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Client:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

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ADDITIONAL:

Payment Terms:

50% / 50%

Other: please specify

 Penalty Clause Yes ☒ No

Please specify:

Blue Book Completion:

Signed		Date	21.08.26
Verified	S. M. Kelly	Date	21.08.26



Quotation

To: N. Asteriadis S.A.
Koukoufli 4 str
Thessaloniki
54622
Greece

VAT No. 094147403

Quotation Date: 26/06/2025
Quotation Reference: 18310
Customer Ref: Athens Uni
Account Ref: AST003
Quotation Validity: 26/09/2025

Quantity	Product Code	Product Description	Unit Price €	Discount €	Net Price €
Agent Pricing					
1	20402/4	HS2022 + Hd Collector + E-Mag + Trap Loop Continuous flow isotope ratio mass spectrometer. Including high sensitivity source, electro magnet and HD collector Innovative trapping loop technology included, which allows the source to be tuned and delta values to be calculated without the need for a reference gas. System configured for m/z 28 to 64 for the analysis of H2, CO2, N2, N2O, NO, O2, SO, SO2, CO and CH4 (converted to CO2). Windows based data system. 70201-1 - Analyser spares kit includes a filament, copper gaskets, source tool kit, pump oil, snoop and ferrules	150,625.000	45,187.50	105,437.50
1	10202/25	PyroEarth 2025 High performance elemental analyser with pyrolysis capable furnace including TCD for simultaneous CNS + OH analysis. Includes autosampler for solids. 70501-3 - Includes sample preparation kit - micro spatula, mirror, forceps, sample tray and syringe - Includes 70501-5 Simultaneous CNS consumables kit - 70801-1 Pyrolysis Start Up Kit high temp for Solids	62,500.000	18,750.00	43,750.00
1	70501-8	Note: Requires HS2022 with Trapping loop Simultaneous CNS Consumables Kit (approx. 5000 samples) Dangerous goods in excepted quantities	4,886.250	0.00	4,886.25
1	SC8017	IAEA-600 Caffeine certified for 13C 15N 0.5g See certificate for values	278.063	0.00	278.06
1	SC9110	IAEA-S-1 Silver Sulphide certified for 34S 0.5g See certificate for values	270.000	0.00	270.00
1	SC8060	L-glutamic Acid USGS40, 2g Certified for 13C 15N See certificate for values	275.000	0.00	275.00



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innovators in isotopes

18310

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Quotation Reference: 18310
Customer Ref: Athens Uni
Account Ref: AST003
Quotation Validity: 26/09/2025

Quantity	Product Code	Product Description	Unit Price €	Discount €	Net Price €
1	SC8118	Glycine Certified for 13C 15N 0.5g See certificate for values	343.750	0.00	343.75
1	INST	Installation and start up training at Customer's site	9,900.000	0.00	9,900.00
1	EXW	Ex Works Crewe (N. Asteriadis S.A. to arrange shipping) The buyer assumes all costs and responsibilities for transporting the goods from the named location.	0.000	0.00	0.00
1	WARR2	2 year warranty	0.000	0.00	0.00

* The price quoted does not include any local taxes or duties
See separate document for terms and conditions

This quotation is issued in	Euro
Total Net Amount	€ 165,140.56
Total VAT Amount	€ 0.00
Order Total	€ 165,140.56

Payment Details:-

50% with order, 40% on delivery and 10% installation
Payment is required within 30 DAYS of invoice date by bank transfer.
All bank transfer charges are the responsibility of the customer.

Intra-community supply, subject to VAT in the country of acquisition.

Sercon Bank Details:-

National Westminster Bank, 36 High Street,
Nantwich, Cheshire CW5 5GA U.K.

Sterling: IBAN: GB74NWBK54101736755133
Euro: IBAN: GB14NWBK60721013806831
US Dollar: IBAN: GB94NWBK60730113806556
BIC: NWBKGB2LXXX



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Company Registration No.: 4290072

Phone: +44 (0) 1270 580008
Fax: +44 (0) 1270 252310

www.sercongroup.com
VAT No.: 771 1100 74

N. ASTERIADIS COMPANY FOR REPRESENTATIONS AND TRADE OF SCIENTIFIC INSTRUMENTS S.A.

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BRANCH OFFICE: 54 TSIMISKI str. • GR-546 23 THESSALONIKI • P.O. BOX 50330 • TEL: +30 2310 278.692, 278.693, 260.331 • FAX: +30 2310 284.691, 260.393 • e-mail: na@asteriadis.gr
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Purchase Order

To : Sercon Limited
 Attention : Joanne O'Connor
 From : Alexandra Delli
 Email : ad@asteriadis.gr
 Date : 11/07/2025
 Pages : 1
 Reference No : Our Order 25-0484

We confirm our order for the following :

Order Line	Item Code	Item Description	Qty	Price	Discount %	Total Value
1	20402/4	HS2022 + Hd Collector + E-Mag + Trap Loop	1	105.437,50		105.437,50
2	10202/14	PyroEarth	1	43.750,00		43.750,00
3	70501-8	Simultaneous CNS Consumables Kit (approx. 5000 samples) Dangerous goods in excepted quantities	1	4.886,25		4.886,25
4	SC8017	IAEA-600 Caffeine certified for 13C 15N 0.5g	1	278,06		278,06
5	SC9110	IAEA-S-1 Silver Sulphide certified for 34S 0.5g	1	270,00		270,00
6	SC8060	L-glutamic Acid USGS40, 2g	1	275,00		275,00
7	SC8118	Glycine Certified for 13C 15N 0.5g	1	343,75		343,75
8	INST	Installation and start up training at Customer's site	1	9.900,00		9.900,00
Totals			8			165.140,56

COMMENTS

You are kindly asked to state on your invoices the Tariff number of the goods, net weight and means of transportation (post, truck, e.t.c.) for INTRASTAT purposes. Please make sure that **INVOICE IS NOT INCLUDED** into the parcel in order to avoid misunderstandings with the clients. Original invoice to follow by mail. Please do not dispatch until you receive our written instructions. Awaiting for a C/O stating delivery time, pricing, total charges, we remain,

INVOICE TO :

N.ASTERIADIS S.A
 4 KOUKOUFLI str
 THESSALONIKI 54622
 GREECE
 Tel : +302310260331
VAT: EL094147403

DELIVERY TO :

N.ASTERIADIS S.A
 31 DERVENION & POSEIDONOS str
 METAMORFOSSI-ATHENS Zip: 14451
 Tel: +302108235383 GREECE

3 - MACHINE SPECIFICATION

Client:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
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Ref No.	Product Description	Required
HS2022 (continuous flow)		
20402/1	HS2022 Ref Gas + P Mag	
20402/2	HS2022 Ref Gas + E-Mag	
20402/3	HS2022 Ref Gas + Hd Collector + E-Mag	
20402/4	HS2022 Ref Gas + Hd Collector+E-Mag+Trap Loop	✓
20501	Hd Collector Assy ***	
50101/2	Trapping Loop Assy	
70201-1	70201-1 Analyser spares kit - Included	
EA Units		
10202/11	iso-EArth	
10202/13	iso-EArth+	
10202/14 2S	iso-Earth HT Furnace Upgrade <i>PyroArth</i>	✓
10202/15	Iso-Earth (Without Autosampler)	
11802/1	Earth+PC	
11802/2	EArth+Clarity+PC	
70501-1	Consumables for C and N for Combustion Only	
70501-11	Simultaneous CNS Consumables Kit (approx. 10000 analysis)	
70501-3	Sample Prep Kit (Inc.)	
70501-4	GSL Combustion and Gas C & N Start Up Kit	
70501-5	Simultaneous NCS Consumables Kit	
70501-6	C&N Combustion Only Consumables Kit (approx. 5000 samples)	
70501-8	Simultaneous CNS Consumables Kit (approx. 5000 samples)	✓
70601-1	Sulphur Start Up Kit (Inc. with Sercon EA Systems)	
70601-2	Sulphur Consumables Kit for 1000 Samples	
70601-4	Sulphur Consumables Kit (approx. 5000 Samples)	
70801-2	Pyrolysis Consumables Kit-Low temp for Solids	
71701-1	Sub Microgram Nitrogen Analysis Start Up Kit	
SI2040	PN150 Pneumatic Autosampler with one no.50 pos, carousel	
SI2345	ME Micro Balance	
SI2737/A	Sercon 50 Position Autosampler Assy	
SI2789	Extra 50 Position Carousel	
SI2744	Automatic Liquid Sampler 15 Position	
SI2743	Liquid Sampler Mounting Plate	
Headspace Equilibration		
10202/10	XYZ Gas Sampling Control Box	
10302/1	Aqua System	
11103	µCarbs for CF	
11103-1	µCarbs for DI	
11601	200 Place Dual Heated Block 240 Volt	
11801	Sercon XYZ Gas Autosampler	
71107-1	CF oxygen-18 equilibration kit	
71107-2	DI Oxygen-18 Equilibration kit	
71201-1	CF deuterium equilibration kit	
71201-2	DI Deuterium Equilibration kit	
71801-1	WES-DI start up kit (Inc. with WES-DI)	
GC Units		
10402/2	Orchid module 1500C (Will run Hd 70901-1 C Spares Kit Inc)	
10901	Nitrogen Option (71301-1 N Spares kit Included)	
HP7890/1	Agilent 7890B GC System	
HP7890/2	Agilent 7890B GC with Auto Injector	
HP7890/3	Agilent 7890B GC + Auto Injector + 150 Vial Sample Tray	
SI2561	Nexis GC 2010 Plus	

Ref No.	Product Description	Required
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S027_v11

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23/10/2017

*** When ordered alone IN no. / Blue book NOT required

3 - MACHINE SPECIFICATION

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GC Units *continued*

SI2564	Nexis GC-2030	
70901-3	GC Pyrolysis H and O Start Up Kit	
70901-4	GC Pyrolysis H Spares Kit	
70901-5	GC Combustion C Spares Kit (approx. 5000 samples)	
70901-6	GC Pyrolysis h Start Up Kit (approx. 5000 samples)	
71301-1	GC N Spares kit	

ABCA2 Units

10502/1	ABCA2 Sercon XYZ Autosampler	
10602	ABCA2 Gas Box	
20602	Complete Sercon ABCA2 system	
20603	ABCA IR Analyser	
70101-1	ABCA2 spares kit (<i>Inc. With ABCA2</i>)	
70101-2	ABCA2 Spares Kit for AB Analitica Systems	
70101-3	ABCA2 Autosampler Upgrade Kit	
SI1767	CVL505 – Barcode Reader	
SC9973	13C Urea breath test kit for <i>Helicobacter pylori</i> infection	
SC9974	<i>Helicobacter</i> Test kit for children age 3-11 (45mg)	

Integra2 Units

20802/4	Integra2	
70201-2	Integra2 analyser spares kit - Included	
70401-1	Integra-2 consumables (<i>Inc. With Integra2</i>)	

Trace Gas Systems

10802/4	CryoPrep	
10802/5	Automated LN refiller	
10802/6	CryoFlex (TOC)	
10802/7	CryoGas	
10802/8	CryoFlex (LA)	
SI2533	Silicon Carbide Vertical Furnace	
SI2731	213nm Laser Ablation System	
SI2733	isoScell 100 sampler chamber	
71001-1	Cryoprep Spares Kit	
71001-5	CryoGas Consumables Kit	

TOC Units

14001	Thermalox Environmental TOC-IRMS	
14002	Thermalox Environmental TOC-Standalone	
14003	Thermalox Environmental TOC-Standalone No Sampler	
SI2772	CO2 Detector, High sensitivity Option	
SI2773	NOx detector Option	
SI2774	Vacuum pump Option	
SI2775	Stirred Vial rack Option	
72101-1	TOC Start Up Kit	
72101-2	TOC Chem Pack	
72101-3	TOC & TN Instrument with heavy usage - one year	
72101-4	TOC only - economy holding	

GEO 20-22 (dual inlet)

10702	GEO 20-22 Water Equilibration System (D & 18O)	
21802/1	GEO 20-22	
21802/2	GEO 20-22 + E-Mag	
21802/3	GEO 20-22 + E-Mag +Hd	
21802/4	GEO 20-22 Inlet	

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70301-1	GEO start up kit - Included	
70301-3E	Comprehensive GEO 20-22 spares kit for 5 years operation	
HT-EA		
11501/4	HT-EA (With Autosampler)	
11501/5	HT-EA With Liquid Option	
11501/6	HT-EA Stand Alone	
11501/7	HT-EA (Without Autosampler)	
SI2622	CTC PAL3-LSI-L-S	
SI2624	CTC PAL3-Kit-Standalone	
70801-1	Pyrolysis Consumables Kit-High Temp for Solids	
71501-1	HT-EA Pyrolysis Start Up kit O and H	
71501-2	HT-EA Pyrolysis Kit for Water injections	
71501-3	HT-EA Sensitivity Start Up Kit for O & H in small samples	
71501-4	HT-EA Sensitivity Consumables Kit for O & H in small samples	
71501-5	HT-EA Sensitivity Kit for O&H in Small Samples (5000 samples)	
71501-7	HT-EA Kit for Room Temp Equilibration	
71501-8	HT-EA Pyrolysis Kit for Water injections (approx. 1 year kit)	

Ref No.	Product Description	Required
Upgrades		
12101	Evacuation System ***	
12102	2 Ref Gas+ Dilutor Box ***	
20101	Standard Source Assy ***	
20102	HS Source Assy ***	
20301	Standard Collector Assy ***	
30202/1	System Control Upgrade (Pmag) installation not included	Edwards Or Pfeiffer
30202/2	System Controller Upgrade (Emag) installation not included	Edwards Or Pfeiffer
10202/7	Preparation PCB Upgrade	
30202/3	Hijack Box ***	
30302/4	nEXT85 Edwards Pumping System Upgrade Single - installation not included	
30302/5	nEXT85 Edwards Pumping System Upgrade Dual - installation not included	
30302/6	nEXT85 Edwards Pumping System Upgrade Triple- installation not included	
SI2542	ABCA2 Upgrade Kit	
CALLISTOW	Callisto software upgrade ***	
Specials		
11702	LC-I interface	
12202	Leco Interface Unit	
SI2320	Agilent 1260 Series Refractive Index Detection HPLC System	
71401-1	ABCA-G Start Up/Spares Kit	
71401-2	ABCA-G Equilibration Spares Kit - Room temp O only	
71401-3	ABCA-G Equilibration Spares Kit - Room Temp O & H	
71601-1	LC Interface Spares Kit	
ADDITIONS		
PC	Windows 7 based PC System with Callisto Software	
Printer	Printer	
INST1	Installation and start up training at customer's site by Sercon Engineer	✓
INST2	Installation and start up training at customer's site by Agents Engineer	
WARR	1 year warranty	
WARR2	2 year warranty	✓
TRAIN	Training in UK for one person for 3 days	
SCONTRACT	Maintenance Service Contract - 1 year	
SPECIFICATION REQUIREMENTS		
Voltage	Volts 50/60Hzs	

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Plug Type	SI2510	3 Metre USA/Japan plug to IEC C 13	
	SI2511	2.5 Metre Australian plug to IEC C 13	
	SI2512	3 Metre UK 13 amp Fused plug to IEC C 13	
	SI2523	3metre Schuko (Euro) Plug to IEC C13 Socket	
	SI2514	2.5 metre Chinese mains to IEC C13	
Pallet	Stamped for export heat treated for 30 min @ 56 °C		
	Complies with all Export Requirements		

4 - LOG SHEET

Client:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

Date	Action Taken	By Whom
01/08/25	Pumping and crimps checked	HR
↓	Leadamps fitting fitted	HR
↓	oprics fitting fitted	HR
↓	Unit PAT tested	HR
13/8/25	Pyro - P.A.T. TESTED	PR
"	Quality checked	PR.
13/8/25	HS2022 in test for a week already, pumped down ok. Crimps for ref gas and isolation valve set. Problem with flashing over baked out on 8/8/25 Running ref gas specs - C+N pass Turn on pyrofurth - valve cable loose, all valves now responsive, except valve 15, wired to position 16 - moving to 15	AD
14/8/25	Empty tubes put in. Crimps set. measured full flow out of pyro. Flow sensors calibrated. Plumbed to trapping loop - low flow. Leak coming out of Valve 9, top connection, tightened up. Leak on flow into loop, tightened - not fixed. Undid connection, front ferrule missing - adding. Pressure test passes, trapping loop iso crimped Heating furnaces with empty tubes - Heat ok Tubes in furnaces, getting to temperature Pressure test hot - not passed, checking for leaks Valve air pumped backwards - corrected	AD/TI
15/8/25	AutoSampler not sticking, put new style arm and PTFE bolts on. lost flow, cooling down reconnection to check copper isn't melted	AD/TI

Date	Action Taken	By Whom
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4 - LOG SHEET

Client:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
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15/8/25	Reduction furnace too hot, looking into thermocouple position. Auto sampler preventing flow	
19/8/25	Reduction furnace swapped for new as temp difference of recirculation to external thermocouple was 150-200°C New furnace works ok.	AD
20/8/25	Temperatures all reached on furnaces. Blanks look ok. Test passes - not there, leak on bottom fitting of reduction furnace. Pressure test passes, pipes now coming through - timings need adjusting	TI
21/8/25	Combustion furnace not hot enough, adjusting temp. Sampler airlines backwards - swapped Running blanks with autosampler turning correctly	AD
22/8/25	No blank when Valve 8 turns, N ₂ background low 11.5. Connected to external O ₂ cylinder blank now 1e-10. Leak on lines. Tuning for SO ₂ - O ₂ timings need adjusting for better combustion. Combustion now ok, timings changed SO ₂ found.	AD
26/8/25	SO ₂ peak tuned for with ammonium sulphate. CO ₂ + N ₂ ref gas peaks checked. Blank > 2e-10. Cysteine precision running - SO ₂ passes after window adjustment, N ₂ and CO ₂ do not - checking ref gas.	AD
Date	Action Taken	By Whom

4 - LOG SHEET

Client:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
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27/8/25	Re-ran ref gas - ok checked flash combustion of samples looks ok Running cystine precision	AP
28/8/25	Replaced combustion and tube furnace tubes for new Running cystine precision	
1/9/25	Combustion furnace doesn't seem hot enough - increase to 1100°C. Opened crimp on iss from 3e-6 to 5e-6 Valve 5 also removed for a repairs job, new valve put in	
2/9/25	Slight background increase, and high blanks external tank shows no difference. Blanking off to just ref is ok looks ok. other two have high vacuum and background - replaced valve T, looks better - needs to pump overnight	AD
3/9/25	N2 background E-11 - all good Running blanks ~3.8E-10 Ref gas peak shapes + stability - OK Pressure not passed Running Beal mix precision N 0.16 C 0.35 S 0.14	T1
4/9/25	Background E-11 + Blanks ~3.5E-10 CO2 re-tuning + ref gas prec + lin passed	T1
5/9/25	N2 tuning - ref gas prec + lin passed Blanks <3.0E-11 - external cylinder - O2	T1
8/9/25	Running beet mix dual precisions, N2 passing - CO2 needs retuning	T1/AP
Date	Action Taken	By Whom

4 - LOG SHEET

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10/9/25	Re-tuned CO ₂ ref gas Specs - Pass Flash combustion not visible, increased furnace temp - now ok, running precision	
11/9/25	Beetmix precision passed after magnet more Ref gas - passed Thermocouple of combustion checked - all good	T1 / AD
12/9/25	Furnaces heated up well overnight Pressure test passed External Cal controller fitted to monitor furnace temp	T1 / AD
15/9/25	Oven 2 tube replaced Ref gas peaks checked - good Pressure test passed Blanks ~2E-10 - all good Cystine precision batch submitted	T1
16/9/25	New combustion furnace link fitted GC baked at 170°C + full He flow overnight	T1
17/9/25	System swapped for pyrolysis New pyro tube + leak check all good Furnaces reach temp okay	T1
18/9/25	Tuned for CO Passed O ₂ precision	T1
19/9/25	Tuning set to Hz + left to stabilise magnet Temp Hz tuning New headamp fitted due to noisy signal	T1
22/9/25	Hz tuning Hz Ref gas + Run precision - Passed System switched back to combustion temp + new tubes Swapped CNN GC column, Pressure test - passed	T1

5 - FAULT REPORTING

Client:	Athens University C/O: N. Asteriadis S.A.		
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[illegible]



Client:	Athens University C/O: N. Asteriadis S.A.		
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[illegible]



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Tel: +44 (0)1270 580008
Company Registration No. 4290072 Vat No. 771 1100 74

Test acceptance - 6

6 - TEST / ACCEPTANCE SPECIFICATION

Customer:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
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HS20-22

Reference Gas Precision (n=5) x5 Ref gas pulses of 5 seconds to be used.

¹³ C	(CO ₂)	0.06	0.05	✓
¹⁵ N		0.06	0.04	✓
¹⁸ O	(CO ₂)	0.06		
³⁴ S	(SO ₂)	0.1		
² H		0.4	0.26	✓

Reference Gas Linearity ref gas pulses ranging from 1-second trough to 10 seconds

¹³ C	≤0.02‰/nA	STD Deviation <0.30	0.09	✓
¹⁵ N	≤0.02‰/nA	STD Deviation <0.30	0.26	✓

IsoEarth & PyroEarth

Combustion (n=5) (For NCS use 0.3mg of Cystine) (Pyrolysis use silver caps)
0.4mg of Cystine for ¹⁸O and 4 mg of Cystine for H₂

¹³ C	100 µg C	0.1		10 µg C	0.8	
¹⁵ N	100 µg N	0.15		10 µg N	1.5	
³⁴ S	25 µg S	0.3	0.03	✓	10 µg S	1.0
Dual	400 µg C	0.1	0.08	✓	100 µg N	0.15
¹⁸ O	100 µg or 1 µl water	0.3	0.07	✓		
² H	200 µg H or 1 µl water	1.0	0.90	✓		



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Tel: +44 (0)1270 580008
Company Registration No. 4290072 Vat No. 771 1100 74

Test acceptance - 6

6 - TEST / ACCEPTANCE SPECIFICATION

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EArth			
Solid specs to be completed using 2mg methionine calibration against 1,2,3mg (n=3) cystine. Combustion (n=5)			
		Accuracy (avg)	Precision (std dev)
¹³ C		+/- 0.4%	0.2
¹⁵ N		+/- 0.4%	0.2
² H		+/- 0.4%	0.2
³⁴ S		+/- 0.4%	0.2
¹⁸ O	Pyrolysis	+/- 0.4%	0.2
Liquid injections n=5 using 5µl methanol calibrated against 2,4,6µl injections of ethanol			
		Accuracy (avg)	Precision (std dev)
¹⁸ O	Pyrolysis	+/- 0.4%	0.2

Integra2			
Specs to be completed using AS beet mix 400C/100N for precision & 250C/100N for linearity			
¹³ C	100 µg C	0.2	
¹⁵ N	100 µg N	0.3	
Dual	100 µg N & 400 µg C	0.4 & 0.15	
³⁴ S	30 µg S	0.5	
¹⁸ O	100 µg O	0.5	
Dual	100 µg N & 250 µg C	0.5	
HT-EA (Pyrolysis use silver caps) 0.4mg of Cystine for ¹⁸ O and 4 mg of Cystine for H2			
Pyrolysis (n=5)			
¹⁸ O	100 µg O or 1 µl water	0.3	
² H	200 µg H or 1 µl water	1.0	

6 - TEST / ACCEPTANCE SPECIFICATION

Customer:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

Aqua, μ Carbs & GasBox					
Equilibrations (n=5)					
^{18}O	0.2 ml water	0.1			
^2H	0.2 ml water	2.0			
Carbonates (n=5)					
^{13}C	100 μg CaCO_3	0.08			
^{18}O	100 μg CaCO_3	0.1			
Gas Analysis (n=5)					
^{13}C	5% CO_2	0.1		Air CO_2	0.1
^{18}O	5% CO_2	0.1		Air CO_2	0.2
^2H	0.5 ml H_2	1.5			
^{15}N	0.5 ml N_2	0.1		100 ppm N_2O	0.5
^{13}C	Breath (12 ml)	0.1			
DIC (n=5)					
^{13}C	15ppm (0.5ml)	0.15			

LC-I			
(n=5)			
^{13}C		0.2	

GC Orchid					
Combustion (n=3 for each analyte)					
^{13}C	3 Alkanes	100 ng C	0.2	10 ng C	0.5
^{15}N	2 Amines	100 ng N	0.5	14 ng N	1.5

6 - TEST / ACCEPTANCE SPECIFICATION

Customer:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

Pyrolysis (n=3 for each analyte)						
² H	3 Alkanes	250 ng H	3.0		25 ng H	10.0
¹⁸ O	3 FAMES	100 ng O	0.5		20 ng O	2.0
Water pyrolysis (n=5)						
² H	0.1 µl water	3.0				
¹⁸ O	0.1 µl water	0.4				

CryoRange						
(n=5)						
¹³ C	Air CO ₂ (12ml)	0.1		Air CH ₄ (125ml)	0.2	
¹⁵ N	Air N ₂ (1ml)	0.1		Air N ₂ O (125ml)	0.4	
¹⁸ O	Air CO ₂ (12ml)	0.15		Air N ₂ O (125ml)	0.7	
¹⁸ O	Air O ₂ (1ml)	0.1				
² H	Air CH ₄	3.0				
¹³ C	TOC (5ppm)	0.4				
¹³ C	Laser					

Geo2			
Internal precision (no change overs)			
² H	200 Bar µl	0.15	
¹³ C	100 Bar µl	0.01	
¹⁵ N	100 Bar µl	0.01	
¹⁸ O	100 Bar µl	0.015	
³⁴ S	100 Bar µl	0.015	
Single cold finger volumes (10 change overs)			

6 - TEST / ACCEPTANCE SPECIFICATION

Customer:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

¹³ C	20 Bar µl	0.01	
¹⁸ O	20 Bar µl	0.015	
¹³ C	3 Bar µl	0.02	
¹⁸ O	3 Bar µl	0.03	
CAPS (n=5)			
¹³ C	50 µg CaCO ₃	0.03	
¹⁸ O	50 µg CaCO ₃	0.06	
WES (n=5)			
² H		1.0	
¹⁸ O		0.05	
Manifold (10 tubes)			
² H		0.5	
¹³ C		0.02	
¹⁵ N		0.02	
¹⁸ O		0.03	
³⁴ S		0.03	

Special tests



sercon
innovators in isotopes

Sercon Ltd, Europa House, Coppicemere Drive,
Crewe, Cheshire CW1 6GZ, UK
Tel: +44 (0)1270 580008
Company Registration No. 4290072 Vat No. 771 1100 74

Test acceptance - **6**

6 - TEST / ACCEPTANCE SPECIFICATION

Customer:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

Sales Signature: 	Date: 20/09/25
Test Signature: 	Date: 26/09/25

7: ASSEMBLY AND TEST RECORD

Client:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

PRODUCT:

2022

SERIAL NUMBER:

20402/4-2025/1367

 ASSEMBLED:
 (Name)



Date:

31/7/25

 PRE-TEST
 INSPECTION:
 (Production name)



Date:

01/08/25 *AD

 PRE-TEST
 INSPECTION:
 (Test name)



Date:

01/08/25 *AD

01/07/25

 SYSTEM TEST:
 (Name)



Date:

26/09/2025

 PRE-DESPATCH
 INSPECTION:
 (Name)



Date:

30/09/2025

P.A.T. Test results

 In compliance with Low Voltage directive 73/23/EEC
 To Low Voltage standard EN61010 – 1:1993

Earth Continuity

0.082
 Ω

Insulation

>300
 $M\Omega$

Earth Leakage Current

0.55

mA. @

0.05

kVA.

Tested by:



Date:

01/08/25

Works Order Picking List

Date: 16/06/2025
Time: 11:12:16

Works Order: WO02474
Stock Code: 20402/4
Description: HS2022 + Hd Collector + E-Mag + Trs
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK25/2025
Due Date: 07/08/2025

ON ORDER

SI2631
x2

Stock Code / Description Qty to Pick Unit Location Qty Picked / By
Manufacturing Instructions: STOCK

9099/1 Instrument Packing	1.00	Each		1
SI1754 Emag Drive Panel with Cable	1.00	Each		
70101/11 20-22 Head Amp Inverter PCB Cable	1.00	Each	B-H1	
70101/12 Source Cable	1.00	Each	B-H1	1
70101/13 Standard Head Amp Cable	1.00	Each	B-H1	
SI2579 20-22 Cabinet Wave Assy Rev 004	1.00	Each	C	1
SI2614 HS2022 Artwork	1.00	Each	C	1
SI1052 3 Way MOLEX Clip	1.00	Each	Carousel 1 M-1	1
SI1255 M5 Plug	2.00	Each	Carousel 1 M-1	2
SI1548 4A Fuse, Anti Surge 5x20mm	1.00	Each	Carousel 1 M-1	1
SI2285 Mag Terminal Cover Black	4.00	Each	Carousel 1 M-3	4
SI0687 1/8" PTFE Ferrules - Blank	1.00	Each	Carousel 1 P-1	1
SI0701 1/4" PTFE Ferrules Pk/1	2.00	Each	Carousel 1 P-1	2
SI0710 VALCO Tee - 1/16	2.00	Each	Carousel 1 P-1	2
SI1900 Dowty Seal - M5	20.00	Each	Carousel 1 P-1	20
SI1244 Seal Kit	1.00	Each	Carousel 1 P-2	1

Works Order Picking List

Date: 16/11/25
Time: 11:12:16

Works Order: WO02474
Stock Code: 20402/4
Description: HS2022 + Hd Collector + E-Mag + Tr
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK25/2025
Due Date: 07/08/2025

Stock Code / Description	Qty to Pick	Unit	Location	Qty Picked / By
SI1595 37 Way D Plate	3.00	Each	Carousel 1 P-2	3
SI0703 1/8-1/16" PTFE Reducing Ferrule Pk/1	7.00	Each	Carousel 1 P-3	7
SI0196 Reducing Union 1/4 x 1/16 SS	2.00	Each	Carousel 1 Q-1	2
SI0197 Reducing Union 3/16 OD x 1/16 OD SS	2.00	Each	Carousel 1 Q-1	2
SI0762 PSR16-16 PTFE Sealing Rings Pk/20	0.60	Each	Carousel 1 Q-1	0.6
SI0022 Capillary Crimp Parts A & B	7.00	Each	Carousel 1 Q-2	7
SI0198 Tee Union 1/16 SS	1.00	Each	Carousel 1 Q-2	1
SI0204 Bulkhead Union 1/16 SS	2.00	Each	Carousel 1 Q-2	2
SI0205 Bulkhead Union 1/8 SS	5.00	Each	Carousel 1 Q-2	5
SI0049 Big Magnet Adjusting Foot	1.00	Each	Carousel 1 Q-3	1
SI0050 Magnet Foot	2.00	Each	Carousel 1 Q-3	2
SI1812 E-Mag Screw	3.00	Each	Carousel 1 Q-3	3
SI1899 1/16 x M5 Fitting	18.00	Each	Carousel 1 Q-3	18
SI3133 3/16 OD X M5-0.8 MALE CONNECTOR SS	2.00	Each	Carousel 1 Q-3	2
SI1580 Source Mounting Pillar	2.00	Each	D-U2	
SI0685 20-20 ElectroMagnet Assembly	1.00	Each	D-V4	
SI0086 Ref Gas Bracket Mounting Bracket slot	5.00	Each	D-W3	

Works Order Picking List

Date: 16/06/2025

Time: 11:12:16

Works Order: WO02474
Stock Code: 20402/4
Description: HS2022 + Hd Collector + E-Mag + Tr
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK25/2025
Due Date: 07/08/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI0524 3 Way Socket Housing, 2.54mm Pitch	1.00	Each	D-W3	
SI0777 Nylon Pillars Male-Female M4x25mm	4.00	Each	D-W3	
SI1004 Right-Angled Bracket 25mm	2.00	Each	D-W3	
SI0794 Female NiPt D Screwlock assembly, 13mm	2.00	Each	D-X	
SI1196 Female NiPt D screwlock assembly, 8mm	6.00	Each	D-X	
SI0385 25 Way Machine Cont Straight D Skt, 750Vac	1.00	Each	D-X4	
SI0387 9 Way Machine Cont Straight D Plug, 750Vac	1.00	Each	D-X4	
SI0388 9 Way Machine Cont Straight D Skt, 750Vac	1.00	Each	D-X4	
SI0570 15 way Solder Contact ZD skt 5A 400 Vac	3.00	Each	D-X4	
SI0631 9 Way D Hood	2.00	Each	D-X4	
SI0632 15 Way D Hood	2.00	Each	D-X4	
SI0900 25 Way D Hood	1.00	Each	D-X4	
SI1482 34 Way IDC Bump Polarised Socket, 1A	1.00	Each	D-X4	
SI1794 37 Way IDC D Socket - Metal	1.00	Each	D-X4	
SI1795 37 Way IDC D Plug - Metal	2.00	Each	D-X4	
SI3271 Straight IEC C13 Socket to Straight IEC C14	1.00	Each	Stores A-1	1
SI0847 IEC Cord - Socket	2.00	Each	Stores A-2	2

7: ASSEMBLY AND TEST RECORD

Client:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

PRODUCT:

PYRO EARCH 2025

SERIAL NUMBER:

10202/25/2025-1367

 ASSEMBLED:
 (Name)

M. Hays

Date:

13/8/25

 PRE-TEST
 INSPECTION:
 (Production name)

P. Hays

Date:

13/8/25

 PRE-TEST
 INSPECTION:
 (Test name)

Dds

Date:

13/8/25

 SYSTEM TEST:
 (Name)

T. Hays

Date:

26/09/25

 PRE-DESPATCH
 INSPECTION:
 (Name)

Shiff

Date:

30/09/25

P.A.T. Test results

 In compliance with Low Voltage directive 73/23/EEC
 To Low Voltage standard EN61010 – 1:1993

Earth Continuity

0.025 Ω

Insulation

99.1 $M\Omega$

Earth Leakage Current

0.75 mA. @ 0.34 kVA.

Tested by:

P. Hays

Date:

13/8/25

Works Order Picking List

Date: 14/07/2025

Time: 08:54:02

Works Order: WO02504
 Stock Code: 10202/25
 Description: PyroEarth 2025
 Qty Required: 1.00 Each
 Qty Outstanding: 1.00
 Plan Period: WK29/2025
 Due Date: 21/08/2025

Stock Code / Description Qty to Pick Unit Location Qty Picked / By

Manufacturing Instructions: IN1367 - Greece

10202/18 PyroEarth & HT-EA Ceramic Tube	1.00	Each		
70801-1 Pyrolysis Start Up Kit high temp for Solids	1.00	Each		
9099/1 Instrument Packing	1.00	Each		
70501-5 CNS Start Up Kit (1000 Samples)	1.00	Each	@	
SI2416 PyroEarth Cabinet Full Assy Rev003	1.00	Each	C	1
SI3032 PyroEarth Artwork (left Hand Door)	1.00	Each	C	1
SI3237 Inrush Current Limiters 22m 4ohms 14A (EA)	1.00	Each	Carousel 1 - N1	1
SI0201 1/16 O/D x 10-32 UNFM.SS	4.00	Each	Carousel 1 M-1	4
SI0607 Anti Surge T HBC Min Fuse 6.3A 5x20mm	2.00	Each	Carousel 1 M-1	2
SI1052 3 Way MOLEX Clip	2.00	Each	Carousel 1 M-1	2
SI1255 M5 Plug	1.00	Each	Carousel 1 M-1	1
SI1548 4A Fuse, Anti Surge 5x20mm	1.00	Each	Carousel 1 M-1	1
SI1784 4mm Y Fitting	1.00	Each	Carousel 1 M-1	1
SI2666 O Ring ID 4.47 OD 7.93 x 1.78	4.00	Each	Carousel 1 M-1	4
SI0701 1/4" PTFE Ferrules Pk/1	6.00	Each	Carousel 1 P-1	6
SI0708 SSUE 16/16 Stainless Steel Union Pk/1	1.00	Each	Carousel 1 P-1	1

Works Order Picking List

Date: 14/07/2025
Time: 08:54:02

Works Order: WO02504
Stock Code: 10202/25
Description: PyroEArth 2025
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK29/2025
Due Date: 21/08/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI1900 Dowty Seal - M5	18.00	Each	Carousel 1 P-1	18
SI2244 Male Elbow 4mm to M5	8.00	Each	Carousel 1 P-1	8
SI0703 1/8-1/16" PTFE Reducing Ferrule Pk/1	13.00	Each	Carousel 1 P-3	13
SI0196 Reducing Union 1/4 x 1/16 SS	6.00	Each	Carousel 1 Q-1	6
SI0212 Reducing Union 1/8 OD x 1/16 OD SS	5.00	Each	Carousel 1 Q-1	(4) (4)
SI0762 PSR16-16 PTFE Sealing Rings Pk/20	0.10	Each	Carousel 1 Q-1	0.10
SI1167 Reducing Union 1/4-1/8	2.00	Each	Carousel 1 Q-1	2
SI1168 1/4 Nut Knurled (brass)	2.00	Each	Carousel 1 Q-1	2
SI1349 Pneumatic Bulkhead Check Valve - 4mm	2.00	Each	Carousel 1 Q-1	2
SI1603 Bulkhead Fitting 4mm - 1/8 (RS 7714923)	1.00	Each	Carousel 1 Q-1	1
SI1604 Male Connector 1/8 UNION 1/8	1.00	Each	Carousel 1 Q-1	1
SI2471 Bulkhead Retainer 1/8"	6.00	Each	Carousel 1 Q-1	6
SI3265 16A Panel Mount Fuse Holder for 5 x 20mm Fuse (EA)	1.00	Each	Carousel 1 Q2	1
SI0198 Tee Union 1/16 SS	7.00	Each	Carousel 1 Q-2	7
SI0204 Bulkhead Union 1/16 SS	3.00	Each	Carousel 1 Q-2	3
SI0205 Bulkhead Union 1/8 SS	12.00	Each	Carousel 1 Q-2	1.2
SI1899 1/16 x M5 Fitting	18.00	Each	Carousel 1 Q-3	18

Works Order Picking List

Date: 14/07/2025

Time: 08:54:02

Works Order: WO02504
 Stock Code: 10202/25
 Description: PyroEArth 2025
 Qty Required: 1.00 Each
 Qty Outstanding: 1.00
 Plan Period: WK29/2025
 Due Date: 21/08/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI3262 Pluggable Function Module, Socket (EA)	1.00	Each	Carousel 1-N1	
SI3263 PCB Mount Power Relay, 24V (EA)	1.00	Each	Carousel 1-N1	
SI0526 5 Way Socket Housing, 2.54mm Pitch	1.00	Each	D-V	
SI0524 3 Way Socket Housing, 2.54mm Pitch	2.00	Each	D-W3	
SI0777 Nylon Pillars Male-Female M4x25mm	4.00	Each	D-W3	
SI0883 M3x30mm Nylon Spacers Male-Female each	2.00	Each	D-W3	
SI1004 Right-Angled Bracket 25mm	2.00	Each	D-W3	
SI1918 8 Way socket housing, 2.54mm pitch	2.00	Each	D-W3	
SI0386 25 Way Machine Cont Straight D Plug, 750Vac	1.00	Each	D-X4	
SI0388 9 Way Machine Cont Straight D Skt, 750Vac	3.00	Each	D-X4	
SI0567 15 Way Solder Contact ZD Plug 5A 400 Vac	3.00	Each	D-X4	
SI0570 15 way Solder Contact ZD skt 5A 400 Vac	1.00	Each	D-X4	
SI0631 9 Way D Hood	2.00	Each	D-X4	
SI1482 34 Way IDC Bump Polarised Socket, 1A	2.00	Each	D-X4	
SI3235 Schurter 16A T Ceramic Cartridge Fuse, 5 x 20mm	1.00	Each	M1 <i>Carousel</i>	1
SC0030 Thermocouple K-Type 1.5mm Pk/1 (Send with 2 pin/2 Bullet Crimps)	2.00	Each	P-A2	
SC0073 Scrubber Tube 6mmODx4mmIDx250mmLong (TG-II) Pk/1	1.00	Each	P-B3	

Works Order Picking List

Date: 14/07/2025
Time: 08:54:02

Works Order: WO02504
Stock Code: 10202/25
Description: PyroEarth 2025
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK29/2025
Due Date: 21/08/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SC0084 Scrubber Tube Water Threaded, Borosilicate Glass Pk/1	2.00	Each	P-B4	
SC0085 Cap Kit for Threaded Joints Caps & PTFE Backed Sil Seals pk2	3.00	Each	P-B4	
SI2469 E1042S Chamfered O-ring (Modified)	1.00	Each	P-B4	
SC0082 GC Column for ANCA-SL/GSL Pk/1 (U shaped)	1.00	Each	PD-3	1
SC2010 Separation Column Oxygen 1m ANCA-SL/GSL	1.00	Each	PD-3	1
SC2502 Sulphur Column for PyroEarth	1.00	Each	PD-3	1
SI0008 GSL Top Hat Adaptor	2.00	Each	Stores A	2
SI0076 Tube Coupling	5.00	Each	Stores A	5
SI1783 IP44 2P+E straight plug, 16A 230V	1.00	Each	Stores A-1	1
SI0847 IEC Cord - Socket	2.00	Each	Stores A-2	2
SI0374 Terminal Block Section	14.00	Each	Stores A-3	14
SI0375 Terminal Block End Plate	3.00	Each	Stores A-3	3
SI2631 End Bracket	4.00	Each	Stores A-3	4
SI2633 BROWN FUSED TERMINAL BLOCK	1.00	Each	Stores A-3	1
SI0620 IEC Insulated Cover	1.00	Each	Stores A-4	1
SI3036 C19 Cable Mount Connector	1.00	Each	Stores A-4	1
SI0378 Blk Re-wireable Straight Plug, 10A 250Vac	2.00	Each	Stores A-5	2

Works Order Picking List

Date: 14/07/2025

Time: 08:54:02

Works Order: WO02504
 Stock Code: 10202/25
 Description: PyroEarth 2025
 Qty Required: 1.00 Each
 Qty Outstanding: 1.00
 Plan Period: WK29/2025
 Due Date: 21/08/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI1344 IEC Connector Clamp Kit	1.00	Each	Stores A-5	1
SI1797 Fuse Holder Insulation Cover	5.00	Each	Stores A-5	5
SI3035 C20 Panel Mount Male Connector	1.00	Each	Stores A-5	1
SI0630 80mm Fan Guard	11.00	Each	Stores A-6	11
SI0793 80mm DC Fan	6.00	Each	Stores A-6	6
SI1418 80mm Fan Screen Filter	6.00	Each	Stores A-6	6
SI0329 Flatpack Fan (for GSL)	1.00	Each	Stores A-7	1
SI0373 34 Way IDC Terminal Block	1.00	Each	Stores A-8	1
SI0508 24V PSU	1.00	Each	Stores A-8	1
SI1236 Levelling Foot - M10x38mm	6.00	Each	Stores A-8	6
SI0346 SPDT plug-in power Relay - 10A 24V DC coil	2.00	Each	Stores B-2	2
SI0347 SPCO Relay Base	2.00	Each	Stores B-2	2
SI3230 EArth On-Off Rocker Switch 20A	1.00	Each	Stores B3	1
SI0345 SSR Safety Cover	5.00	Each	Stores B-3	5
SI0559 Solid State Relay 10A rms 24-280 Vac	4.00	Each	Stores B-3	4
SI2608 30A Rail Mount Fuse Holder	1.00	Each	Stores B-3	1
SI3034 SSR 25AMP Pyroearth.	1.00	Each	Stores B-3	1

Works Order Picking List

Date: 14/07/2025
Time: 08:54:02

Works Order: WO02504
Stock Code: 10202/25
Description: PyroEarth 2025
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK29/2025
Due Date: 21/08/2025

Stock Code / Description	Qty to Pick	Unit	Location	Qty Picked / By
SI2411 KVT 20 Split Cable Gland (inc locknut)	1.00	Each	Stores B-6	
SI2412 KT 5 insert	1.00	Each	Stores B-6	1
SI2790 Halogen Heating Element Bulb with 3X Clips & Ceramic Connect	1.00	Each	Stores C-1	1
SI0767 6 Way VALCO	1.00	Each	Stores D-1	1
SI2435 Electronic Pressure Regulator	2.00	Each	Stores D-1	2
SI0366 Flow Meter PMFc3100V	2.00	Each	Stores D-2	2
SI2296 Precision Flow Control	1.00	Each	Stores D-2	1
SI1241 3 Way Solenoid Valve	4.00	Each	Stores D-3	4
SI1242 2 Way Solenoid Valve	5.00	Each	Stores D-3	5
SI1245 SOL Cable	2.00	Each	Stores D-3	2
SI1251 Autosampler Solenoid Valve	2.00	Each	Stores D-3	2
SI0807 Thermostat	1.00	Each	Stores D-5	1
SI1710 - 60000269 Temperature Controller - CAL3300	1.00	Each	Stores D-7	1
SI2639 Small Expandable Braided Fibreglass Sleeve	1.00	Each	Stores D-7	1
SI0275 Ceramic Spacer Set	4.00	Each	Stores D-8	4
SI2311 MicroFlow Mass Flow Controller Helium	1.00	Each	Stores E-2	1
SI2319 MicroFlow Mass Flow Controller Oxygen	1.00	Each	Stores E-2	1

Works Order Picking List

Date: 14/07/2025

Time: 08:54:02

Works Order: WO02504
 Stock Code: 10202/25
 Description: PyroEArth 2025
 Qty Required: 1.00 Each
 Qty Outstanding: 1.00
 Plan Period: WK29/2025
 Due Date: 21/08/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI2346 Thermal Conductivity Detector	1.00	Each	Stores E-2	1
SI2581 Cartridge Heater - 6.5mm -40mm L - 230V - 125W	1.00	Each	Stores E-2	1
SI2589 TCD GC Assy	1.00	Each	Stores E-3	1
SI2600 TCD Heated Block	1.00	Each	Stores E-3	1
SI2632 End Plate	1.00	Each	Stores E-6	1
SI1689 Threaded Adaptor for GSL/INTEGRA. (NO COUPLING NUT)	3.00	Each	Stores E-8	3
SI1690 Coupling Nut for SI1689 & SI0043	3.00	Each	Stores E-8	3
SI2910 2 Way, Ceramic Non-Fused Terminal Block PK OF 5	1.00	Each	Stores H-2	1
SI3229 <i>- on order</i> MV Multi-Voltage 240V to 110V Transformer 3.00kVA	1.00	Each	Stores H3	1
10202-S Sercon 50 Position Autosampler Assy	1.00	Each	Stores I-1	
SI2085 EA-SM Furnace	1.00	Each	Stores I-3	
SI2409 EA-ST Furnace	1.00	Each	Stores I-3	
SI2715 50mm Dynalox Collar Pair	1.00	Each	Stores I-3	1-4 1
SI2999 HT Furnace fan and Bracket set	1.00	Each	Stores I-3	
SI3033 EA-HT Furnace	1.00	Each	Stores I-3	
SI3102 HT EA ELEMENT COLLAR (PAIR)	1.00	Each	Stores I-3	1-4 1
SI2288 Internal USB 4.5m	1.00	Each	Stores J-3	1

Works Order Picking List

Date: 14/07/2025
Time: 08:54:02

Works Order: WO02504
Stock Code: 10202/25
Description: PyroEArth 2025
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK29/2025
Due Date: 21/08/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI2582	1.00	Each	Stores J-4	
✓ EArth System PCB - on order				
70501-3	1.00	Each	Z@	
✓ Sample Preparation Kit				

All items picked and packed as marked:

Date: ____/____/____ Signed: _____

Stock Allocated, Issued, Completed:

Date: ____/____/____ Signed: _____

8 - Serial Numbers Record Document

Client:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

Units	S/N
MS/ABCA	20402/4-2025/1367
Integra 2	
Prep Unit 1	10202/25-2025/1367
Prep Unit 2/Misc	
Electronics Upgrade	
CETAC	
Gas Box	
Autosampler	42715
BCR	
Dual Heater Block	

Pump Kit and Optics	S/N
Turbo pump S	250244815
Turbo pump A	250244817
Rotary Pump	250236011
Voltage	110 / 240
Gauge S	250097501
Gauge A	250097508
Source	20101HS-260
Collector 1	20301-172
Collector 2	20501-080
Magnet	

Parts	S/N
Fan PSU	
24V PSU	

PCBs	S/N
Electronics Box	20250008
Prep PCB	20250008
VFC PCB	
Watchdog PCB	
Head Amp PCB 1	25015
Head Amp PCB 2	2501
Electromagnet RP	136

Furnaces	S/N
Combustion	
Reduction	
HT-EA	
GC Oven	
Furnace 1	
Furnace 2	

PC	S/N
PC	
Monitor	
Printer	

Key

Pumps:	E: Edwards P: Pfeiffer
Furnaces:	V/S: Vecstar E: Elite
Magnet:	E: Electromagnet S: Standard
Turbos & Gauges:	S: Source A: Analyser
Collectors:	Std: Standard S: Sulphur HD: Hydrogen Deuterium

Additional System Info:

Packing List

Customer Reference: 25-0484

Shipper / Exporter:

Sercon Limited
Europa House
Coppicemere Drive
Crewe
CW1 6GZ
UK

Tel: +44 (0)1270 580008
Reference: IN1367

Consignee:

N. Asteriadis S.A.
31 Dervenion street & Poseidonos str
144 51 Metamorfossi Athens
Greece

Contact Name: Thanasis Asteriadis
Contact Tel Number: +30 2108235383

BOX: 1

Quantity	Product Code	Product Description	Serial Number: <i>If available</i>
☒ 1	20402/4	HS2022	20402/4-2025/1367
☒ 1		Aux cable box - 16-amp mains cable for PyroEarth - Type-E mains cable for HS2022 - Threaded adaptor plate for furnace - External pipes and cables	

Packed by: 

Date: 30/09/2025

Claims for damage or shortages must be made within 3 days

Packing List

Customer Reference: 25-0484

Shipper / Exporter:

Sercon Limited
Europa House
Coppicemere Drive
Crewe
CW1 6GZ
UK

Tel: +44 (0)1270 580008
Reference: IN1367

Consignee:

N. Asteriadis S.A.
31 Dervenion street & Poseidonos str
144 51 Metamorfossi Athens
Greece

Contact Name: Thanasis Asteriadis
Contact Tel Number: +30 2108235383

BOX: 2

Quantity	Product Code	Product Description	Serial Number: if available
☒ 1	10202/25	PyroEarth	10202/25-2025/1367
☒ 1	SI2918	PC	

Packed by:



Date:

30/09/2025

Claims for damage or shortages must be made within 3 days

Packing List

Customer Reference: 25-0484

Shipper / Exporter:

Sercon Limited
 Europa House
 Coppicemere Drive
 Crewe
 CW1 6GZ
 UK

Tel: +44 (0)1270 580008
 Reference: IN1367

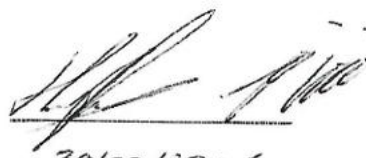
Consignee:

N. Asteriadis S.A.
 31 Dervenion street & Poseidonos str
 144 51 Metamorfossi Athens
 Greece

Contact Name: Thanasis Asteriadis
 Contact Tel Number: +30 2108235383

BOX: 3

Quantity	Product Code	Product Description	Serial Number: if available
☒ 1	10202-5	Autosampler	42715
☒ 1	SI0685	Electromagnet	136
☒ 1	SI0103	Rotary pump	250236011
☒ 1	SI2391	Monitor	
☒ 1	70201-1	Analyser spares kit	
☒ 1	70501-3	Sample preparation kit	
☒ 1	70501-5	Simultaneous CNS consumables kit	
☒ 1	70801-1	Pyrolysis starts up kit	
☒ 1	70501-8	Simultaneous CNS consumables kit approx. 5000 samples	

Packed by: 

Date: 30/09/2025

Claims for damage or shortages must be made within 3 days



COLLECTION NOTE

Job Number: **IN1367**
Customer: N. Asteriadis S.A.
Contact: **Thanasis Asteriadis**

Collection on

Date:

09/10/25

No.

of boxes:

3

By:

Company:

ATLAS Couriers.

Vehicle

Reg No.

WR71 JCO

Signature:

[Signature]

Print:

DEAN REGLER



S062_v3

Sercon Ltd
Europa House, Coppicemere Drive,
Crewe, Cheshire
CW1 6GZ U.K.
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Phone: +44 (0) 1270 580008

sales@sercongroup.com

www.sercongroup.com

VAT No.: 771 1100 74

19/01/2017

11 – Installation Report

Client:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

Contact:	Konstantinos Aliferis, Ioannis Kalampokis		
Date of Visit:	11/05/2026	No. of Days:	5
Engineer:	Thomas Iordanidis		

Details of visit:

Day 1 (11/05/2026):

- Arrived on site
- Instrument was already unpacked and placed on the bench, initial inspection of both the Pyro and the HS2022 to identify possible damage during transport – all okay
- All gas connections were pre-made by ASTERIADIS engineers, MS connections fitted – all okay
- Turned on PC, COMs established everything responds fine
- Unpacked all consumables and instrument parts
- Continuity checked filament – all ok
- Rotary pump fitted okay with good oil level – all ok
- Pumps turned on and reached maximum speed ~93k rapidly and vacuum started settling nicely
- Electromagnet placed over the flight tube and on the present markings, cable connected and set to HD mode due to customer requesting pyrolysis set up as well – pyrolysis specs to be run first
- Vacuum reached 1.5 E-7 relatively quickly and source and HT were switched on as this was an already conditioned filament with good emissions – all OK
- Checked already set flows for pyrolysis – all OK
- Pyrolysis tube, Water & CO2 trap were made, fitted and leak checked – all okay
- Combustion furnace not heating up, locked out, pyro restarted – all okay
- Ramped the temperature of the combustion furnace to reach 1350°C – temperature reached and maintained successfully left at full flow overnight for the CO to burn off
- Checked peak shapes quickly for CO2 & N2 whilst on a good position for HD analysis – low sensitivity
- Leak on the existing CO2 gas line detected and fixed
- Good sense for C&N after magnet adjustments and left magnet on HD tuning to cool down overnight
- GC box baked overnight at 140°C
- Vacuum at the end of the day ~5.7E-8

Day 2 (12/05/2026):

- Vacuum on arrival ~1.4 E-8 – all okay
- Combustion and GC maintained temperature overnight – all okay
- GC set to 60°C for running pyrolysis specifications
- OK HD Peak Shape with good stability but reference gas precision not passing
- Adjusted tuning as required obtaining a much improved peak shape with good stability

11 – Installation Report

Client:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

- Specifications for HD passed for both HD Reference Gas Precision (0.314‰) and Pyrolysis run Precision with 4mg of Cystine samples (0.616‰)
- Provided Hydrogen related training to customer including Pyrolysis set up, sample pathway, sample preparation, methods/events and reprocessing using Marquardt
- Emag set to 13500 to heat overnight for O2 analysis

Day 3 (13/05/2026):

- Vacuum on arrival ~7.6E-9
- CO background ~2.7 E-10 – all okay
- Good peak shape and stability obtained for CO using the 3/1 ratio from CO2 reference gas
- Ran a precision O2 analysis (0.4mg Cystine) – met specifications of 0.067‰ S.D., **Pyrolysis passed**
- Provided training to customer for O2 analysis & reference gas tuning
- Combustion furnace cooled down to switch set up to combustion
- In the meanwhile started running reference gas obtaining good peak shapes and stabilities for both CO2 & N2. Ran reference gas precision and linearity for CO2 & N2 – both passed reference gas specifications with a precision of 0.049 (CO2), 0.01 (N2) and linearity of 0.093 (CO2), 0.19 (N2)
- Made combustion, reduction and secondary reduction furnace tubes demonstrating the process to the customer
- All fitted and leak checked, pressure test passed with cool furnaces over 300secs
- Started ramping the temperatures and at around 860°C, a pressure release was heard and when removing the tube it was realised that it had cracked and copper looked solidified
- Blew out combustion furnace link which did not seem to be blocked – all okay
- Cooled down furnace replaced tube but at around 900°C same thing happened again
- Put a link on to eliminate the autosampler but the tube is building up pressure and getting out of position
- Checked flows- crimped down the trickle flow to ~12ml/min as it was set to ~37ml/min and that itself can sometimes cause the build up of back pressure
- Flows look better after the adjustment to be tested in the morning

Day 4 (14/05/2026):

- With adjusted trickle flow when PSI set to 0 a flow of 12ml/min is going into the autosampler and with full 25PSI and 60ml/min full flow at the end of the system is ~70ml/min – all okay
- Empty tube fitted into combustion furnace for testing to not waste customer materials and temperatures ramped up to full temps – back pressure issue not present
- Combustion furnace cooled down and new combustion tube made, fitted and leak checked
- Furnaces ramped up to Combustion: 800°C, Reduction: 860°C, Secondary reduction 600°C and GC 70°C, Lower temperature for combustion furnace selected due to the melting of copper at higher temperatures
- No back pressure issue observed at a temperature of 800°C and flows look okay
- High blanks observed, tightened autosampler screws – no change

11 – Installation Report

Client:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

- Stripped autosampler – no obvious issues – wiped – put back together re-fitted
- N2 Blanks ~2.0E-10 prior to batch submission
- NCS Batch left running overnight and monitored through GoToMyPC
- CO2 & S precision passed but N2 did not suggesting this is due to a leak in the system / autosampler as blanks at the start of the batch increased – to be investigated in the morning
- Ran N2 Reference Gas specifications of Precision and Linearity with both passing well

Day 5 (15/05/2026):

- Leak tested autosampler – still leaking on the top screws
- Screws tightened and another batch submitted – still N2 affected by high blanks
- Run blank without autosampler firing which reduced the blank suggesting the autosampler is still the main source of the leak – stripped, cleaned, PTFE slider swapped and it was found that one of the concave discs was in the wrong orientation - fixed
- Pressure test passes with a drop of 1-2PSI over 300 secs, Blanks ~3 E-10 – all okay
- Submitted another batch and N2 precision passed
- Visit concluded with passing all specifications – revisit required see the follow up section for more information

Final Specifications:

Pyrolysis (O2&HD)		
Species	Test	Result (% S.D.)
HD	Ref Gas Precision	0.314
HD	Sample Precision	0.616
O2	Sample Precision	0.067
Combustion (CNS)		
CO2	Ref Gas Precision	0.049
CO2	Ref Gas Linearity	0.093
CO2	Sample Precision	0.021
N2	Ref Gas Precision	0.011
N2	Ref Gas Linearity	0.187
N2	Sample Precision	0.123
S	Sample Precision	0.135

11 – Installation Report

Client:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

Recommendations:

N/A

Faults and Shortages:

- System Controller reads high emissions only for standby and CO2 tuning files – it was like this during testing and does not affect system performance with good stabilities and results
- Trickle flow adjusted from ~40ml/min to ~12ml/min as it was creating back pressure issues
- Combustion furnace set to 800°C as any higher the copper was melting and blocking the tube – calibration file to be adjusted during next visit
- Autosampler leaking resulting to high blanks and poor N2 precision – it was found that one of the concave discs on the autosampler screws was in the wrong orientation resulting to not a proper seal – PTFE slider also swapped

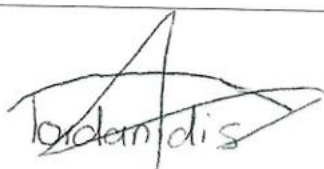
Follow up:

A revisit will be required to calibrate combustion furnace, optimise system performance and provide CNS customer training – Thomas Iordanidis to attend w/c 25/05/2026 (2-3 days visit)

Engineer: Thomas Iordanidis

Date: 15/05/2026

Signed:



12 – Installation Acceptance and Warranty Certificate

Client:	Athens University C/O: N. Asteriadis S.A.		
Quotation Number:	18310	Date:	26/06/2025
Job Number:	IN1367	Date:	11/07/2025

Contact:	Emmanouil Flemetakis
System:	PYROEARTH (10202/25-2025/1367) HS2022 (20402/4-2025/1367)
Software:	V50.0.3
Engineer:	Thomas Iordanidis
Installation Date:	29/05/2026

Warranty commences:	29/05/2026
Warranty Expires:	28/05/2028

Customer Acceptance:

Name: _____

 Signature: _____
 EMMANOUIL FLEMETAKIS
 17/07/2026 11:48

Date: _____

Notes:

Engineer's Signature:

On behalf of Sercon Limited

Name: Thomas Iordanidis

 Signature: 

Date: 29/05/2026