

# Field-test of PlasmaQuant MS Q argon gas usage

As all drivers know, the mileage your car achieves in reality may be different to the manufacturers claim; so we decided to field-test our PQ ICP-MS Q. The premise was simple, we would use a new 147 L argon tank and record how long the plasma ran for before the tank was empty. The PQ ICP-MS was operated on 3 separate days over a period of about 2 weeks. The total run time was about 15 hrs.

Day 1 19<sup>th</sup> March  
2025  
New 147L Ar  
cylinder



Day 1 19<sup>th</sup> March  
2025  
Regulator fitted



19 March 2025 12:17 pm

Day 1 19<sup>th</sup>  
March 2025  
Cylinder  
open



19 March 2025 12:18 pm

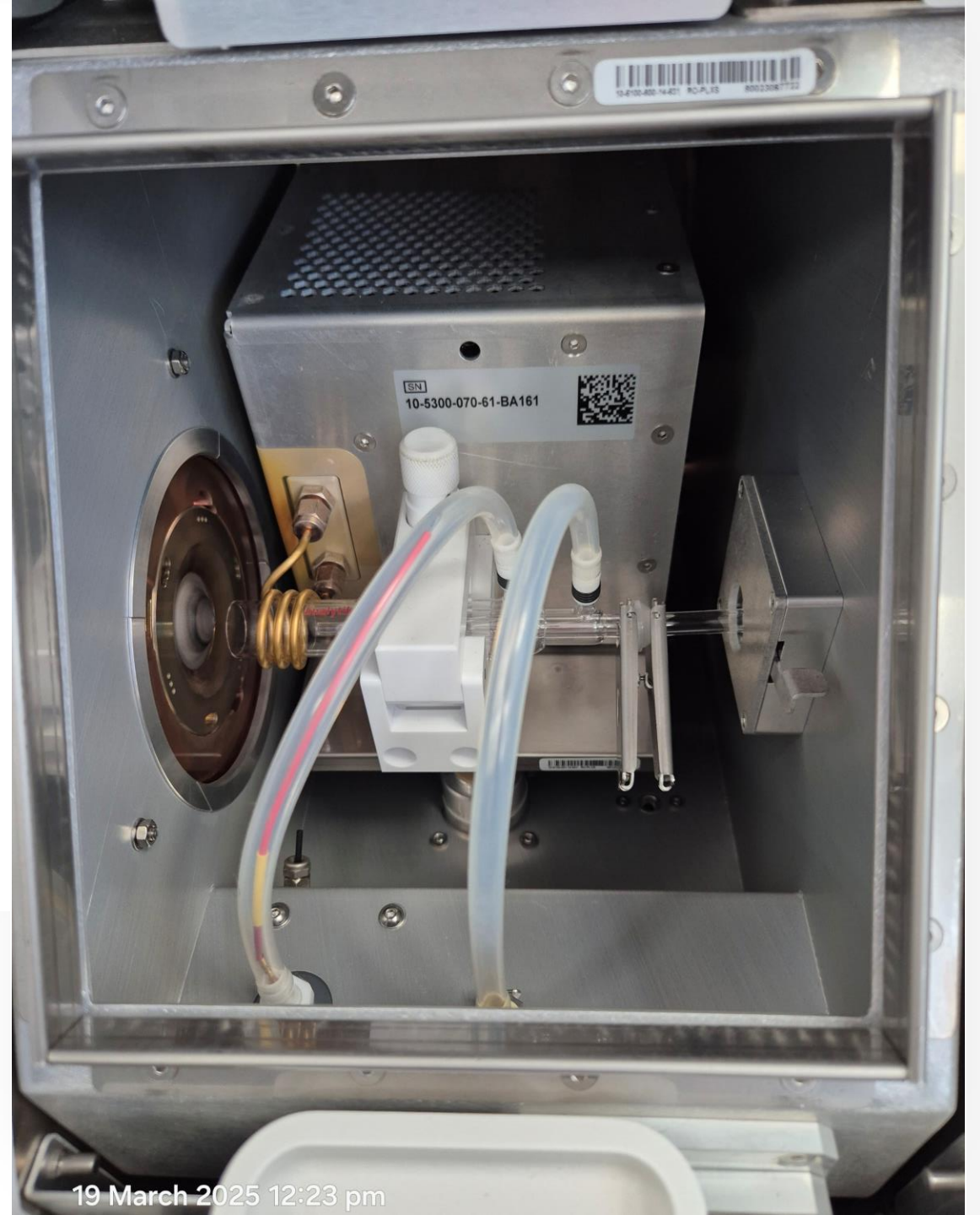
Day 1 19<sup>th</sup> March  
2025 Internal  
regulator set to 6  
bar (90 psi)



Day 1 19<sup>th</sup> March  
2025  
PlasmaQuant MS  
Q @ SciMed,  
Stockport, UK



# Day 1 19<sup>th</sup> March 2025 Torch assembly



Day 1 19<sup>th</sup>  
March 2025  
12.44  
0 hrs run  
Plasma on



Day 1 19<sup>th</sup>  
March 2025  
15.14  
3 hrs run.  
Pressure 150  
bar (2200 psi)



Day 1 19<sup>th</sup>  
March 2025  
18.11  
Plasma  
running



Day 1 19<sup>th</sup>  
March 2025  
18.13  
Plasma Off



Day 1 19<sup>th</sup>  
March 2025  
18.14  
**6 hrs 30 min**  
run time



Day 2 20<sup>th</sup>  
March 2025  
11.07 am



Day 2 20<sup>th</sup>  
March 2025  
11.13  
Plasma on



20 March 2025 11:13 am

Day 2 20<sup>th</sup> March  
2025  
15.40  
Run time 6 hr 30  
mins + 4 hrs 27 min  
= 10 hrs 57 min



20 March 2025 3:40 pm

Day 2 20<sup>th</sup> March  
2025

16.20

Run time 6 hr 30  
mins + 5 hrs 7 min  
= **11 hrs 37 min**



20 March 2025 4:20 pm

Day 3 3<sup>rd</sup> April  
2025  
13.26  
90 bar (1200 psi)



02 April 2025 1:26 pm

Day 3 2<sup>nd</sup> April 2025  
13.30 plasma on  
Run time 11 hrs 37  
min



02 April 2025 1:30 pm

Day 3 2<sup>nd</sup> April 2025

15.32

Plasma failed due to  
insufficient argon  
pressure

Run time 11 hrs 37  
min + 3 hrs 2 min =

**14 hrs 39 mins**

