ABCA2 Maintenance Report

Job Number:	SE0741 (ABCA 1 SERVICE)		
Customer:	Biomnis, Lyon, France		
Instrument Serial #	20601-201001	Gas Box Serial #	10601-201002
ASX 7400 Serial #	041103A7400	Software Version	V600.0.115
Contact:	Pauline Marini		
Date of Visit:	17/11/2026	Days:	3
Engineer:	Thomas Iordanidis		

Pre Maintenance Checks

Initial Tuning Parameters:

HT	2623	IR	-3.8
Focus	84	eV	-85
HP	42	Trap	200
Emission	710.6		
Vacuum	1.0E-8 (3.1E-6 with v10 open)		

Initial Performance Evaluation

Peak Shape	Good	Sheet Number 1
Stability	Good	Sheet Number 2
Ref Gas Precision	0.108‰	Sheet Number 3
Linearity	0.738‰	Sheet Number 4
Breath Precision	0.192‰	Sheet Number 5

Maintenance Checklist		
Filament Change	Initial: TI	Date: 17/11/2026
Oil Change	Initial: TI	Date: 17/11/2026
Filament Condition	Initial: TI	Date: 18/11/2026
Tune Optimisation	Initial: TI	Date: 18/11/2026
Replace Syringe O Rings	Initial: TI	Date: 18/11/2026
Gas Flow Check and Optimisation	Initial: TI	Date: 18/11/2026
Magnet Position Optimisation (If Applicable)	Initial: N/A	Date: N/A
System Leak Check	Initial: TI	Date: 18/11/2026

Final Performance Evaluation

HT	2624	IR	-3.8
Focus	86	eV	-85
HP	42	Trap	200
Emission	600.7		
Vacuum	8.2E-8 (2.7E-6 with v10 open)		

Final Performance Evaluation

Peak Shape	Good	Sheet Number 6
Stability	Good	Sheet Number 7
Ref Gas Precision	0.024‰	Sheet Number 8
In Tube Precision	0.034‰	Sheet number 9
Sensitivity	10nA	Sheet Number 10
Linearity	0.378‰ (n=5)	Sheet Number 11
Breath Precision	0.065‰	Sheet Number 12

Faults and Issues:
Slow pumper – make sure that the vacuum settles at ~E-8s
Follow Up:
Service: • System in good condition, no issues reported by customer, with good pre-service specifications, Pump speed readback 71k – customer is aware • Service commenced – Changed rotary pump oil, filament, grub screws, copper gasket, sample inlet ferrule & source screws • Vacuum reached ~2.3E-7 by the start of day 2 • Filament conditioned at a vacuum of ~2.3E-7 with good emissions & source continuity checked on bench top & in flight tube – all okay • Vacuum reached ~8.2E-8 by day 3 – all okay – still pumping down (slow pumper) • Syringe and block O-rings replaced and leak checked -all okay • System passed all specifications with new filament (see results above) • System handed back over to customer for normal use **ABCA4:** Upon customers request after some random results, specifications ran on ABCA4 to assess system performance. Very good specifications were met showing that the system is working as expected, could be a sample issue or just a random result. Specs: Ref Gas Precision (0.077), Breath Precision (0.075), 5% Precision (0.072), Linearity (0.356 n=5), Sensitivity (20.8nA). Please contact us at service@sercongroup.com if you have any future questions or problems with this system going forwards

Engineer:	Thomas Iordanidis	Date:	19/11/2026
Signed:			
Customer:	Pauline Marini	Date:	19/11/2026
Signed:			