

Gas Analysis
 Performance Data Sheet PDS-300012

Results for a Standard QGA Pre and Post Bakeout

m/z	Species of Interest	Pre-bake ppm	Post-bake ppm
Carrier	⁴⁰ Ar	100%	100%
2	H ₂	1147.9	1508.1
3	HD/H ₃	0.2	0.3
4	He	<0.1	<0.1
12	C	1.2	0.7
13	¹³ C	8.3	8.6
14	N	1.3	0.9
15	CH ₃	2.1	1.9
16	CH ₄ /O	8.3	3.9
17	NH ₃ /OH	65.5	11.8
18	H ₂ O/ ³⁶ Ar ⁺⁺	1024.3	750.6
18	H ₂ O	284.6	51.2
19	H ₃ O/F	159.7	154.6
20	Ne/Ar ⁺⁺	186845	182088
28	N ₂ /CO	26.7	21.7
30	NO	1.6	0.4
32	O ₂	3.5	1.1
34	PH ₃ /H ₂ S	<0.1	<0.1
35	³⁵ Cl	6.6	10.1
36	³⁶ Ar	3525.9	3366.5
37	³⁷ Cl	2.2	2.9
38	³⁸ Ar	652.5	610.8
44	CO ₂	16.9	7.7
45	¹³ CO ₂	0.3	0.1
57	Hydrocarbons	<0.1	<0.1
64	³² SO ₂	0.1	<0.1
69	CF ₄	<0.1	<0.1
78	C ₆ H ₆	<0.1	<0.1
84	Kr	<0.1	<0.1

The table of results shows data collected post-bakeout for a standard QGA system. This system consisted of:

- HAL 201 gauge with an open ion source
- Standard capillary
- EXT75H turbo
- nXDS6i scroll pump

The system was run on BIP+ Argon for a period of 72 hours, all impurities in the carrier gas are <0.01 ppm. The system manifold then underwent an overnight (16 hours) bake-out and the measurements repeated over another 72-hour period. During testing, total pressure of the system was 3.5E-6 mbar.