

ABCA2 Maintenance Report

Job Number:	SE0735		
Customer:	CHU Brugmann		
Instrument Serial #	20602-201410	Gas Box Serial #	10602-2018/1200
ASX 7400 Serial #	031103A7400	Software Version	V600.0.110
Contact:	Peter Vereecken, Edmée Delmotte		
Date of Visit:	12/08/2026	Days:	2
Engineer:	Thomas Iordanidis		

Pre Maintenance Checks

Initial Tuning Parameters:

HT	2646	IR	-1.8
Focus	87	eV	-80
HP	-20	Trap	200
Emission	854.7		
Vacuum	1.0E-8		

Initial Performance Evaluation

Peak Shape	Good	Sheet Number 1
Stability	Good	Sheet Number 2
Ref Gas Precision	0.05	Sheet Number 3
Linearity	0.38	Sheet Number 4
Breath Precision	0.05	Sheet Number 5

Maintenance Checklist																																												
Filament Change	Initial: TI	Date: 12/08/2026																																										
Oil Change	Initial: TI	Date: 12/08/2026																																										
Filament Condition	Initial: TI	Date: 12/08/2026																																										
Tune Optimisation	Initial: TI	Date: 13/08/2026																																										
Replace Syringe O Rings	Initial: TI	Date: 12/08/2026																																										
Gas Flow Check and Optimisation	Initial: TI	Date: 13/08/2026																																										
Magnet Position Optimisation (If Applicable)	Initial: TI	Date: N/A																																										
System Leak Check	Initial: TI	Date: 13/08/2026																																										
Final Performance Evaluation <table> <tbody> <tr> <td>HT</td> <td>2649</td> <td>IR</td> <td>-1.2</td> </tr> <tr> <td>Focus</td> <td>87</td> <td>eV</td> <td>-80</td> </tr> <tr> <td>HP</td> <td>-20</td> <td>Trap</td> <td>200</td> </tr> <tr> <td>Emission</td> <td>471.3</td> <td></td> <td></td> </tr> <tr> <td>Vacuum</td> <td>2.4E-8</td> <td></td> <td></td> </tr> </tbody> </table> Final Performance Evaluation <table> <tbody> <tr> <td>Peak Shape</td> <td>Good</td> <td>Sheet Number 6</td> </tr> <tr> <td>Stability</td> <td>Good</td> <td>Sheet Number 7</td> </tr> <tr> <td>Ref Gas Precision</td> <td>0.02</td> <td>Sheet Number 8</td> </tr> <tr> <td>In Tube Precision</td> <td>0.03</td> <td>Sheet number 9</td> </tr> <tr> <td>Sensitivity</td> <td>20nA</td> <td>Sheet Number 10</td> </tr> <tr> <td>Linearity</td> <td>0.43</td> <td>Sheet Number 11</td> </tr> <tr> <td>Breath Precision</td> <td>0.05</td> <td>Sheet Number 12</td> </tr> </tbody> </table>				HT	2649	IR	-1.2	Focus	87	eV	-80	HP	-20	Trap	200	Emission	471.3			Vacuum	2.4E-8			Peak Shape	Good	Sheet Number 6	Stability	Good	Sheet Number 7	Ref Gas Precision	0.02	Sheet Number 8	In Tube Precision	0.03	Sheet number 9	Sensitivity	20nA	Sheet Number 10	Linearity	0.43	Sheet Number 11	Breath Precision	0.05	Sheet Number 12
HT	2649	IR	-1.2																																									
Focus	87	eV	-80																																									
HP	-20	Trap	200																																									
Emission	471.3																																											
Vacuum	2.4E-8																																											
Peak Shape	Good	Sheet Number 6																																										
Stability	Good	Sheet Number 7																																										
Ref Gas Precision	0.02	Sheet Number 8																																										
In Tube Precision	0.03	Sheet number 9																																										
Sensitivity	20nA	Sheet Number 10																																										
Linearity	0.43	Sheet Number 11																																										
Breath Precision	0.05	Sheet Number 12																																										

Faults and Issues:
Service:

- System in good condition with good pre-service specifications
- Service commenced – Changed rotary pump oil, filament, grub screws, copper gasket, sample inlet ferrule & source screws
- Filament conditioned at a vacuum of $\sim 1.2\text{E-}7$ & continuity checked – all okay
- Vacuum reached $\sim 2.4\text{E-}8$ by the start of day 2
- Syringe wing nut rusted and rounded due to a flood in the lab 2 years ago. Managed to remove it and syringe was found very dirty with a disintegrated O-ring – cleaned with methanol, new O-rings on plunger and block, new wing nut installed to keep block stable, screw to be replaced on next visit, leak checked – all okay
- System passed all specifications with new filament (see results above)
- System handed back over to customer

A significant amount of oil was found to have leaked into your rotary pump tray this was cleaned and every connection was tightened, O-ring inspected and seems to be in good condition – please monitor the oil levels – old oil slight discolouration but nothing significant

Follow Up:

Flow meter has not worked since flood in 2024. 1 new flow meter and cable were fitted but there was still no readback or calibration – re-fitted original parts. It is possible that the cable coming from the back of the ABCA is the issue – you can order one and try this yourselves or wait until the next visit – this does not affect system performance/monitor Helium cylinder levels

Please contact us at service@sercongroup.com if you have any future questions or problems with this system going forwards

Engineer:	Thomas Iordanidis	Date:	13/08/2026
Signed:			
Customer:		Date:	13/09/26
Signed:	C.H.U. BRUGMANN U.V.C. VERECKEN PETER SERVICE BIOTECHNIQUE DIENST BIOTECHNIEK 02/477.25.84		