

4 - LOG SHEET

Client:	Chongqiang University C/O: LabTech		
Quotation Number:	15187	Date:	09/12/2021
Job Number:	IN1274	Date:	11/01/2022

Date	Action Taken	By Whom
11.4.22	Instrument has Agilent Pumping System on	SM
	The Software has been modified to read Agilent gauges and can now be selected under System options	SM
	The Agilent gauges turn on by the solts At E-03 but gauge relays are also required to activate to disable interlocks	SM
	Instrument Pumps down to 2.0008 Acceptable Vacuum	
19.4.22	ref gas lines Plumbed in All Flows and crimps Set on ref Side lots of loose 1/16 cups	SM
20.4.22	E-mag on CO2 Peak Found CO2 peak ok ✓ Stability 2/1 ok ✓	SM SM
	Ref gas Precision Put on CO2. 0.06% ✓	SM
	CO2 Ref Lin 0.20% ✓	SM
	N2 Peak Great Ref prec 0.06 ✓	
	Ref Lin. 0.24	SM

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05 May 22	Set up Cryo Prep system start. Make up CO + CO ₂ scrubber tubes + fit Connect up lines to tubes. Bypass furnace with 30 thou Air plumping to Cryo loops fitted incorrectly → Rejigged ok now.	DJH
06 May 22	Fitted needle to autosampler. Cal flows after setting crimps	DJH
09 May 22	Carry on setting up flows. Fitted GC columns. Passes leak test → OK	DJH
10 May 22	Software set up incorrectly. Adjusted bot map. V9 + V11 back to front. Furnace not working → Not wired incorrectly. Rewired → Now OK Thermocouple for GC oven + Furnace wired back to front on prep board. Swapped to correct config. Now OK. Fitted 6 thou to source from Cryo Prep.	DJH
11 May 22	Conditioned GC columns → OK GC oven → OK Config Auto sampler alignment → OK Blank sample → OK.	DJH
17 May 22	Auto sampler software froze overnight Re start fixes. Updated Wayne 2 software. Flows seem ok but flow meter will not cal correctly. Possible leak? Auto Sampler Freezers need run Wayne informed. Run N ₂ (in Air) + N ₂ O batch. Results not great. Seem low Sens sensor on N ₂ O. Looked for leaks Loop 3 seems to be blocked. Refitted. Opened up inlet crimp to allow 2.5 c.c. min in to source. Adjusted timings (now quicker sampling)	DJH

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13 May 22	Re visit tuning. N_2 peak not great. Moved magnet. Check pres. seems ok with sample isolation value sent, color increases with sample isolation value open. Re adjusted sam isolation value crimp. Vac waves around a bit (could be down to new type of turbo) + read back? Possible drift on energy/HT position? Run N_2 in Air only sample batch. Results good @ 0.035 % s.d. Set off N_2 (in air) + N_2O batch	DJH
24/5/22	Run air samples in N_2/N_2O mode and no peaks are present. Checked source tuning and re-tuned. Still no peaks? Started leak checking as per manual VI.1 p15 System leak tight no pressure drop over 10 minutes. Leak checked every portion all fixed. Cryolocks catching each other and not fully operating. loops reared and now working well	SB Sai/SB
25/5/22	Tuned source & checked system prep'd for 10 sample run of air from outspark. Tried to run system but ran out of liquid nitrogen.	SB
27 MAY 22	Nation loose + small leak. Re plumbed seems okay now. Re-jigged plumbing to include loop for carrier flow crimp. peaks present. Set off batch over weekend	DJH

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30 May 22	Batch results improved from other runs but still fail for N_2O . N_2 pass @ 0.057%. $N(N_2O) = 1.418\%$. $O(N_2O) = 2.758\%$. Found that needle had cracked and was leaking. Replaced for new. Sample peaks improved. Adjusted flush speed by upping pressure to 12psi GC flow @ 1ml/min. Set off run but fail due to autosampler freezing. WM informed error message seen. Log set off to monitor.	DDH
31 May 22	Sampler range was > limit. This caused the move to fail. 160mm injection for 150mm MAX travel.	WM.
31 May 22	Batch set off N_2 from air (still good) but large amounts of drift seen on N_2O results.	DDH
01 Jun 22	Set GC oven to 30°C for run. Adjusted timing checked peaks & stability all ok 2/1 + 3/1 (N_2O running). Rechecked pressure tests. All ok. Re-run air samples 1.1 nA sample peak now obtained. Chromatogram peaks seen to be drifting. Set off new batch. Peaks seen stable now after flows adjusted.	DDH
15 Jun 22	Set vent valve opening delay to 1500 (5x60s) + checked Set Point Signal Activation Type. High HIGH.	WM.