year AMC
- Delivery: 18 to 19 weeks.
- Training & Installation: On Site.
- Custom Duty charges, Clearance charges and Transportation charges from CIP Chennai to SRM University charges will be extra at actuals.

Acknowledged By

SRM TRUST AP

Supplier Seal, Signature &amp; Date

Authorized Signature &amp; Date

Regd Office : R K Galleria, 2nd, 3rd, 4th, Floor, Srinivasa Nagar, Bank Colony, Service Road  
 Near Mahanadu Signal, Vijayawada - 520 008, Krishna District, Andhra Pradesh  
 Corp Office : No. 3, Veeraswamy Street, West Mambalam, Chennai - 600 033, Tamil Nadu

## Annexure – I

Po No: SRM/TRUST/AP/Mar/IC/22-23/PUR-00010

Date: 01-03-2023

Pos.	Product No.	Description	Quantity
1000	200006875	<b>UNICUBE instrument package</b> High performance elemental analyser for simultaneous CHNS analyses. Includes installation kit (containing all items for installation and maintenance as well as for sample preparation). Integrated 120 positions autosampler as standard. Contents: 1-piece UNICUBE with mode kit CHNS 1-piece Initial outfit kit UNICL.BF 1 piece Sample carousel/Auto sampler, 120 positions, red, (with sample cover)	01
2000	200004299	<b>Starter kit UNICUBE</b> includes all necessary consumables sufficient to analyse 1000 CHNS sample analysis. Automatically included in the basic instrument (unicu-CHNS-120).	01
3000	200014001	<b>Mettler-Toledo WXTS micro balance, new model</b> Readability 0.001 mg with V 24/RS 232 interface. Incl cable to connect to elemental analyser.	01
4000	200000740	<b>Maintenance kit for UNICUBE</b> Content: all wear parts which have to be exchanged in conjunction with a maintenance call.	01
<b>Consumables required for additional 1,000 sample analysis</b>			
5000	200014555	Ash finger, 60 mm, slotted	04
6000	200011820	Support tube, L 65 mm	02
7000	200004159	O2 lance, 150 mm	01
8000	200009795	Tin foil for elemental analysis, 3.5 x 3.5 mm, 1000 pcs./package	01
9000	200014271	Copper for elemental analysis, wires, 100 gm	04
10000	200008936	Tungsten (VI)-oxide for elemental analysis	01
11000	100005768	Combustion tube (quartz) labelled	01

## SRM UNIVERSITY – AP, Andhra Pradesh-522240

### Sub: Recommendations of Purchase Committee Meeting held on 18/01/2023 for the Purchase of CHNS-O-Elemental Analyzer – EVS Dept (Research Equipment).

We have received an Indent from Dr. Javid Ahmad Dar – EVS Dept., on 23/12/2022 (Indent No:732) for the CHNS-O-Elemental Analyzer.

A proposal has been obtained from various vendors as under:

- M/s. ThermoFisher Scientific
- M/s. Shiva Tilosal Teknonyms
- M/s. Swan Scientific LLP

Upon receipt of techno commercial offer, a PCM was scheduled on 18/01/2023 and following list of committee members participated for technical and commercial discussions as below.

1. Prof. D Narayana Rao – Pro Vice Chancellor
2. Dr. R Prem Kumar – Registrar
3. Ms. Sujana – C/AO
4. Prof. B V Baba – Dean, SEAS
5. Asst. Prof. Javid Ahmad Dar – EVS Dept
6. Mr. Sai Kiran – Executive – Procurement

In techno commercial discussions, the committee has negotiated with the vendors to bring down the prices and this proposal is finalized as below:

Vendor Name		Basic Cost (Rs)	GST 18% (Rs)	Total (Rs)	
M/s. Elementar Analysensysteme GmbH	Initial Proposal	40,44,800.00	7,28,064.00	47,72,864.00	L3
	Final Proposal	₹32,000 (₹ 28,42,880.00) (Equipment) + ₹ 1,88,800.00 (Helium Cylinder) = ₹30,31,680.00/- (CIP Chennai)			T1

(Detailed techno commercial comparison statement enclosed Ref Annexure - I)

After the PCM the user dept had a internal technical discussion with the faculty and recommended M/s Elementar as T1,T3. The difference between the L1 and L3 is Rs.62,944.00/- . User dept technical discussions and recommendations sheet enclosed. Ref Annexure – II.

#### Purchase Terms :-

- 100% LC for Equipment
- 100% Against delivery for Helium Cylinder.

#### Purchase Terms :-

- CIP Chennai for Equipment
- FOB Destination for Accessories
- Warranty: 1 Year (Equipment & Helium Cylinder) + 1 Year AMC
- Delivery: 18-19 Weeks
- Custom Duty charges, Clearance charges and Transportation charges from CIP Chennai to SRM University charges will be extra at actuals.

Hence there is a negotiation saving of Rs. 10,41,920.00/-.

Here by submitting the PCM-Minutes with the proposal requesting for approval to proceed further and release the order in favour of

#### **For Equipment**

- M/s. Elementar Analysensysteme GmbH with ₹32,000 /- (CIP Chennai)

&

#### **For Helium Cylinder**

- M/s. Elementar India Pvt Ltd Rs. 1,88,800/- (Inclusive of 18% GST)

**Sub: Recommendations of Purchase Committee Meeting held on 18/01/2023 for the Purchase of CHNS-O-Elemental Analyzer – EVS Dept (Research Equipment).**



Dy. Manager Procurement



Asst. Professor – EVS Dept  
(Dr. Javid Ahmad Dar)



HOD – EVS Dept



Dean – SEAS



CFAO



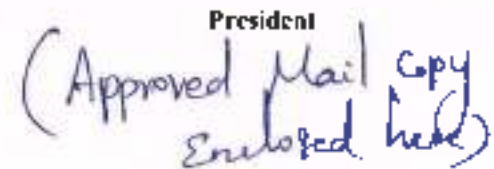
Registrar

  
22-02-23

Pro Vice Chancellor



Vice-Chancellor

  
(Approved Mail Copy  
Enclosed here)

President



## Annexure - I

## SRM University AP

Comparison Statement for CHNS - O Elemental Analyzer - Environmental Science

Indent No: 732

S.No	Description	Qty	M/s Swam Scientific Ltd		M/s Elementar		M/s Shiva Global Teknosys		M/s Thermo Fisher	
			Specifications	Cost	Specifications	Cost	Specifications	Cost	Specifications	Cost in Euro
1	CHNS - O Elemental Analyzer	1	Elemental Analyser Make Velp Scientific Model no EMA 512	€ 29,400.00	Elemental Analyser Make Elementar	€ 12,000.00	Euro EA 5101 Elemental analyser basic unit Make Euro Vector	€ 33,000.00	CHNS/O includes 1000 analysis kit for CHNS & 1000 analysis kit for oxygen make Thermo Fisher	€ 47,000.00
In INR (A)			₹ 18,12,336.00		₹ 28,42,880.00		₹ 29,31,720.00		₹ 41,75,480.00	
Warranty			2 Years		1 Year + 1 Year AMC		2 Year		1 Year	
Freight			CIP Chennai		CIP Chennai		CIP Chennai		CIP Chennai	
Installation and Demo			Inclusive		Inclusive		Inclusive		Inclusive	
Delivery Period			12-14 Weeks		18-19 Weeks		14-16 Weeks		10-12 Weeks	
Payment terms			100% LC		100% LC		100% LC		100% LC	
•	Description	Qty	M/s Swam Scientific Ltd		M/s Elementar		M/s Shiva Global Teknosys		M/s Thermo Fisher	
			Specifications	Cost	Specifications	Cost	Specifications	Cost	Specifications	Cost in Euro
2	Accessories	1	Macro Balance	₹ 9,80,000.00	Helium Cylinder	₹ 1,60,000.00	Helium Cylinder	₹ 48,728.81	Accessories	₹ 73,300.00
Sub Total			₹ 9,80,000.00		₹ 1,60,000.00		₹ 48,728.81		₹ 73,300.00	
GST 18%			₹ 1,76,400.00		₹ 28,800.00		₹ 8,771.19		₹ 13,194.00	
Total (B)			₹ 11,56,400.00		₹ 1,88,800.00		₹ 57,500.00		₹ 86,494.00	
Warranty			2 Years		1 Year		1 Year		1 Year	
Installation and Demo			Inclusive		Inclusive		Inclusive		Inclusive	
Delivery Period			12-14 Weeks		18-19 Weeks		14-16 Weeks		10-12 Weeks	
Payment terms			100% Payment against delivery		100% Payment against delivery		100% Payment against delivery		100% Payment against delivery	
Grand Total (A+B)			₹ 29,68,736.00		₹ 30,31,680.00		₹ 29,89,210.00		₹ 42,61,974.00	
Stage	Commercial		L2		L3		L1		L4	
	Technical		T3		T1		T3			

Recommendations: M/s Elementar (L3 T1)



University Research Grant - Equipment & Project Proposal  
Sanction Order No: SRM/AP/UP-G/EPG/2022-23/012/01, 06/12/2022  
SRM UNIVERSITY-AP  
Necrukonda Village, Mangalagiri Mandal, Guntur District-522502, Andhra Pradesh

Department Name : Environmental Science  
Name of the Requisitioner : Dr. David Abhinav Bar  
Designation : Assistant Professor  
Specify the Purpose : For research at SRM-AP

Date : 20/12/2022  
Required By : December 2022  
Category : Instrument

Sl.No	Material Description	Specification (Model / Make / Type / Size etc.)	Uom	Quantity	Store Stock	Order Qty	Approx. Unit Cost	Remarks
1.	CHNS-O Elemental Analyzer	MODEL Euro EA3100-UNICLBE/EC5- 4024-ThermoScientific/EMA502		1	NA	1	45,00,000.00	✓
2.								
Total cost							45,00,000.00	

In : 739  
Date : 23/12/22  
Signature : [Signature]

Requisitioner

Stores

Dean : Director

Budget Verification

Finance Verification

Category	Approved Budget (Rupees in Lakhs)				
	Approved	Actual	Balance	Unutilized	Unallocated
Departmental	0.00	0.00	0.00	0.00	0.00
Academic	0.00	0.00	0.00	0.00	0.00
Administrative	0.00	0.00	0.00	0.00	0.00
Research	0.00	0.00	0.00	0.00	0.00

Approving Authority

(Final amount per below order)

Procurement Dept Acknowledgment

Note: With the sanction of any approval authority, the amount should be used for the purpose specified.

# Sanctioned Amount Rs. 37 Lakhs

# SFB Project Amount Rs. 8 Lakhs

**SRM UNIVERSITY AP**

**SANCTION ORDER FOR UNIVERSITY RESEARCH GRANT –EQUIPEMENTS AND PROJECT PROPOSALS**

Sanction Number: SRMAP/URG/E&PP/2022-23/012

Date: 06-12-2022

Dear Dr. Javid Ahmad Dar And Dr. Pankaj Pathak,  
EVS Dept.

The University Allocation Research Grant Committee has approved your proposal under the Equipment grant category for the FY 2022-23. The total amount sanctioned is **Rs. 37,00,000/-**.

S.No	Faculty Name	Department	Equipments Name
1	Dr. Javid Ahmad Dar And Dr. Pankaj Pathak	EVS	CHNSO Anlayser

You are requested to adhere to the University Purchase Policy to procure the Equipments as soon as possible. The purchase requisition along with the quotations to be submitted to the Procurement Dept for processing.

University is confident that you will give your best research outcome utilizing the sanctioned fund. University expects 100 % utilization of the equipment and a minimum 30 % by other users. You will maintain a logbook to record the utilization. You will be requested to adhere the university research grant policy for the utilization of the equipment. You are requested to acknowledge the SRM University – AP Research Grant for any research-based outcome by utilization of the equipment.

You are expected to submit the Technical report after 1 year to the committee for review (Format will be shared).

**Note:** Can be shared with the approved fund of Rs. 8 Lakhs under the SERB project received by Dr.Javid Ahmed Dar (Proposal submitted for Rs.45 Lakhs).

Regards

  
CFAO

Convenor

**SRM University-AP**  
**CHECKLIST FOR RESEARCH LAB REQUIREMENTS**

URG Sanction Order No: SRMAP/URG/ESP/2022-23/012

Date: 06-12-2022

Purchase requisition for : CHNS-O ANALYZER

Purchase Requisition Value : 45 Lakhs.

**PART A**

Name of the Faculty : Dr. JAVID AHMAD DAR AND Dr PANKAJ PATHAK

Department : ENVIRONMENTAL SCIENCE

School : ENGINEERING AND SCIENCES

01	Name of the Equipments	<u>CHNS-O ANALYZER</u>
02	Location of the Lab / Room (Mention the place where the equipment is to be installed)	<u>RESEARCH BLOCK, ROOM-NO. 9-LEVEL-2</u>
03	Is it department facility / Central Facility ?	<u>Departmental facility</u>
04	Any Other information	

Pankaj  
Jamil  
5.19/01/23  
Faculty

Ben  
23/01/23  
Department HOD

Ben  
23/01/2023  
DEAN

**PART B : INFRASTRUCTURE READINESS**

	Yes	No	NA
01. Lab Allotment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
02. Furniture Available	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
03. MEP Works Completed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04. Civil / Interior works	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05. Any Other requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussed & Confirmed  
with Mr. ABPA BAPPA  
9633790838

Ben  
23/01/23  
(Director CLM)

**PART C : ITEM READINESS**

	Yes	No	NA
01. Networking	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
02. Hardware	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
03. Software	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04. Any other requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- Work in progress for  
3 LAN Points in Research  
Building Level 2

K. Ch  
(Director IKTM)

FOR OFFICE USE:

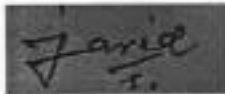
CFAO

REGISTRAR

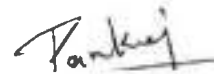
## Self- Declaration

We, **Dr. Javid Ahmad Dar & Dr. Pankaj Pathak** declare that we will be working at SRM University -AP during the execution of the project as per the projected timeline (Two years from the date of procurement of the Equipment (s). The project/equipment sanctioned number is **SRMAP/URG/E&PP/2022-23/012, Dated: 06-12-2022.**

Signature and Name of the Faculty Members



**Dr. Javid Ahmad Dar**  
Dept. of Environmental Science  
SRM University – AP



**Dr. Pankaj Pathak**  
Dept. of Environmental Science  
SRM University – AP



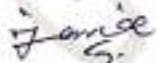
Date: 20/12/2023

**GOODS RECEIVED NOTE**

Customer: SRM University AP  
Address: Mangalagiri, Guntur - 522502, AP

Order No:  
SRM/TRUST/AP/Har/IC/22-23  
PUR - 00010

Sr.no	Item Code	Description	Ordered Quantity	Received Quantity	Physical Condition
1	100007262	UNICUBE CHNS	01	01	OK
2	200011445	Initial outfit kit UNICUBE	01	01	OK
3	200004299	UNICUBE starter kit	01	01	OK
4	200000740	UNICUBE Maintenance kit	01	01	OK
5	200014001	Micro Balance (Mettler Toledo)	01	01	OK
6	200006875	UNICUBE Plus	01	01	OK
7	200009795	Tin foil 35x35	01	01	OK
8	100007633	Double stage Gas Regulator	02	02	OK
9	100007737	Liquid Precap	01	01	OK
10	100007623	Helium Gas cylinder	01	01	OK
11	100007624	Oxygen Gas cylinder	01	01	OK
12	200015749	Tin capsules	02	02	OK



Customer Signature

 20/12/2023  
Engineer Signature

**elementar**

Elementar India Pvt Ltd  
204, Block-I, DLF Corporate Park, MG Road  
Gurgaon - 122002, Haryana, INDIA  
Tel.: +91 124 4782150

**SERVICE REPORT**

Customer Service Centre  
Email: [service-india@elementar.com](mailto:service-india@elementar.com)

Name &amp; Address of Customer:

SRM University AP  
Mangalagiri, Guntur-522502

Contact Person / Designation:

Dr. Javid Ahmad Dar  
Assistant Professor

Tel / Fax / Email:

[javidahmad.d@srmap.edu.in](mailto:javidahmad.d@srmap.edu.in)

Department:

ENVIRONMENTAL SCIENCE AND ENGINEERING

Date:

18-12-2023 To 20-12-2023

Job Status (complete/incomplete)

Complete

Type of Job (Warranty/ AMC/Installation/ Courtesy/ Validation)

Installation & Demonstration

Your Reference

NA

Our Reference

SRM/TRUST/AP/Mar/IC/22-23/PUR-00010

Engineers Name

Nayan D'Almeida

Instrument

Model

Sr. number

Elemental Analyser

UNICUBE

0400BC1069

**Purpose:** Installation & Demonstration

**Observation & Action :** Unpacked the Instrument, checked the consignment did electrical and gas connections, both Helium and Oxygen cylinders are connected with copper tubing, shown to users how to fill the combustion tube, reduction tube and drying tubes, did leak test, it is passed and explained how to perform leak test. checked the instrument for blanks, standards and samples, results are good and repeatable in the both mode, instrument is working satisfactorily. Explained the schematic and maintenance procedure of the equipment to the customer and users.

**Note:** We have delivered all the items as per PO and same thing shown to the customer.

Parts Require for future:

Customer Feedback:

*N. D. Almeida*  
20/12/2023  
For Elementar India Pvt Ltd

*Javid*  
Customer's signature



### Usage Rate Chart


Equipment Name	CHNS – Elemental Analyzer
Research Facility	CHNS – Analyzer
Model and make	ELEMENTAR-UNICUBE
Year of Installation and Location	2023, 2 <sup>nd</sup> Floor, JC Bose Block, Room No. 212
Source of Fund	SRM University - AP and DST-SERB


Usage Rate: (as indicated by SRM University-AP)		
S.NO.	USERS CATEGORY	RATE (UNIT SAMPLE) & (IN RUPEES)
1	Academic (External) <sup>1</sup>	400.00
2	Academic (Internal but different department/lab) <sup>2</sup>	0.00
3	Academic (Internal) <sup>3</sup>	0.00
4	Industry User	1000.00
5	National Research Lab User	500.00
6	Start-ups Company	500.00

**Note:**

1. Academic (External) means researchers belongs to the other institution.
2. Academic (Internal but different department/lab) means researchers belongs to other department/lab or other investigators.
3. Academic (Internal) means researchers belongs to the same institution.

Approved by

  
Prof. Ranjit Thapa  
Professor and Dean - Research  
SRM University – AP  
**Prof. Ranjit Thapa**  
Dean - Research  
SRM University-AP, Andhra Pradesh  
Neerukonda, Pincode: 522240  
Guntur District, Andhra Pradesh, India.

  
Dr. Sabyasachi Mukhopadhyay  
Coordinator,  
Central Research Facility and I-STEM  
Department of Physics  
SRM University – AP  
**Dr. Sabyasachi Mukhopadhyay**  
SRM University-AP, Andhra Pradesh  
Neerukonda, Pin code-522240,  
Guntur District, Andhra Pradesh, India

Prepared for I-STEM portal submission.