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Client:	University of Texas Austin C/O: GSS		
Quotation Number:	19323	Date:	07/01/2026
Job Number:	IN1376	Date:	12/01/2026

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ADDITIONAL:

Payment Terms:
 50% / 40% / 10%
Other: please specify

Penalty Clause Yes / No

Please specify: _____

Blue Book Completion:

Signed		Date	
Verified		Date	

Quotation

To: Government Scientific Source, Inc.
 12355 Sunrise Valley Drive,
 Suite 400, Reston,
 VA 20191
 USA

VAT Reg No: US

Quotation Date: 07/01/2026
Quotation Reference: 19323
Customer Ref:
Account Ref. GSS001
Quotation Validity: 31/01/2026

Quantity	Product Code	Product Description	Unit Price \$	Net Price \$
Proposal for LA IRMS system				
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	160,265.000	160,265.00
1	10802/9	IRMS Compatible 213 Laser	159,600.000	159,600.00
1	10802/8	IRMS compatible Variant of LSX-213G2+ CryoFlex (LA) Trace gas analyser optimised for connection to peripherals which require a cryogenic focussing module. Includes liquid nitrogen based trapping system, gas chromatography and a micro-combustion stage. Includes isoSell 100 sample chamber. 71001-6 Cryo LA start up kit	77,140.000	77,140.00
1	10202/11	iso-EArth High performance elemental analyser including TCD. Flexible system can be configured for CN or S analysis. Includes autosampler for solids. 70501-3 - Includes sample preparation kit - micro spatula, mirror, forceps, sample tray and syringe 70501-1 - Includes start up consumables kit for C and N combustion Requires Traping Loop for S (REMOVE IF NOT REQUIRED)	46,084.500	46,084.50
1	INST	Installation and start up training at Customer's site for 5 days	13,100.500	13,100.50

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Customer Ref:
Account Ref: GSS001
Quotation Validity: 31/01/2026

Quantity	Product Code	Product Description	Unit Price	Net Price
			\$	\$
1	DDP	Delivered Duty Paid	6,000.000	6,000.00
1	CON001	US Trade Tariff	33,000.000	33,000.00
1	WARR2	2 year warranty		
		3 Year - Maintenance Service Contract		
1	SCONTRACT	Maintenance Service Contract - 3 Years Contract to consist of 1 visit of *3 days onsite per annum Lead time 90 days from order	34,770.000	34,770.00

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

Delivery: within 90 days of receipt of order

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.

This quotation is issued in USD Dollar

Total Net Amount \$ 529,960.00

Total VAT Amount \$ 0.00

Order Total \$ 529,960.00

Sercon Bank Details:-

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

IBAN: GB94NWBK60730113806556
SWIFT/BIC: NWBKGB2LXXX

PURCHASE ORDER

Mail
Invoice To:

Government Scientific Source, Inc.

12355 Sunrise Valley Drive, Suite 400, Reston, VA 20191

Phone: 703-734-6962 * Fax: 703-935-0374

Correspondence: ap@govsci.com

Send Invoices to: invoicing@govsci.com

Order Date: 01/12/26

GSS PO Number: 19730416

****Customer Ship To Info****

To:

SERCON LIMITED
EUROPA HOUSE, COPPICEMERE DRIVE
CREWE, CW16GZ
CHESHIRE
United Kingdom - DNU

ATTN: PO: 2026C00752
UNIVERSITY OF TEXAS AUSTIN
MARINE SCIENCE INSTITUTE
ATTN Rocio Torres
750 CHANNEL VIEW DRIVE RM 223
PORT ARANSAS, TX 78373
United States

****Purchasing Contact****

Ship Via PREPAY & ADD
Terms NET 60

Confirm To PURCHASING@GOVSCI.COM
Buyer Chanty Sommerfeld
Fax No. 703-935-0374
Phone No. 703-734-1088

****ITEM REQUIREMENTS ARE LISTED BELOW EACH ITEM****

Our Ref	Item No.	Description	Unit	Quantity	Unit Price	Total Price
S2071091	20402/4	Continuous flow isotope ratio mass spectrometer	Each	1	160,265.00	160,265.00
S2071091	10802/9	IRMS Compatible 213 Laser	Each	1	159,600.00	159,600.00
S2071091	10802/8	CryoFlex (LA)	Each	1	77,140.00	77,140.00
S2071091	10202/11	iso-EArth	Each	1	46,084.50	46,084.50
S2071091	INST	Installation and start up training at site 5 Day	Each	1	13,100.50	13,100.50
S2071091	DDP	Delivery Duty Paid	Each	1	6,000.00	6,000.00

PURCHASE ORDER

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Our Ref	Item No.	Description	Unit	Quantity	Unit Price	Total Price
S2071091	CON001	US Trade Tariff	Each	1	33,000.00	33,000.00
S2071091	WARR2	2 year warranty	Each	1		
S2071091	SCONTRACT	Maintenance Service Contract - 3 Years	Each	1	34,770.00	34,770.00
		Quote - 19323				

Subtotal: 529,960.00
Sales Tax: 0.00
Total: 529,960.00

IF S/H IS MORE THAN \$150.00
PLEASE CALL PRIOR TO SHIPPING

ALL ORDERS ARE TO BE
CONFIRMED VIA EMAIL WITHIN
48 HOURS

ANY PRICING CHANGES MUST
HAVE GSS APPROVAL PRIOR TO
SHIPPING.

In order to provide appropriate assurances of quality, substitutions, refurbished/used products, and suspect/counterfeit products are not permitted and will be rejected. Further verification of quality assurances by inspection or audit may be required in appropriate circumstances.

All goods and services procured by Government Scientific Source, Inc. from Supplier shall be in accordance with the Procurement Terms and Conditions located on our website at https://www.govsci.com/terms-conditions/procurement_terms_conditions.aspx.

3 - MACHINE SPECIFICATION

Client:	University of Texas Austin C/O: GSS		
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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+	
10202/25	PyroEArth	
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
S027_v12		
*** When ordered alone IN no. / Blue book NOT required		

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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 Helicobacter pylori infection	
SC9974	Helicobacter 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	

3 - MACHINE SPECIFICATION

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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:			
Quotation Number:		Date:	
Job Number:		Date:	

Date	Action Taken	By Whom
16/6/25	MARK = TANKO BUILD	PH.
1/9/25	OLLI P.A.T. TESTS	PH.
9/9/25	ELECTRONIC TAKEN OUT FOR INIS68	PH.
15/9/25	SWAPPED VFL CABLES AROUND -> 0-3 HAS THE AMP CONNECTION	WM
15/9/25	SOURCE WAS SAYING OPEN FILAMENT WHEN SWITCHED ON - DIAGNOSED AS FAULTY SOURCE CABLE	WM
16/9/25	modified iso valve to be put on (trapping loop) when theres time	AD
17/9/25	leak along source line, blanked off at ref isolation valve T - vacuum ok	AD
22/9/25	No spare valve T's, tightened fittings in vice. vacuum now ok and background low	AD
25/9/25	HD probe very noisy - Swapped System Controller - no change. Swapped head amp - no change. Swapped head amp cable - no change. Swapped for working source - no change	AD
26/9/25	Put original source back in, new HD collector - Peak much smoother	AD
10/10/25	Filament changed - gaps in coating. Still testing new software and electronics	AD

Date	Action Taken	By Whom
------	--------------	---------

4 - LOG SHEET

Client:			
Quotation Number:		Date:	
Job Number:		Date:	

[illegible]



Client:			
Quotation Number:		Date:	
Job Number:		Date:	

[illegible]

4 - LOG SHEET

Client:	University of Texas Austin C/O: GSS		
Quotation Number:	19323	Date:	07/01/2026
Job Number:	IN1376	Date:	12/01/2026

Date	Action Taken	By Whom
19/1/26	Recheck ref gas Specs for C+N - pass OK	AD
20/1/26	Check HD ref gas - OK Connected Cryo to the PC and uploaded Projects	AD
21/1/26	New micro on system controller died, Al knows about issue, coming to swap board. Cryo manifold not talking to software. Flashed a new manifold all OK, re-plugged in original manifold - now OK	AD
22/1/26	Crimps on isocath set. Tubes and water trap put in - full flow. Flow meters calibrated. Cold pressure test - pass Heating tubes to full temp. Connecting to mass spec, N ₂ background low. Blanks low, less than 3E-10 Test sample run, windows moved. Running beet mix precision.	AD
23/1/26	Beet mix prec close but not passing. Re-tuning. Opening sample iso crimp as its quite low, and sample peaks are also low. Beet mix precision passes - iso shut down Cryo manifold crimp set. Swapped air flows for loops Installed GC, flow measured through. Pressure test passed. Flow through furnace checked, flow meter calibrated.	AP



Log sheet - 4

Client:	University of Texas Austin C/O: GSS		
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[illegible]



Client:	University of Texas Austin C/O: GSS		
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[illegible]



Log sheet - 4

Client:	University of Texas Austin C/O: GSS		
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[illegible]

4 - LOG SHEET

Client:	University of Texas Austin C/O: GSS		
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[illegible]



sercon

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

Fault reporting - 5

5 - FAULT REPORTING

Client:	University of Texas Austin C/O: GSS		
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[illegible]



innovators in isotopes

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5 - FAULT REPORTING

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[illegible]

[illegible]

5 - FAULT REPORTING

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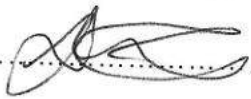
sercon
innovators in isotopes

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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:	University of Texas Austin C/O: GSS		
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Job Number:	IN1376	Date:	12/01/2026

Sales Signature: 	Date: 26/01/26
Test Signature: 	Date: 26/01/26



sercon
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Test acceptance - 6

6 - TEST / ACCEPTANCE SPECIFICATION

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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 0.03	✓
¹⁸ O	(CO ₂)	0.06	
³⁴ S	(SO ₂)	0.1	
² H		0.4 0.23	✓

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

¹³ C	≤0.02‰/nA STD Deviation <0.30 0.08	✓
¹⁵ N	≤0.02‰/nA STD Deviation <0.30 0.11	✓

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		10 µg S	1.0	
Dual	400 µg C	0.1 0.06	✓	100 µg N	0.15 0.06	✓
¹⁸ O	100 µg or 1 µl water	0.3				
² H	200 µg H or 1 µl water	1.0				



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Test acceptance - 6

6 - TEST / ACCEPTANCE SPECIFICATION

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EAarth

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 ¹⁸O 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	



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:	University of Texas Austin C/O: GSS		
Quotation Number:	19323	Date:	07/01/2026
Job Number:	IN1376	Date:	12/01/2026

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	



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Test acceptance - 6

6 - TEST / ACCEPTANCE SPECIFICATION

Customer:	University of Texas Austin C/O: GSS		
Quotation Number:	19323	Date:	07/01/2026
Job Number:	IN1376	Date:	12/01/2026

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)			



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Test acceptance - 6

6 - TEST / ACCEPTANCE SPECIFICATION

Customer:	University of Texas Austin C/O: GSS		
Quotation Number:	19323	Date:	07/01/2026
Job Number:	IN1376	Date:	12/01/2026

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

7: ASSEMBLY AND TEST RECORD

Client:	University of Texas Austin C/O: GSS		
Quotation Number:	19323	Date:	07/01/2026
Job Number:	IN1376	Date:	12/01/2026

PRODUCT: 20402/4 (HS2022) (formally stock 8)

SERIAL NUMBER: 20402/4 - 2025/1376

ASSEMBLED:
(Name)

Mur

Date: 9/8/25

PRE-TEST
INSPECTION:
(Production name)

P. Kuy

Date: 1/9/25

PRE-TEST
INSPECTION:
(Test name)

DA

Date: 1/9/25

SYSTEM TEST:
(Name)

DA

Date: 27/1/26

PRE-DESPATCH
INSPECTION:
(Name)

[Signature]

Date: 29/01/26

P.A.T. Test results

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

Earth Continuity 0.070 Ω

Insulation 7300 $M\Omega$

Earth Leakage Current 0.55 mA. @ 0.05 kVA.

Tested by: P. Kuy

Date: 1/9/25

7: ASSEMBLY AND TEST RECORD

Client:	University of Texas Austin C/O: GSS		
Quotation Number:	19323	Date:	07/01/2026
Job Number:	IN1376	Date:	12/01/2026

PRODUCT: 10202/11 (ISO-EARTH) (formally stock 18)

SERIAL NUMBER: 10202/11-2025/1376

ASSEMBLED:
(Name)

MW

Date: 9/12/25

PRE-TEST
INSPECTION:
(Production name)

ES

Date: 17/12/25

PRE-TEST
INSPECTION:
(Test name)

DB

Date: 17/12/25

SYSTEM TEST:
(Name)

DB

Date: 27/1/26

PRE-DESPATCH
INSPECTION:
(Name)

SPH

Date: 29/01/26

P.A.T. Test results

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

Earth Continuity 0.77 Ω

Insulation > 300 $M\Omega$

Earth Leakage Current 1.05 mA. @ 0.5 kVA.

Tested by: HR [Signature]

Date: 23/12/25

Works Order Picking List

Date: 30/10/2025

Time: 09:40:08

Works Order: WO02549
 Stock Code: 10202/11
 Description: iso-EArth
 Qty Required: 1.00 Each
 Qty Outstanding: 1.00
 Plan Period: WK44/2025
 Due Date: 16/12/2025

Stock 18

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

Manufacturing Instructions: Quote: 19193B - Ecological Acedemy of Sciences

9099/1 Instrument Packing	1.00	Each		
SI2416 PyroEArth Cabinet Full Assy Rev003	1.00	Each	C	1
SI2621 iso EArth Artwork <i>- Sam office</i>	1.00	Each	C	
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 <i>Change</i>	1.00	Each	Carousel 1 M-1	2
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
SI1681 10A Fuse, Anti surge, 5x20mm	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	4.00	Each	Carousel 1 P-1	4
SI0708 SSUE 16/16 Stainless Steel Union Pk/1	2.00	Each	Carousel 1 P-1	2
SI1900 Dowty Seal - M5	25.00	Each	Carousel 1 P-1	25
SI2244 Male Elbow 4mm to M5	3.00	Each	Carousel 1 P-1	3
SI0703 1/8-1/16" PTFE Reducing Ferrule Pk/1	15.00	Each	Carousel 1 P-3	15
SI0196 Reducing Union 1/4 x 1/16 SS	4.00	Each	Carousel 1 Q-1	4

Works Order Picking List

Date: 30/10/2025
Time: 09:40:08

Works Order: WO02549
Stock Code: 10202/11
Description: iso-EArth
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK44/2025
Due Date: 16/12/2025

Stock Code / Description	Qty to Pick	Unit	Location	Qty Picked / By
SI0212 Reducing Union 1/8 OD x 1/16 OD SS	4.00	Each	Carousel 1 Q-1	4
SI0762 PSR16-16 PTFE Sealing Rings Pk/20	0.20	Each	Carousel 1 Q-1	0.2 (4)
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"	4.00	Each	Carousel 1 Q-1	4
SI2472 Bulkhead Retainer 1/16"	2.00	Each	Carousel 1 Q-1	2
SI0198 Tee Union 1/16 SS	4.00	Each	Carousel 1 Q-2	4
SI0204 Bulkhead Union 1/16 SS	8.00	Each	Carousel 1 Q-2	8
SI0205 Bulkhead Union 1/8 SS	11.00	Each	Carousel 1 Q-2	11
SI1899 1/16 x M5 Fitting	25.00	Each	Carousel 1 Q-3	25
SI1482 34 Way IDC Bump Polarised Socket, 1A	2.00	Each	D-X4	
SI0902 Toggle Switch	1.00	Each	D-X6	
SC0030 Thermocouple K-Type 1.5mm Pk/1 (Send with 2 pin/2 Bullet Crimps)	2.00	Each	P-A2	2
SC2495 Scrubber Tube 220mm	2.00	Each	P-B3	1

Works Order Picking List

Date: 30/10/2025

Time: 09:40:08

Works Order: WO02549
 Stock Code: 10202/11
 Description: iso-EArth
 Qty Required: 1.00 Each
 Qty Outstanding: 1.00
 Plan Period: WK44/2025
 Due Date: 16/12/2025

Stock Code / Description	Qty to Pick	Unit	Location	Qty Picked / By
SC0085 Cap Kit for Threaded Joints Caps & PTFE Backed Sil Seals pk2	2.00	Each	P-B4	2
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
SI0008 GSL Top Hat Adaptor	1.00	Each	Stores A	1
SI0076 Tube Coupling	4.00	Each	Stores A	4
SI0847 IEC Cord - Socket	2.00	Each	Stores A-2	2
SI0374 Terminal Block Section	15.00	Each	Stores A-3	15
SI0375 Terminal Block End Plate	3.00	Each	Stores A-3	3
SI2631 End Bracket	2.00	Each	Stores A-3	2
SI0620 IEC Insulated Cover	1.00	Each	Stores A-4	1
SI1328 Mains Filter	1.00	Each	Stores A-4	1
SI0378 Blk Re-wireable Straight Plug, 10A 250Vac	3.00	Each	Stores A-5	3
SI1344 IEC Connector Clamp Kit	1.00	Each	Stores A-5	1
SI1797 Fuse Holder Insulation Cover	5.00	Each	Stores A-5	5
SI2304 Screwdriver bayonetcap fuseholder 5x20mm	4.00	Each	Stores A-5	4
SI0630 80mm Fan Guard	7.00	Each	Stores A-6	7
SI0793 80mm DC Fan	7.00	Each	Stores A-6	7

- Adjust 1 IN } End of
 - Adjust 1 OUT } Build.

Works Order Picking List

Date: 30/10/2025
Time: 09:40:08

Works Order: WO02549
Stock Code: 10202/11
Description: iso-EArth
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK44/2025
Due Date: 16/12/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
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	4.00	Each	Stores B-3	4
SI0559 Solid State Relay 10A rms 24-280 Vac	4.00	Each	Stores B-3	4
SI2411 KVT 20 Split Cable Gland (inc locknut)	1.00	Each	Stores B-6	1
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
SI2435 Electronic Pressure Regulator	2.00	Each	Stores D-1	2
SI0366 Flow Meter PMFc3100V	2.00	Each	Stores D-2	2
SI1241 3 Way Solenoid Valve	7.00	Each	Stores D-3	7
SI1242 2 Way Solenoid Valve	3.00	Each	Stores D-3	3

Works Order Picking List

Date: 30/10/2025

Time: 09:40:08

Works Order: WO02549
 Stock Code: 10202/11
 Description: iso-EArth
 Qty Required: 1.00 Each
 Qty Outstanding: 1.00
 Plan Period: WK44/2025
 Due Date: 16/12/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI1245 SOL Cable	1.00	Each	Stores D-3	1
SI1251 Autosampler Solenoid Valve	1.00	Each	Stores D-3	1
SI0807 Thermostat	1.00	Each	Stores D-5	1
SI0581 Toroidal Transformer 1000VA 2x55V o/p	1.00	Each	Stores D8	1
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
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
SI1689 - ON ORDER Threaded Adaptor for GSL/INTEGRA. (NO COUPLING NUT)	2.00	Each	Stores E-8	
SI1690 - ON ORDER Coupling Nut for SI1689 & SI0043	2.00	Each	Stores E-8	
10202-S - ON ORDER Sercon 50 Position Autosampler Assy	1.00	Each	Stores I-1	
SI2409 - ON ORDER EA-ST Furnace	2.00	Each	Stores I-3	
SI2288 Internal USB 4.5m	1.00	Each	Stores J-3	1
SI2582 EArth System PCB	1.00	Each	Stores J-4	1
SI2512 3 Metre UK 13 amp Fused plug to IEC C 13	1.00	Each	Stores NCB	1

Works Order Picking List

Date: 30/10/2025

Time: 09:40:08

Works Order: WO02549
Stock Code: 10202/11
Description: iso-EArth
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK44/2025
Due Date: 16/12/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
70501-1 Consumables for C and N for Combustion Only (Inc.)	1.00	Each	Z@	
70501-3 Sample Preparation Kit	1.00	Each	Z@	

All items picked and packed as marked:

Date: ____/____/____ Signed: _____

Stock Allocated, Issued, Completed:

Date: ____/____/____ Signed: _____

Works Order Picking List

Date: 21/10/2025

Time: 08:53:25

Works Order: WO02547
Stock Code: 10802/8
Description: CryoFlex (LA)
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK43/2025
Due Date: 15/12/2025

Stock Code / Description **Qty to Pick** **Unit** **Location** **Qty Picked / By**
Manufacturing Instructions: STOCK (University of Texas)(19323)

13001/1 - ORDER
isoScell 100 for LSX213 G2+

1.00 Each

71001-6
Cryoflex LA (Start up Kit)

1.00 Each

9099/1
Instrument Packing

1.00 Each

SI0219 - ORDER
AGIL 3 DEWAR - Cryopal

1.00 Each

SI2506 - ORDER
Silicon Carbide Vertical tube furnace model TSV15/16/125

1.00 Each

SI2557 - ORDER
MAGNETICALLY COUPLED RODLESS

2.00 Each

2.

SI1198 - ORDER
Rt-Q-BOND PLOT Column 30m, 0.53mm ID, 20um

1.00 Each B-L1

1

SI2578
Cryoprep Cabinet Assemble

1.00 Each C

1

SI1052
3 Way MOLEX Clip

1.00 Each Carousel 1 M-1

1

SI2413
Pneumatic Straight Tube Adapter, Plug In 4mm-8mm

1.00 Each Carousel 1 M-1

1

SI1602
Speed Controller (5mm)

4.00 Each Carousel 1 N-1

4

SI0701 - Check
1/4" PTFE Ferrules Pk/1

2.00 Each Carousel 1 P-1

2.

SI0708
SSUE 16/16 Stainless Steel Union Pk/1

11.00 Each Carousel 1 P-1

11

SI1727
8mm Plug

1.00 Each Carousel 1 P-1

1

SI1900
Dowty Seal - M5

8.00 Each Carousel 1 P-1

8.

SI2244
Male Elbow 4mm to M5

2.00 Each Carousel 1 P-1

2

Works Order Picking List

Date: 21/10/2025
Time: 08:53:25

Works Order: WO02547
Stock Code: 10802/8
Description: CryoFlex (LA)
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK43/2025
Due Date: 15/12/2025

Stock Code / Description	Qty to Pick	Unit	Location	Qty Picked / By
SI1594 15 Way D Plate	1.00	Each	Carousel 1 P-2	X 2
SI0703 1/8-1/16" PTFE Reducing Ferrule Pk/1	2.00	Each	Carousel 1 P-3	2.
SI0196 Reducing Union 1/4 x 1/16 SS	1.00	Each	Carousel 1 Q-1	X 2
SI0762 PSR16-16 PTFE Sealing Rings Pk/20	1.00	Each	Carousel 1 Q-1	1
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
SI0198 Tee Union 1/16 SS	2.00	Each	Carousel 1 Q-2	2.
SI0205 Bulkhead Union 1/8 SS	2.00	Each	Carousel 1 Q-2	2.
SI1899 1/16 x M5 Fitting	8.00	Each	Carousel 1 Q-3	8
SC0030 Thermocouple K-Type 1.5mm Pk/1 (Send with 2 pin/2 Bullet Crimps)	1.00	Each	P-A2	1
SI1628 6 Way Manifold Assy	1.00	Each	PAUL OFFICE	1
SI0374 Terminal Block Section	4.00	Each	Stores A-3	4
SI0375 Terminal Block End Plate	3.00	Each	Stores A-3	3.
SI0620 IEC Insulated Cover	1.00	Each	Stores A-4	1
SI1328 Mains Filter	1.00	Each	Stores A-4	1
SI1344 IEC Connector Clamp Kit	1.00	Each	Stores A-5	1
SI1797 Fuse Holder Insulation Cover	2.00	Each	Stores A-5	2

Works Order Picking List

Date: 21/10/2025

Time: 08:53:25

Works Order: WO02547
 Stock Code: 10802/8
 Description: CryoFlex (LA)
 Qty Required: 1.00 Each
 Qty Outstanding: 1.00
 Plan Period: WK43/2025
 Due Date: 15/12/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI2304 Screwdriver bayonetcap fuseholder 5x20mm	2.00	Each	Stores A-5	2
SI0629 120mm Fan Guard	2.00	Each	Stores A-6	2
SI0630 80mm Fan Guard	4.00	Each	Stores A-6	4
SI0793 80mm DC Fan	2.00	Each	Stores A-6	2
SI1418 80mm Fan Screen Filter	2.00	Each	Stores A-6	2
SI1737 B/bearing axial fan, 119sqx25mm 24V med	1.00	Each	Stores A-6	1
SI0373 34 Way IDC Terminal Block	1.00	Each	Stores A-8	1
SI0508 24V PSU	1.00	Each	Stores A-8	1
SI0346 SPDT plug-in power Relay - 10A 24V DC coil	1.00	Each	Stores B-2	1
SI0347 SPCO Relay Base	1.00	Each	Stores B-2	1
SI0345 SSR Safety Cover	1.00	Each	Stores B-3	1
SI0559 Solid State Relay 10A rms 24-280 Vac	1.00	Each	Stores B-3	1
SI0344 2P red illuminated round rocker switch, 10A	1.00	Each	Stores B-5	1
SI2411 KVT 20 Split Cable Gland (inc locknut)	1.00	Each	Stores B-6	1
SI2412 KT 5 insert	0.10	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

Works Order Picking List

Date: 21/10/2025

Time: 08:53:25

Works Order: WO02547
Stock Code: 10802/8
Description: CryoFlex (LA)
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK43/2025
Due Date: 15/12/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI2435 Electronic Pressure Regulator	1.00	Each	Stores D-1	1
SI0366 Flow Meter PMFc3100V	1.00	Each	Stores D-2	1
SI2296 Precision Flow Control	2.00	Each	Stores D-2	2
SI1241 3 Way Solenoid Valve	1.00	Each	Stores D-3	1
SI1242 2 Way Solenoid Valve	3.00	Each	Stores D-3	3
SI0807 Thermostat	1.00	Each	Stores D-5	1
SI0837 Nafion Dryer	1.00	Each	Stores E-1	1
SI2288 Internal USB 4.5m	1.00	Each	Stores J-3	1
SI2582 EArth System PCB	1.00	Each	Stores J-4	1
SI2512 3 Metre UK 13 amp Fused plug to IEC C 13	1.00	Each	Stores NCB	1

All items picked and packed as marked:

Date: ____/____/____ Signed: _____

Stock Allocated, Issued, Completed:

Date: ____/____/____ Signed: _____

7: ASSEMBLY AND TEST RECORD

Client:	University of Texas Austin C/O: GSS		
Quotation Number:	19323	Date:	07/01/2026
Job Number:	IN1376	Date:	12/01/2026

PRODUCT: 10802/8 (CryoFlex LA) (formerly Stock 19)

SERIAL NUMBER: 10802/8 - 2025/1376

ASSEMBLED:
(Name)



Date: 12/11/25

PRE-TEST
INSPECTION:
(Production name)

HR.



Date: 14/11/25

PRE-TEST
INSPECTION:
(Test name)

DA

Date: 14/11/25

SYSTEM TEST:
(Name)

DA

Date: 27/11/25

PRE-DESPATCH
INSPECTION:
(Name)



Date: 29/01/26

P.A.T. Test results

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

Earth Continuity 0.063 Ω

Insulation 7300 $M\Omega$

Earth Leakage Current 0.90 mA. @ 0.5 kVA.

Tested by: HR. 

Date: 14/11/25

Production Handover Checklist

Unit Name	ISO - Earth
Product Code	10202 / 11
Customer	Ecological Academy of Sciences
Unit IN/Stock Number	Quote: 19193B / Stock 18

Visual inspection

	Description	Initial
1)	All external cover/Panels present	SW
2)	Cabinet and panels free from dents/scratches/damage	SW
3)	Doors and panels fitted right and correctly	SW
4)	All instrument controls/fuse holders/connections all marked according to the schematic	SW
5)	Sercon Logo/Vinyls fitted correctly to door and panels	ABF
6)	Unit rating/serial sticker correct and fitted to fixed rear panel	ABF
7)	Mains isolation sticker fitted to all removable panels	SW
8)	internal compartments free from dust and debris	SW

Mechanical Inspection

	Description	Initial
1)	All fastenings fitted correctly I.E Flat washers and shakeproof washer ETC	SW
2)	All fastenings tight and tightened to the correct torque where applicable	SW
3)	All cooling fans fitted correctly with air flow in the right direction and guards present	SW
4)	All plumbing bulkheads and fittings fitted correctly and tightend to required torque	SW
5)	All piping secure and free from kinks ETC	SW

Electrical inspection

	Description	Initial
1)	Equitential earth bonding to all removable panels	N/A
2)	All cable terminations tight and correctly crimped	SW
3)	All Cable identifications and sizes correct to the schematic drawing	SW
4)	Ribbon cables fitted and "Checked" label applied	SW
5)	All fuses fitted to holders and are correct rating as schematic drawing	SW
6)	All instrument cables supplied with unit	SW

Testing

	Description	Initial
1)	Use 24V test power supply to run and check correct operation of the unit cooling fans	LM
2)	P.A.T unit	LR
3)	P.A.T Sticker filled in and applied to the rear of unit	LM
4)	P.A.T results logged in the blue book	LR

Remark:

Transformer fitted with a "Potential Earth fault" tag

Works Order Picking List

Date: 15/01/2026

Time: 09:36:29

Works Order: WO02600
Stock Code: 70501-3
Description: Sample Preparation Kit
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK3/2026
Due Date: 05/02/2026

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
Manufacturing Instructions: IN1376 - University of Texas				
SC0127 Micro spatula 154mm long Pk/1	1.00	Each	P-B5	/
SC0128 Mirror Tiles 6in x 6in Pk/1	1.00	Each	P-B5	/
SC1605 Forceps Stainless Steel Curved Points Pk/1 125mm	1.00	Each	P-B5	/
SC1606 Forceps Stainless Steel Straight Points Pk/1	1.00	Each	P-B5	/
SC1630 Cell Well 96 Flat Bottom Pk/1	1.00	Each	P-B5	/
SI0709A Syringe Model SK-10F 10ul Pk/1	1.00	Each	Stores D-4	/

All items picked and packed as marked:

Date: 20/1/26 Signed: P21

Stock Allocated, Issued, Completed:

Date: ___/___/___ Signed: _____

Works Order Picking List

Date: 15/01/2026

Time: 09:37:01

Works Order: WO02598
Stock Code: 70201-1
Description: Analyser spares kit - Included
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK3/2026
Due Date: 05/02/2026

Stock Code / Description Qty to Pick Unit Location Qty Picked / By
Manufacturing Instructions: IN1376 - University of Texas

SI0703 1/8-1/16" PTFE Reducing Ferrule Pk/1	5.00	Each	Carousel 1 P-3	5
SC0032A Copper Gasket DN63CF Pk/1	5.00	Each	P-A3	5
SC0033A Copper Gasket DN40CF Pk/1	5.00	Each	P-A3	5
SC0038 Source Tool Kit	1.00	Each	P-B5	1
SC8407 Snoop Liquid Leak Detector 2oz	1.00	Each	PC-5	1
SC0063 Edwards Rotary Pump Oil - Ultra grade 15 - 1L	1.00	Each	P-E1	1
SC0028 Filament, 20-20 Pk/1	1.00	Each	Stores A-1	1

All items picked and packed as marked:

Date: 16 / 1 / 26 Signed: Per

Stock Allocated, Issued, Completed:

Date: ____ / ____ / ____ Signed: _____

Works Order Picking List

Date: 15/01/2026

Time: 09:36:47

Works Order: WO02599
Stock Code: 71001-6
Description: Cryoflex LA (Start up Kit)
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK3/2026
Due Date: 15/01/2026

Stock Code / Description Qty to Pick Unit Location Qty Picked / By
Manufacturing Instructions: IN1376 - University of Texas

SI0700 1/16" PTFE Ferrules Pk/1	1.00	Each	Carousel 1 P-1	1
SI0701 1/4" PTFE Ferrules Pk/1	5.00	Each	Carousel 1 P-1	5
SI0196 Reducing Union 1/4 x 1/16 SS	4.00	Each	Carousel 1 Q-1	4
SI0762 PSR16-16 PTFE Sealing Rings Pk/20	1.00	Each	Carousel 1 Q-1	1
SC9131 Scrubber Tube 6mmODx4mmIDx370mmLong Pk/1	3.00	Each	P-B3	3
SC0001/E Chromium Oxide Granular 0.85-1.7mm 25g	2.00	Each	P-C1	2
SC0006 Quartz Wool Very Fine 10g	1.00	Each	PD-1	1
SI0712 Tubing SS 1/16" ODX 0.75mm ID pk/1M	3.00	Each	Production	3M
SI0769A Peek Tubing 1m	3.00	Each	Production	3M
SI0695 GVF 16-005 Graphite/Vespel Ferrule Pk/10	1.00	Each	Stores C-3	1

All items picked and packed as marked:

Date: 20/1/26 Signed: 

Stock Allocated, Issued, Completed:

Date: ____/____/____ Signed: _____

Works Order Picking List

Date: 23/12/2025

Time: 14:54:26

Works Order: WO02465
Stock Code: 20402/4
Description: HS2022 + Hd Collector + E-Mag + Tr
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK24/2025
Due Date: 04/08/2025

Stock Code / Description Qty to Pick Unit Location Qty Picked / By
Manufacturing Instructions: ~~W1369~~ Development Stock 08

9099/1 Instrument Packing	1.00	Each		
SI1754 Emag Drive Panel with Cable	2.00	Each		
70101/11 20-22 Head Amp Inverter PCB Cable	1.00	Each	B-H1	
70101/13 Standard Head Amp Cable	1.00	Each	B-H1	
SI2579 20-22 Cabinet Wave Assy Rev 004	3.00	Each	C1	
SI2614 HS2022 Artwork	2.00	Each	C1	
SI1052 3 Way MOLEX Clip	2.00	Each	Carousel 1 M-1	
SI1255 M5 Plug	4.00	Each	Carousel 1 M-1	
SI1548 4A Fuse, Anti Surge 5x20mm	2.00	Each	Carousel 1 M-1	
SI2285 Mag Terminal Cover Black	8.00	Each	Carousel 1 M-3	
SI0687 1/8" PTFE Ferrules - Blank	2.00	Each	Carousel 1 P-1	
SI0701 1/4" PTFE Ferrules Pk/1	4.00	Each	Carousel 1 P-1	
SI0710 VALCO Tee - 1/16	4.00	Each	Carousel 1 P-1	
SI1900 Dowty Seal - M5	40.00	Each	Carousel 1 P-1	
SI1244 Seal Kit	2.00	Each	Carousel 1 P-2	
SI1595 37 Way D Plate	6.00	Each	Carousel 1 P-2	

Works Order Picking List

Date: 23/12/2025

Time: 14:54:26

Works Order: WO02465
Stock Code: 20402/4
Description: HS2022 + Hd Collector + E-Mag + Tr
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK24/2025
Due Date: 04/08/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI0703 1/8-1/16" PTFE Reducing Ferrule Pk/1	14.00	Each	Carousel 1 P-3	
SI0196 Reducing Union 1/4 x 1/16 SS	4.00	Each	Carousel 1 Q-1	
SI0197 Reducing Union 3/16 OD x 1/16 OD SS	4.00	Each	Carousel 1 Q-1	
SI0762 PSR16-16 PTFE Sealing Rings Pk/20	1.20	Each	Carousel 1 Q-1	
SI0022 Capillary Crimp Parts A & B	14.00	Each	Carousel 1 Q-2	
SI0198 Tee Union 1/16 SS	2.00	Each	Carousel 1 Q-2	
SI0204 Bulkhead Union 1/16 SS	4.00	Each	Carousel 1 Q-2	
SI0205 Bulkhead Union 1/8 SS	10.00	Each	Carousel 1 Q-2	
SI0049 Big Magnet Adjusting Foot	2.00	Each	Carousel 1 Q-3	
SI0050 Magnet Foot	4.00	Each	Carousel 1 Q-3	
SI1812 E-Mag Screw	6.00	Each	Carousel 1 Q-3	
SI1899 1/16 x M5 Fitting	36.00	Each	Carousel 1 Q-3	
SI3133 3/16 OD X M5-0.8 MALE CONNECTOR SS	4.00	Each	Carousel 1 Q-3	
SI1196 Female NiPt D screwlock assembly, 8mm	12.00	Each	Carousel A-1	
SI1482 34 Way IDC Bump Polarised Socket, 1A	2.00	Each	Carousel A-3	
SI0086 Ref Gas Bracket Mounting Bracket slot	10.00	Each	Carousel B-1	
SI0794 Female NiPt D Screwlock assembly, 13mm	4.00	Each	Carousel B-1	

Works Order Picking List

Date: 23/12/2025

Time: 14:54:26

Works Order: WO02465
Stock Code: 20402/4
Description: HS2022 + Hd Collector + E-Mag + Tr
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK24/2025
Due Date: 04/08/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI1004 Right-Angled Bracket 25mm	4.00	Each	Carousel B-1	
SI0631 9 Way D Hood	4.00	Each	Carousel B-3	
SI0632 15 Way D Hood	4.00	Each	Carousel B-3	
SI0900 25 Way D Hood	2.00	Each	Carousel B-3	
SI0524 3 Way Socket Housing, 2.54mm Pitch	2.00	Each	Carousel C-1	
SI0777 Nylon Pillars Male-Female M4x25mm	8.00	Each	Carousel C-1	
SI0385 25 Way Machine Cont Straight D Skt, 750Vac	2.00	Each	Carousel D-3	
SI0387 9 Way Machine Cont Straight D Plug, 750Vac	2.00	Each	Carousel D-3	
SI0388 9 Way Machine Cont Straight D Skt, 750Vac	2.00	Each	Carousel D-3	
SI0570 15 way Solder Contact ZD skt 5A 400 Vac	6.00	Each	Carousel D-3	
SI1794 37 Way IDC D Socket - Metal	2.00	Each	Carousel D-3	
SI1795 37 Way IDC D Plug - Metal	4.00	Each	Carousel D-3	
SI1580 Source Mounting Pillar	4.00	Each	D-U2	
SI3271 Straight IEC C13 Socket to Straight IEC C14	2.00	Each	Stores A-1	
SI0847 IEC Cord - Socket	4.00	Each	Stores A-2	
SI0374 Terminal Block Section	16.00	Each	Stores A-3	
SI0375 Terminal Block End Plate	4.00	Each	Stores A-3	

Works Order Picking List

Date: 23/12/2025

Time: 14:54:26

Works Order: WO02465
Stock Code: 20402/4
Description: HS2022 + Hd Collector + E-Mag + Tr
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK24/2025
Due Date: 04/08/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI0620 IEC Insulated Cover	2.00	Each	Stores A-4	
SI0903 I.E.C Socket Mount	2.00	Each	Stores A-4	
SI1328 Mains Filter	2.00	Each	Stores A-4	
SI1491 IEC Insulation Cover	2.00	Each	Stores A-4	
SI1344 IEC Connector Clamp Kit	4.00	Each	Stores A-5	
SI1797 Fuse Holder Insulation Cover	4.00	Each	Stores A-5	
SI2304 Screwdriver bayonetcap fuseholder 5x20mm	4.00	Each	Stores A-5	
SI0630 80mm Fan Guard	12.00	Each	Stores A-6	
SI0793 80mm DC Fan	12.00	Each	Stores A-6	
SI1418 80mm Fan Screen Filter	12.00	Each	Stores A-6	
SI3126 Traco Power 24volt PSU	2.00	Each	Stores A-7	
SI0373 34 Way IDC Terminal Block	2.00	Each	Stores A-8	
SI0508 24V PSU - Add Finger Cover	2.00	Each	Stores A-8	
SI0534 3307 Telescopic Slide 457mm L 483mm	2.00	Each	Stores A-8	
SI1236 Levelling Foot - M10x38mm	10.00	Each	Stores A-8	
SI0112 NW10/16 Clamping Ring Stainless Steel - Edwards	2.00	Each	Stores B-1	
SI0113 NW10/16 Adapt/Cent Viton® SS - Edwards	2.00	Each	Stores B-1	

Works Order Picking List

Date: 23/12/2025

Time: 14:54:26

Works Order: WO02465
Stock Code: 20402/4
Description: HS2022 + Hd Collector + E-Mag + Tr
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK24/2025
Due Date: 04/08/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI2289 Oil Mist Eliminator **requires SI2294**	2.00	Each	Stores B-1	
SI2294 NW10 x 3/8" Bsp Adapter	2.00	Each	Stores B-1	
SI0346 SPDT plug-in power Relay - 10A 24V DC coil	6.00	Each	Stores B-2	
SI0347 SPCO Relay Base	6.00	Each	Stores B-2	
SI0355 DPCO Plug-in Relay, 10A 24V DC coil	2.00	Each	Stores B-2	
SI0376 DPCO Relay Base	2.00	Each	Stores B-2	
SI0344 2P red illuminated round rocker switch, 10A	8.00	Each	Stores B-5	
SI2411 KVT 20 Split Cable Gland (inc locknut)	2.00	Each	Stores B-6	
SI2412 KT 5 insert	2.00	Each	Stores B-6	
SI1247 4-Station Manifold - M5	2.00	Each	Stores B-8	
SI1481 4 WAY REF GAS MANIFOLD	2.00	Each	Stores B-8	
SI0366 Flow Meter PMFc3100V	2.00	Each	Stores D-2	
SI2296 Precision Flow Control	2.00	Each	Stores D-2	
SI1241 3 Way Solenoid Valve	4.00	Each	Stores D-3	
SI1245 SOL Cable	14.00	Each	Stores D-3	
SI1821 3 Port valve	14.00	Each	Stores D-3	
SI0697 MOVPT-S-1-50 Pneumatic Valve (EF3240-R1-001)	8.00	Each	Stores D-4	

Works Order Picking List

Date: 23/12/2025
Time: 14:54:26

Works Order: WO02465
Stock Code: 20402/4
Description: HS2022 + Hd Collector + E-Mag + Tr
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK24/2025
Due Date: 04/08/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI1478 Double Flange	2.00	Each	Stores E-8	
SI2663 nEXT85 HS2022 KIT	2.00	Each	Stores G	
SI0961 System Controller - Electronics Box	1.00	Each	Stores I3	
SI2391 Dell 24" Monitor - P2425H	1.00	Each	Stores J1	
SI2918 Dell Slim Intel Core I3 14100 Processor	1.00	Each	Stores J1	
SI0895 Blue Cat5e UTP patch lead, 2m	2.00	Each	Stores J-3	
SI0896 Yellow Cat5e UTP patch lead, 2m	2.00	Each	Stores J-3	
SI2288 Internal USB 4.5m	2.00	Each	Stores J-3	
SI1513 VFC PCB	2.00	Each	Stores J-4	
SI0685 20-20 ElectroMagnet Assembly	1.00	Each	Stores K	
70101/12 Source Cable	2.00	Each	Stores K-1	
SI0005 20-20 H/D Flight Tube Assembly	2.00	Each	Stores L-2	
41902 Single channel 100G amp assy (Use SI2527)	1.00	Each	Stores M2	
41903 Three channel 100M/5G/5G amp assy (Use SI2526)	1.00	Each	Stores M2	
20102 HS Source Assy	1.00	Each	Stores M4	
20301 Standard Collector Assy	1.00	Each	Stores M4	
20501 Hd Collector Assy	1.00	Each	Stores M4	

8 - Serial Numbers Record Document

Client:	University of Texas Austin C/O: GSS		
Quotation Number:	19323	Date:	07/01/2026
Job Number:	IN1376	Date:	12/01/2026

Units	S/N
MS/ABCA	20402/4 - 2026/1376
Integra 2	
Prep Unit 1 - ISO EARTH	10202/11/2025/1376
Prep Unit 2/Misc - CRYOFLEX	10802/8 - 2025/1376
Electronics Upgrade	
CETAC	
Gas Box	
Autosampler	42710
BCR	
Dual Heater Block	

Pump Kit and Optics	S/N
Turbo pump S	250180869
Turbo pump A	250396412
Rotary Pump	250065854
Voltage	110 / (240)
Gauge S	250097512
Gauge A	250097515
Source	20102-208
Collector 1	20301-179
Collector 2	20501-084
Magnet	147

Parts	S/N
Fan PSU	24049169
24V PSU	35121549

PCBs	S/N
Electronics Box	20250017
Prep PCB ^{Earth}	20250015
VFC PCB	25015
Watchdog PCB	
Head Amp PCB 1	25004
Head Amp PCB 2	25009
Electromagnet RP	

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

PC	S/N
PC	BK6PRC4
Monitor	DS04R86Y-TV200-54B-505B
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:

MFC 1 - 25090057
 MFC 2 - 25040053
 Flight tube - S10005-03

EPC1 - 74952002
 EPC2 - 74952002



Packing List

Customer Reference: 19730416

Shipper / Exporter:

Sercon Limited
Europa House
Coppicemere Drive
Crewe
CW1 6GZ
UK

Tel: +44 (0)1270 580008
Reference: IN1376

Consignee:

University of Texas Austin
Marine Science Institute
ATTN Rocio Torres
750 Channel View Drive Rm 223
Port Aransas, TX 78373
USA

Contact Name: ATTN PO: 2026C00752
Contact Tel Number: 703-734-1088

BOX: 1

Quantity	Product Code	Product Description	Serial Number: if available
☒	20402/4	HS2022	20402/4-2025/1376

Packed by:

Date:


29/01/20

Claims for damage or shortages must be made within 3 days



S035b_v6

Sercon Limited
Europa House, Coppicemere Drive
Crewe, Cheshire
CW1 6GZ, U.K.
Company Registration No.: 4290072

Phone: +44 (0) 1270 580008

sales@sercongroup.com
www.sercongroup.com
VAT No.: 771 1100 74
19/01/2017



Packing List

Customer Reference: 19730416

Shipper / Exporter:

Sercon Limited
Europa House
Coppicemere Drive
Crewe
CW1 6GZ
UK

Tel: +44 (0)1270 580008
Reference: IN1376

Consignee:

University of Texas Austin
Marine Science Institute
ATTN Rocio Torres
750 Channel View Drive Rm 223
Port Aransas, TX 78373
USA

Contact Name: ATTN PO: 2026C00752
Contact Tel Number: 703-734-1088

BOX: 3

Quantity	Product Code	Product Description	Serial Number: if available
☐	10202/11	Iso-Earth	10202/11-2025/1376

Packed by:

Date:

29/01/20

Claims for damage or shortages must be made within 3 days



S035b_v6

Sercon Limited
Europa House, Coppicemere Drive
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VAT No.: 771 1100 74
19/01/2017



Packing List

Customer Reference: 19730416

Shipper / Exporter:

Sercon Limited
Europa House
Coppicemere Drive
Crewe
CW1 6GZ
UK

Tel: +44 (0)1270 580008
Reference: IN1376

Consignee:

University of Texas Austin
Marine Science Institute
ATTN Rocio Torres
750 Channel View Drive Rm 223
Port Aransas, TX 78373
USA

Contact Name: ATTN PO: 2026C00752
Contact Tel Number: 703-734-1088

BOX: 2

Quantity	Product Code	Product Description	Serial Number: if available
☒	10802/8	CryoFlex	10802/8-2025/1376

Packed by:

Date:

29/01/26

Claims for damage or shortages must be made within 3 days



S035b_v6

Sercon Limited
Europa House, Coppicemere Drive
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CW1 6GZ, U.K.
Company Registration No.: 4290072

Phone: +44 (0) 1270 580008

sales@sercongroup.com
www.sercongroup.com
VAT No.: 771 1100 74
19/01/2017

Packing List

Customer Reference: 19730416

Shipper / Exporter:

Sercon Limited
Europa House
Coppicemere Drive
Crewe
CW1 6GZ
UK

Tel: +44 (0)1270 580008
Reference: IN1376

Consignee:

University of Texas Austin
Marine Science Institute
ATTN Rocio Torres
750 Channel View Drive Rm 223
Port Aransas, TX 78373
USA

Contact Name: ATTN PO: 2026C00752
Contact Tel Number: 703-734-1088

BOX: 4

Quantity	Product Code	Product Description	Serial Number: if available
☒ 1	SI2918	PC (Software backup inside PC box)	BK6PKC4
☒ 1	SI2391	Monitor (Windows recovery inside pc box)	RSOHR8GY
☒ 1	10202-S	Autosampler	42710
☒ 6	SI2510	US mains cable	
☒ 1	SI1198	GC column	
☒ 1	SI0219	Dewar	
☒ 1	71001-6	Cryo LA start up kit	
☒ 1	70501-1	Consumables kit for C+N	
☒ 1	70501-3	Sample prep kit	
☒ 1	70201-1	Analyser spares kit	
☒ 1	SI0685	Electromagnet	147
☒ 1	SI0103	Rotary pump + cable	250065854

Packed by:

Date:

29/01/20

Claims for damage or shortages must be made within 3 days

Works Order Picking List

Date: 15/01/2026

Time: 09:36:09

Works Order: WO02601
 Stock Code: 70501-1
 Description: Consumables for C and N for Combu
 Qty Required: 1.00 Each
 Qty Outstanding: 1.00
 Plan Period: WK3/2026
 Due Date: 05/02/2026

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

Manufacturing Instructions: IN1376 - University of Texas

SC0012 Reaction/Reduction Tube Transparent Heavy Wall Pk/1	3.00	Each	P-B2		3
SC0011 Quartz Liner Sleeve Insert Open Both Ends 15x180mm Pk/1	4.00	Each	P-B3		4
SC2495 Scrubber Tube 220mm	3.00	Each	P-B3		3
SC0074 O-Ring Set - ANCA SL/GSL (5xSC0046,5xSC0047,5xSC1395)	1.00	Each	P-B4		1
SC1410 O Ring Schott Type Silicone/PTFE 29013603 Pk/10	1.00	Each	P-B4		1
SC1421 Seal Viton Chamfered Square Profile-upper reaction tube Pk/5	1.00	Each	P-B4		1
SC0162 Magnesium Perchlorate Gran 0.7to1.2mm H2O Absorbent 25g	4.00	Each	PC-1	*	4
SC0001/E Chromium Oxide Granular 0.85-1.7mm 25g	2.00	Each	P-C1		2
SC0004 Quartz Chips Granular 50g	1.00	Each	P-C1		1
SC0003 Copper Oxide Fine Wires 100g	1.00	Each	P-C2		1
SC0024 Chromosorb W 30-60 Mesh Acid Washed 10g	1.00	Each	P-C3		1
SC2667 EMASorb II A Granular 20-30 mesh 25g	4.00	Each	P-C3	*	4
SC2668 EMASorb II B Granular 1.6-3mm 8-20 mesh CO2 25g	4.00	Each	P-C3	*	4
SC0006 Quartz Wool Very Fine 10g	1.00	Each	PD-1		1
SC0007 Silver Wool Very Fine Wire Unreeled 89 sqcm/g 10g	1.00	Each	PD-1		1
SC0009 Tin Capsules Pressed Std Wt 8 x 5mm Pk/250	2.00	Each	PD-1		2

Works Order Picking List

Date: 15/01/2026
Time: 09:36:09

Works Order: WO02601
Stock Code: 70501-1
Description: Consumables for C and N for Combu:
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK3/2026
Due Date: 05/02/2026

Stock Code / Description	Qty to Pick	Unit	Location	Qty Picked / By
SC0010 Tin Capsules Pressed Std Wt 6 x 4mm Pk/500	1.00	Each	PD-2	1
SC0002 Copper Wires Fine Wires Reduced 4 x 0.5mm 100g	2.00	Each	PD-3	2

All items picked and packed as marked:

Date: 3 / 2 / 26 Signed: P4

Stock Allocated, Issued, Completed:

Date: / / Signed:

★ DATA GOOD
PACKED SEPARATELY

Works Order Picking List

Date: 23/12/2025

Time: 14:54:26

Works Order: WO02465
Stock Code: 20402/4
Description: HS2022 + Hd Collector + E-Mag + Trc
Qty Required: 1.00 Each
Qty Outstanding: 1.00
Plan Period: WK24/2025
Due Date: 04/08/2025

<u>Stock Code / Description</u>	<u>Qty to Pick</u>	<u>Unit</u>	<u>Location</u>	<u>Qty Picked / By</u>
SI2512 3 Metre UK 13 amp Fused plug to IEC C 13	2.00	Each	Stores NCB	
70201-1 Analyser spares kit - Included	1.00	Each	Z	

All items picked and packed as marked:

Date: ____/____/____ Signed: _____

Stock Allocated, Issued, Completed:

Date: ____/____/____ Signed: _____

11 – Installation Report

Client:	University of Texas		
Quotation Number:		Date:	
Job Number:	IN1376	Date:	10 Aug 2026

Contact:	Ryan Hladyniuk		
Date of Visit:	10 Aug 2026	No. of Days:	9
Engineer:	Henry Connell Cooke		
System:	HS2022 (20402/4-2025/1376) Iso-EArth (10202/11-2025/1376) Cryo-Flex (10802/8-2025/1376) Elite Furnace Model TSV15/16/125 (3898/01/26) LSX-213 G2+ with Isosell (261211)		

Details of visit:

Day 1

- ☐ Arrived with all Sercon systems still in boxes and gas lines in place to the edge of the desk
- ☐ Each system (barring laser) was unboxed, inspected and lifted onto the table. No damage observed. Desk layout provides ample space around the back of each system, but not much space between systems to remove side panels
- ☐ PC set up and connection was established with 2022, Iso and Cryo without problem
- ☐ Source was removed, filament observed to look in good working condition so not replaced for new. A couple of barrels had loosened, but source looked otherwise unaffected by transit
- ☐ Oil added to rotary pump and installed
- ☐ Pumps switched on, but rotary did not start. System has been built for 240 V, supplied by customers own UPS, but UPS only provides 240 through a different sort of plug socket. Pumps cannot be switched on until a female IEC to NEMA 6-20P cable is purchased or made
- ☐ He, O₂, CO₂, N₂ and compressed air lines all made up and plumbed into the back of each system where required. Each line was leak checked with snoop/He detector, no leaks found
- ☐ Iso furnaces set to heat, to see if they would work at 120V. Furnaces heated very slowly and combustion plateaued around 750°C. Elite furnace wouldn't even start heating with 120V
- ☐ Cryo He plumbed in and GC installed, ~6mL/min going into the GC with ~2 mL/min making it out. GC baked out overnight

Day 2

- ☐ Customer obtains NEMA 6-20P plugs and rewires them into the cables that Sercon provided. HS2022, Iso and Elite furnace are now plugged into 240V as required
- ☐ Customer shown how to make combustion, reduction and water trap tubes. Furnaces are cleared of plastic debris from the top stopper that had not been removed before heating the day prior. Tubes are placed in furnace before heating
- ☐ Despite source being tested for continuity before switching on the pumps, a short circuit was found between HT and HP when vacuum reached 4.4E-7. Pumps switched off and source removed, with the top HP barrel being repositioned further away from the feedthrough. Source reinstated and system pumped down again
- ☐ Furnaces reach full temperature and pass a pressure test. Pressure increased from 25 to 34 PSI over 5 minutes pressurisation, before falling to 32 after 10 minutes of V6 being closed
- ☐ Since the filament was not new, source switched on at 3.2E-7 vacuum, and CO₂ peak observed. N₂ not tested until vacuum improved on day 3

Day 3

- ☐ System had lost comms overnight. HS2022 electronics restarted along with the PC, comms regained
- ☐ Vacuum of 8.2E-8 formed overnight
- ☐ Magnet positioning and tuning carried out to find good CO₂ and N₂ Peak shapes

11 – Installation Report

Client:	University of Texas		
Quotation Number:		Date:	
Job Number:	IN1376	Date:	10 Aug 2026

- Reference gas specs completed: Precision CO₂ = 0.01 ‰ and N₂ = 0.03 ‰. Linearity CO₂ = 0.09 ‰ and N₂ = 0.25 ‰. If you change linear regression from true to false for N₂. Linearity improves to 0.15 ‰, but precision becomes 0.06 ‰
- After only 3 blank runs, N₂ blank has a height of 8.2E-11
- Test samples dropped to observe combustion and set accurate windows. Good combustion and peak separation is observed. N₂ peak is slightly smaller than typical with a peak height of ~4 nA from 100 ug sample. CO₂ is a nice large peak surpassing 10nA from 400 ug
- Combustion precision ran: CO₂ = 0.04 ‰ and N₂ = 0.37 ‰
- N₂ retuned and another combustion precision ran overnight

Day 4

- Arrive to a vacuum of 5.8E-8
- N₂ combustion precision improved but still not passing at 0.25 ‰.
- Combustion Linearity also ran, N₂ = 0.24 ‰, but CO₂ had very poor 1.6 ‰. A couple of spikes were observed in the last two samples, for both CO₂ and N₂
- N₂ and CO₂ ref gas stability showed no sign of spiking, but spiking maintained in ref gas precision runs, even after restarting electronics and tightening the trapping loop crimp from 4.0E-6 to 3.1 E-6
- Pumps switched off and source removed. Cracked ceramic on the trap screw fell apart when loosening the screw, explaining intermittent spiking and HT voltage could arc to the trap. New ceramic and new filament installed; source reinstated and system pumped down
- After ~3 hours, system reached 1.6E-7 and filament was conditioned, taking 4 switches before firing

Day 5

- Arrived to a vacuum of 5.8E-8
- CO₂ and N₂ tuning completed. Ref gas precision CO₂ = 0.06 ‰ and N₂ = 0.05, Linearity CO₂ = 0.09, N₂ = 0.18
- Combustion linearity completed. N₂ = 0.11, CO₂ = 0.24 for n=5, removing the smallest sample, making the CO₂ linear working range 100 – 500 ug, or 6.8E-8 – 3.2E-7 beam area
- Customer ran their two smallest standards to see if losing the smallest sample from the linearity would be impactful. The first standard had a beam area of 1.19E-7, well within the working range. The second standard had a beam area of 2.6E-8, which is below the smallest failed sample from the linearity run anyway, (4.7E-8). Customer agreed they were happy with this linear working range.
- Combustion precision completed. N₂ = 0.12 ‰, CO₂ = 0.09 ‰ when replacing erroneous sample 3 with the final 'TEST' sample. Sample 3 was likely slightly contaminated, since it ~10% larger than the rest of the samples and is more than 1.0 away from the rest
- Dual RGI method created while providing customer software training. Customer ran their own material using new method, and achieved results with very good accuracy and precision

Day 6

- System lost comms over the weekend once again. Newest version of the software (60.0.2) installed, and 2022 USB was moved to a USB2 port
- Cryo system readbacks appear faulty. GC temps reads back random values 40-60°C without actually heating. EPC is correctly setting pressure but readbacks fluctuate from 0-11 PSI. New thermocouple does not change anything. Correct voltage is being supplied to the board whether the system is running at 120 or 240 V. New board is needed to heat the GC and provide accurate readbacks
- Teledyne engineer arrives and spends the day setting up the laser

Day 7

- Laser is setup ready to start sampling
- Customer shown how to make combustion tube, with just ~3 cm chromium oxide in the middle of the tube. Flow path is set up using peek tubing from laser into the furnace, and from furnace into the back of the cryo
- He flow from laser is initially set to 20 mL/min. No leaks are detected and flow out of V8 vent is 18.5
- Initial testing is completed at 10mL/min, with no peak observed. Laser flow increased to 20 mL/min and peak observed after the run had finished. Flow increased further to 30 mL/min and run time extended to 900 seconds. Peak observed with ~15 nA peak height and no tailing

11 – Installation Report

Client:	University of Texas		
Quotation Number:		Date:	
Job Number:	IN1376	Date:	10 Aug 2026

- Shipment did not include trigger cable. Trigger relay was replaced within the 2022 after it did not appear to light up, and individual wires are connected to/from the correct pins on the 2022 and laser, to emulate the trigger cable. Cable to be shipped ASAP
- Timings set up for RGI method with sample arriving after ~800 seconds. Test run overnight on IAEA C3 cellulose standard with a delta value of -24.7 vs PDB.
- Laser settings used as follows: Fluence = 6.06 J/cm² Rep rate = 10 Iteration Count = 1 Spot size = 100 um scan speed = 50 um/s line length 500 um

Day 8

- Overnight run of 10 samples shows good accuracy and precision overall. Two of the first three samples are inaccurate, but the following 7 give precision of 0.12 ‰ with an average value of -24.7, exactly as it should be.
- Customer runs their own samples with unknown delta values, to get used to laser functionality

Day 9

- Customer continues to run their own samples

Test	CO2 Precision ‰	N2 Precision ‰
Ref gas precision n = 5	0.06	0.05
Ref gas linearity n = 6	0.09	0.18
Combustion precision. 100 ug N, 400 ug C, n = 5	0.09	0.12
Combustion linearity. 20 – 200 ug N, n=6, 100-500 ug C, n = 5	0.24	0.20
Laser ablation. RGI n = 7	0.12	N/A

Recommendations:

- Customer is warned that potential problems with air conditioning will affect stability and sample results.
- Customer is warned that systems are too close together to properly access side panels, potentially causing problems if maintenance is needed

Faults and Shortages:

- New board to be sent out to replace faulty Cryo board. To be replaced by customer
- Trigger cable to be sent out

Follow up:

Please contact me at henry.cooke@sercongroup.com or service@sercongroup.com if you need any further guidance or have any questions. Especially reach out regarding the replacement of the Cryo board and addition of the trigger cable, and keep in touch with questions/updates regarding CO method development.

Engineer:

Henry Cooke

Date: 20 Aug 2026

Signed:

Henry Connell Cooke

12 – Installation Acceptance and Warranty Certificate

Client:	University of Texas		
Quotation Number:	19730416	Date:	12 Jan 2026
Job Number:	IN1376	Date:	10 Aug 2026

Contact:	Ryan Hladyniuk
System:	HS2022 (20402/4-2025/1376) Iso-EArth (10202/11-2025/1376) Cryo-Flex (10802/8-2025/1376) Elite Furnace Model TSV15/16/125 (3898/01/26) IsoSell
Software:	Callisto V 60.0.2
Engineer:	Henry Connell Cooke
Installation Date:	20 Aug 2026

Warranty commences:	20 Aug 2026
Warranty Expires:	19 Aug 2028

Customer Acceptance:

Name: Ryan Hladyniuk
 Signature: 
 Date: 08/20/2026

Engineer's Signature: On behalf of Sercon Limited

Name: Henry Connell Cooke
 Signature: 
 Date: 20 Aug 2026

Notes:

LSX-213 G2+ was installed in tandem with this system, but it's warranty is not covered by Sercon