

Software Version : 6.3.2.0646 Date : 31-Mar-24 3:32:15 PM
Operator : service Sample Name :
Sample Number : Study :
AutoSampler : Rack/Vial : 0/1
Instrument Name : Channel : A
Interface Serial # : A/D mV Range : 1000
Delay Time : 0.00 min End Time : 8.50 min
Sampling Rate : 10.0006 pts/s
Sample Volume : 1.000000 µL
Sample Amount : 1.0000
Data Acquisition Time : 01-Jan-80 12:00:01 AM

Raw Data File : D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-3dat-SS420x.raw
Result File : D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-3dat-SS420x.rst [Editing in Progress]
Inst Method : DEFAULT from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-3dat-SS420x.raw
Proc Method : E:\Calibra from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-3dat-SS420x.rst [Editing in Progress]
Calib Method : E:\Calibration\Calibration QA HPL I 23 2016\Method\Software Cal from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-3dat-SS420x.rst [Editing in Progress]
Report Format File: DEFAULT.rpt
Sequence File :

DEFAULT REPORT

Peak #	Time [min]	Area [µV·s]	Height [µV]	Area [%]	Norm. Area [%]	BL	Area/Height [s]
1	0.073	24997.70	10003.00	0.02	0.02	BB	2.4990
2	0.137	50000.60	20003.00	0.04	0.04	BB	2.4997
3	0.227	75001.63	30003.28	0.06	0.06	BB	2.4998
4	0.313	100005.10	40004.00	0.08	0.08	BB	2.4999
5	0.393	125006.40	50003.44	0.10	0.10	BB	2.5000
6	0.493	150013.20	60006.00	0.12	0.12	BB	2.5000
7	0.567	175006.40	70003.00	0.14	0.14	BB	2.5000
8	0.670	200001.80	80002.00	0.16	0.16	BB	2.5000
9	0.732	225011.30	90004.00	0.18	0.18	BB	2.5000
10	0.837	250014.20	100006.00	0.20	0.20	BB	2.5000
11	0.907	275010.00	110004.00	0.22	0.22	BB	2.5000
12	0.982	300011.80	120003.00	0.24	0.24	BB	2.5000
13	1.067	325018.00	130005.00	0.26	0.26	BB	2.5000
14	1.160	350017.20	140005.00	0.28	0.28	BB	2.5000
15	1.240	375012.70	150003.00	0.30	0.30	BB	2.5000
16	1.330	400022.00	160006.00	0.32	0.32	BB	2.5000
17	1.415	425026.10	170006.00	0.34	0.34	BB	2.5001
18	1.498	450024.20	180005.53	0.36	0.36	BB	2.5001
19	1.570	475024.40	190005.84	0.38	0.38	BB	2.5001
20	1.668	500026.10	200005.61	0.40	0.40	BB	2.5001
21	1.747	525021.00	210002.00	0.42	0.42	BB	2.5001
22	1.818	550026.20	220004.00	0.44	0.44	BB	2.5001
23	1.915	575025.00	230005.53	0.46	0.46	BB	2.5000
24	2.000	600024.65	240003.52	0.48	0.48	BB	2.5001
25	2.080	625029.30	250004.00	0.50	0.50	BB	2.5001
26	2.158	650029.80	260003.00	0.51	0.51	BB	2.5001
27	2.253	675021.31	270002.49	0.53	0.53	BB	2.5001
28	2.334	700033.41	282093.00	0.55	0.55	BB	2.4816
29	2.415	725033.31	290004.51	0.57	0.57	BB	2.5001
30	2.492	750037.56	300004.61	0.59	0.59	BB	2.5001
31	2.573	775030.31	310003.35	0.61	0.61	BB	2.5001
32	2.660	800041.71	320007.00	0.63	0.63	BB	2.5001
33	2.753	825043.21	330006.00	0.65	0.65	BB	2.5001
34	2.818	850043.21	340004.68	0.67	0.67	BB	2.5001
35	2.915	875034.51	350004.06	0.69	0.69	BB	2.5001
36	3.003	900034.81	360004.06	0.71	0.71	BB	2.5001
37	3.077	925041.11	370003.45	0.73	0.73	BB	2.5001
38	3.159	950044.41	380003.38	0.75	0.75	BB	2.5001
39	3.240	975038.31	390002.83	0.77	0.77	BB	2.5001
40	3.326	1000029.26	400000.07	0.79	0.79	BB	2.5001
41	3.413	1025044.51	410002.18	0.81	0.81	BB	2.5001
42	3.498	1050040.31	420000.49	0.83	0.83	BB	2.5001
43	3.582	1075030.06	431962.69	0.85	0.85	BB	2.4887
44	3.649	1100028.51	439998.98	0.87	0.87	BB	2.5001
45	3.746	1125031.26	449998.18	0.89	0.89	BB	2.5001
46	3.823	1150035.31	459997.84	0.91	0.91	BB	2.5001

31-Mar-24 3:32:15 PM Result: D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-3dat-SS420x.rst

Peak #	Time [min]	Area [µV·s]	Height [µV]	Area [%]	Norm. Area [%]	BL	Area/Height [s]
47	3.907	1175033.31	469999.61	0.93	0.93	BB	2.5001
48	3.998	1200020.31	481887.91	0.95	0.95	BB	2.4902
49	4.080	1225024.41	489994.04	0.97	0.97	BB	2.5001
50	4.156	1250030.51	499995.49	0.99	0.99	BB	2.5001
51	4.249	1275030.81	509997.61	1.01	1.01	BB	2.5001
52	4.334	1300018.41	521958.18	1.03	1.03	BB	2.4907
53	4.415	1325031.61	529996.06	1.05	1.05	BB	2.5001
54	4.493	1350034.41	539995.49	1.07	1.07	BB	2.5001
55	4.585	1375027.41	590495.94	1.09	1.09	BB	2.3286
56	4.661	1400021.41	559995.49	1.11	1.11	BB	2.5001
57	4.742	1425024.61	569993.60	1.13	1.13	BB	2.5001
58	4.833	1450027.81	579991.84	1.15	1.15	BB	2.5001
59	4.910	1475021.76	589992.42	1.17	1.17	BB	2.5001
60	4.993	1500016.76	599993.07	1.19	1.19	BB	2.5001
61	5.081	1525022.56	609992.05	1.21	1.21	BB	2.5001
62	5.167	1550029.71	621665.25	1.23	1.23	BB	2.4934
63	5.238	1575017.07	629988.82	1.25	1.25	BB	2.5001
64	5.319	1600017.42	639991.69	1.27	1.27	BB	2.5001
65	5.406	1625023.22	649992.08	1.29	1.29	BB	2.5001
66	5.500	1650034.71	659993.55	1.31	1.31	BB	2.5001
67	5.580	1675022.42	669991.12	1.33	1.33	BB	2.5001
68	5.665	1700024.92	679995.53	1.35	1.35	BB	2.5001
69	5.745	1725030.12	689994.41	1.37	1.37	BB	2.5001
70	5.827	1750035.97	699992.70	1.39	1.39	BB	2.5001
71	5.918	1775028.87	756493.18	1.41	1.41	BB	2.3464
72	5.996	1800018.92	719992.63	1.43	1.43	BB	2.5001
73	6.072	1825036.32	729995.45	1.45	1.45	BB	2.5001
74	6.162	1850044.02	739994.84	1.47	1.47	BB	2.5001
75	6.237	1875039.47	749993.64	1.49	1.49	BB	2.5001
76	6.330	1900028.32	759994.93	1.50	1.50	BB	2.5001
77	6.412	1925030.22	769993.18	1.52	1.52	BB	2.5001
78	6.497	1950052.67	779996.16	1.54	1.54	BB	2.5001
79	6.573	1975046.02	789994.76	1.56	1.56	BB	2.5001
80	6.666	2000034.12	799996.06	1.58	1.58	BB	2.5001
81	6.747	2025041.12	809996.98	1.60	1.60	BB	2.5001
82	6.833	2050055.82	820981.00	1.62	1.62	BB	2.4971
83	6.915	2075052.07	829995.60	1.64	1.64	BB	2.5001
84	6.996	2100037.42	839996.12	1.66	1.66	BB	2.5001
85	7.072	2125034.27	849993.49	1.68	1.68	BB	2.5001
86	7.163	2150056.52	859996.06	1.70	1.70	BB	2.5001
87	7.241	2175056.12	869995.97	1.72	1.72	BB	2.5001
88	7.330	2200043.47	879996.05	1.74	1.74	BB	2.5001
89	7.411	2225043.32	889995.61	1.76	1.76	BB	2.5001
90	7.491	2250061.82	899995.70	1.78	1.78	BB	2.5001
91	7.585	2275064.87	959657.94	1.80	1.80	BB	2.3707
92	7.666	2300049.12	919997.02	1.82	1.82	BB	2.5001
93	7.748	2325046.32	930584.44	1.84	1.84	BB	2.4985
94	7.829	2350057.42	939994.61	1.86	1.86	BB	2.5001
95	7.913	2375060.12	949994.06	1.88	1.88	BB	2.5001
96	8.001	2400052.57	959995.58	1.90	1.90	BB	2.5001
97	8.071	2425042.42	969993.12	1.92	1.92	BB	2.5001
98	8.151	2450063.52	979994.32	1.94	1.94	BB	2.5001
99	8.234	2475068.42	989993.98	1.96	1.96	BB	2.5001
100	8.319	2500063.07	999996.27	1.98	1.98	BB	2.5001

1.26e+08 5.06e+07 100.00 100.00

Warning -- Signal level out-of-range in peak

Missing Component Report
Component Expected Retention (Calibration File)

All components were found

Software Version : 6.3.2.0646 Date : 31-Mar-24 3:33:11 PM
Operator : service Sample Name :
Sample Number : Study :
AutoSampler : Rack/Vial : 0/1
Instrument Name : Channel : A
Interface Serial # : A/D mV Range : 1000
Delay Time : 0.00 min End Time : 8.50 min
Sampling Rate : 10.0006 pts/s
Sample Volume : 1.000000 µL
Sample Amount : 1.0000
Data Acquisition Time : 01-Jan-80 12:00:01 AM

Area Reject : 0.000000
Dilution Factor : 1.00
Cycle : 1

Raw Data File : D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-4dat-SS420x.raw
Result File : D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-4dat-SS420x.rst [Editing in Progress]
Inst Method : DEFAULT from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-4dat-SS420x.raw
Proc Method : E:\Calibra from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-4dat-SS420x.rst [Editing in Progress]
Calib Method : E:\Calibration\Calibration QA HPL I 23 2016\Method\Software Cal from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-4dat-SS420x.rst [Editing in Progress]
Report Format File: DEFAULT.rpt
Sequence File :

DEFAULT REPORT

Peak #	Time [min]	Area [µV·s]	Height [µV]	Area [%]	Norm. Area [%]	BL	Area/Height [s]
1	0.105	24992.60	10001.00	0.02	0.02	BB	2.4990
2	0.220	49998.20	20003.00	0.04	0.04	BB	2.4995
3	0.300	75002.10	30004.00	0.06	0.06	BB	2.4997
4	0.363	100003.10	40003.00	0.08	0.08	BB	2.4999
5	0.455	125005.40	50004.00	0.10	0.10	BB	2.4999
6	0.547	150006.70	60005.00	0.12	0.12	BB	2.4999
7	0.630	175005.90	70003.00	0.14	0.14	BB	2.5000
8	0.712	200005.80	80003.00	0.16	0.16	BB	2.5000
9	0.800	225010.40	90005.00	0.18	0.18	BB	2.5000
10	0.870	250016.20	100006.00	0.20	0.20	BB	2.5000
11	0.967	275012.90	110004.00	0.22	0.22	BB	2.5000
12	1.050	300011.20	120002.47	0.24	0.24	BB	2.5000
13	1.133	325015.30	130005.47	0.26	0.26	BB	2.5000
14	1.202	350019.20	140004.49	0.28	0.28	BB	2.5001
15	1.290	375018.40	150003.14	0.30	0.30	BB	2.5001
16	1.377	400023.35	160005.39	0.32	0.32	BB	2.5001
17	1.462	425016.10	170004.12	0.34	0.34	BB	2.5000
18	1.548	450019.80	180004.61	0.36	0.36	BB	2.5000
19	1.637	475029.15	190006.52	0.38	0.38	BB	2.5001
20	1.722	500024.75	200005.59	0.40	0.40	BB	2.5001
21	1.798	525018.70	210003.00	0.42	0.42	BB	2.5001
22	1.882	550022.65	220003.42	0.44	0.44	BB	2.5001
23	1.972	575030.10	230005.00	0.46	0.46	BB	2.5001
24	2.047	600027.40	240003.60	0.48	0.48	BB	2.5001
25	2.128	625022.06	250002.44	0.50	0.50	BB	2.5001
26	2.220	650020.41	260002.06	0.51	0.51	BB	2.5001
27	2.304	675022.61	270000.77	0.53	0.53	BB	2.5001
28	2.383	700038.40	280006.00	0.55	0.55	BB	2.5001
29	2.469	725024.01	290002.02	0.57	0.57	BB	2.5001
30	2.550	750032.31	300004.45	0.59	0.59	BB	2.5001
31	2.630	775013.51	309997.45	0.61	0.61	BB	2.5001
32	2.718	800041.31	320005.06	0.63	0.63	BB	2.5001
33	2.802	825031.91	330002.96	0.65	0.65	BB	2.5001
34	2.880	850033.61	340003.49	0.67	0.67	BB	2.5001
35	2.970	875037.91	350003.49	0.69	0.69	BB	2.5001
36	3.050	900036.51	360001.76	0.71	0.71	BB	2.5001
37	3.138	925032.01	370002.57	0.73	0.73	BB	2.5001
38	3.215	950033.21	380003.31	0.75	0.75	BB	2.5001
39	3.298	975036.46	390001.64	0.77	0.77	BB	2.5001
40	3.381	1000031.71	399998.49	0.79	0.79	BB	2.5001
41	3.472	1025031.51	420329.37	0.81	0.81	BB	2.4386
42	3.548	1050031.46	420000.88	0.83	0.83	BB	2.5001
43	3.628	1075028.91	429997.12	0.85	0.85	BB	2.5001
44	3.723	1100035.96	439998.51	0.87	0.87	BB	2.5001
45	3.800	1125028.06	449997.20	0.89	0.89	BB	2.5001
46	3.883	1150024.06	459996.79	0.91	0.91	BB	2.5001

31-Mar-24 3:33:11 PM Result: D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-4dat-SS420x.rst

Peak #	Time [min]	Area [µV·s]	Height [µV]	Area [%]	Norm. Area [%]	BL	Area/Height [s]
47	3.973	1175036.51	513926.16	0.93	0.93	BB	2.2864
48	4.052	1200031.61	479995.06	0.95	0.95	BB	2.5001
49	4.133	1225018.41	489993.06	0.97	0.97	BB	2.5001
50	4.218	1250021.01	499996.12	0.99	0.99	BB	2.5001
51	4.298	1275029.01	509995.45	1.01	1.01	BB	2.5001
52	4.373	1300023.01	519991.00	1.03	1.03	BB	2.5001
53	4.461	1325022.36	529992.88	1.05	1.05	BB	2.5001
54	4.548	1350017.86	539994.49	1.07	1.07	BB	2.5001
55	4.639	1375025.81	560832.83	1.09	1.09	BB	2.4518
56	4.714	1400028.11	559992.78	1.11	1.11	BB	2.5001
57	4.801	1425018.11	569991.49	1.13	1.13	BB	2.5001
58	4.873	1450008.66	579989.34	1.15	1.15	BB	2.5001
59	4.960	1475022.61	589990.49	1.17	1.17	BB	2.5001
60	5.058	1500033.66	599992.52	1.19	1.19	BB	2.5001
61	5.138	1525021.61	609991.06	1.21	1.21	BB	2.5001
62	5.220	1550015.02	619992.06	1.23	1.23	BB	2.5001
63	5.293	1575017.62	629988.49	1.25	1.25	BB	2.5001
64	5.387	1600030.41	639991.84	1.27	1.27	BB	2.5001
65	5.468	1625026.02	649992.27	1.29	1.29	BB	2.5001
66	5.555	1650016.02	670545.04	1.31	1.31	BB	2.4607
67	5.627	1675018.32	669989.40	1.33	1.33	BB	2.5001
68	5.712	1700039.22	679993.38	1.35	1.35	BB	2.5001
69	5.800	1725029.32	689992.96	1.37	1.37	BB	2.5001
70	5.890	1750016.32	764850.78	1.39	1.39	BB	2.2880
71	5.962	1775022.52	709989.84	1.41	1.41	BB	2.5001
72	6.053	1800035.72	729393.12	1.43	1.43	BB	2.4679
73	6.135	1825039.12	729994.04	1.45	1.45	BB	2.5001
74	6.213	1850021.57	739992.72	1.47	1.47	BB	2.5001
75	6.297	1875029.32	749992.61	1.49	1.49	BB	2.5001
76	6.377	1900045.72	759994.98	1.50	1.50	BB	2.5001
77	6.470	1925034.32	769991.63	1.52	1.52	BB	2.5001
78	6.543	1950024.72	779993.49	1.54	1.54	BB	2.5001
79	6.638	1975031.22	789993.83	1.56	1.56	BB	2.5001
80	6.723	2000045.72	872713.20	1.58	1.58	BB	2.2918
81	6.796	2025042.62	809994.06	1.60	1.60	BB	2.5001
82	6.886	2050035.57	819996.47	1.62	1.62	BB	2.5001
83	6.960	2075036.62	829994.49	1.64	1.64	BB	2.5001
84	7.053	2100048.32	839994.61	1.66	1.66	BB	2.5001
85	7.140	2125047.82	926257.98	1.68	1.68	BB	2.2942
86	7.211	2150040.77	859995.41	1.70	1.70	BB	2.5001
87	7.290	2175044.27	869994.58	1.72	1.72	BB	2.5001
88	7.376	2200057.32	879995.15	1.74	1.74	BB	2.5001
89	7.466	2225055.72	889995.62	1.76	1.76	BB	2.5001
90	7.538	2250039.47	899993.86	1.78	1.78	BB	2.5001
91	7.638	2275041.72	918510.89	1.80	1.80	BB	2.4769
92	7.718	2300058.92	919996.49	1.82	1.82	BB	2.5001
93	7.800	2325063.12	929997.06	1.84	1.84	BB	2.5001
94	7.880	2350043.57	939995.66	1.86	1.86	BB	2.5001
95	7.962	2375044.17	949995.78	1.88	1.88	BB	2.5001
96	8.041	2400063.22	959995.12	1.90	1.90	BB	2.5001
97	8.134	2425060.72	969992.98	1.92	1.92	BB	2.5001
98	8.219	2450053.92	979995.02	1.94	1.94	BB	2.5001
99	8.299	2475047.07	989995.56	1.96	1.96	BB	2.5001
100	8.369	2500072.67	999996.24	1.98	1.98	BB	2.5001
		1.26e+08	5.08e+07	100.00	100.00		

Warning -- Signal level out-of-range in peak

Missing Component Report
Component Expected Retention (Calibration File)

All components were found

Software Version : 6.3.2.0646 Date : 31-Mar-24 3:34:04 PM
Operator : service Sample Name :
Sample Number : Study :
AutoSampler : Rack/Vial : 0/1
Instrument Name : Channel : A
Interface Serial # : A/D mV Range : 1000
Delay Time : 0.00 min End Time : 8.50 min
Sampling Rate : 10.0006 pts/s
Sample Volume : 1.000000 µL
Sample Amount : 1.0000
Data Acquisition Time : 01-Jan-80 12:00:01 AM

Raw Data File : D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-5dat-SS420x.raw
Result File : D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-5dat-SS420x.rst [Editing in Progress]
Inst Method : DEFAULT from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-5dat-SS420x.raw
Proc Method : E:\Calibra from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-5dat-SS420x.rst [Editing in Progress]
Calib Method : E:\Calibration\Calibration QA HPL I 23 2016\Method\Software Cal from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-5dat-SS420x.rst [Editing in Progress]
Report Format File: DEFAULT.rpt
Sequence File :

DEFAULT REPORT

Peak #	Time [min]	Area [µV·s]	Height [µV]	Area [%]	Norm. Area [%]	BL	Area/Height [s]
1	0.113	25176.99	10016.14	0.02	0.02	BB	2.5136
2	0.198	49996.20	20001.46	0.04	0.04	BB	2.4996
3	0.295	74999.65	30002.62	0.06	0.06	BB	2.4998
4	0.373	99998.30	40000.79	0.08	0.08	BB	2.4999
5	0.450	124998.85	50000.83	0.10	0.10	BB	2.4999
6	0.549	150001.20	60002.39	0.12	0.12	BB	2.4999
7	0.627	174998.20	69999.49	0.14	0.14	BB	2.5000
8	0.720	199997.05	81247.65	0.16	0.16	BB	2.4616
9	0.799	225004.55	90001.30	0.18	0.18	BB	2.5000
10	0.872	250005.25	100000.79	0.20	0.20	BB	2.5000
11	0.957	275000.60	109999.16	0.22	0.22	BB	2.5000
12	1.044	300000.60	119997.51	0.24	0.24	BB	2.5001
13	1.139	325004.70	142001.27	0.26	0.26	BB	2.2887
14	1.205	350004.15	139998.34	0.28	0.28	BB	2.5001
15	1.302	374999.10	151864.85	0.30	0.30	BB	2.4693
16	1.389	400007.60	174691.36	0.32	0.32	BB	2.2898
17	1.472	425003.20	185575.00	0.34	0.34	BB	2.2902
18	1.542	449999.45	179996.25	0.36	0.36	BB	2.5000
19	1.625	475004.30	189997.55	0.38	0.38	BB	2.5001
20	1.717	500001.81	199994.49	0.40	0.40	BB	2.5001
21	1.802	524997.01	212291.97	0.42	0.42	BB	2.4730
22	1.880	549999.31	219994.06	0.44	0.44	BB	2.5001
23	1.969	574998.51	229993.51	0.46	0.46	BB	2.5001
24	2.048	600002.86	239992.89	0.48	0.48	BB	2.5001
25	2.139	625001.36	272463.68	0.50	0.50	BB	2.2939
26	2.217	649992.81	259990.06	0.51	0.51	BB	2.5001
27	2.302	674990.41	272579.89	0.53	0.53	BB	2.4763
28	2.385	700004.61	279993.49	0.55	0.55	BB	2.5001
29	2.473	725001.16	289990.49	0.57	0.57	BB	2.5001
30	2.547	749997.26	299990.11	0.59	0.59	BB	2.5001
31	2.637	774989.66	312932.24	0.61	0.61	BB	2.4765
32	2.721	800003.61	319991.98	0.63	0.63	BB	2.5001
33	2.793	825003.71	329987.87	0.65	0.65	BB	2.5001
34	2.877	849998.56	339988.44	0.67	0.67	BB	2.5001
35	2.967	874994.06	349988.07	0.69	0.69	BB	2.5001
36	3.052	899996.91	362783.81	0.71	0.71	BB	2.4808
37	3.137	924999.41	369986.61	0.73	0.73	BB	2.5001
38	3.210	949996.36	379986.75	0.75	0.75	BB	2.5001
39	3.298	974983.51	389984.12	0.77	0.77	BB	2.5001
40	3.380	999985.31	399981.06	0.79	0.79	BB	2.5001
41	3.470	1024996.91	409984.06	0.81	0.81	BB	2.5001
42	3.548	1049987.31	419981.49	0.83	0.83	BB	2.5001
43	3.632	1074974.61	429979.33	0.85	0.85	BB	2.5001
44	3.719	1099981.71	439978.53	0.87	0.87	BB	2.5001
45	3.794	1124982.11	449977.02	0.89	0.89	BB	2.5001
46	3.885	1149977.11	459975.97	0.91	0.91	BB	2.5001

31-Mar-24 3:34:04 PM Result: D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 4-5dat-SS420x.rst

Peak #	Time [min]	Area [µV·s]	Height [µV]	Area [%]	Norm. Area [%]	BL	Area/Height [s]
47	3.966	1174972.86	469977.05	0.93	0.93	BB	2.5001
48	4.043	1199973.61	479974.06	0.95	0.95	BB	2.5001
49	4.132	1224971.71	489971.70	0.97	0.97	BB	2.5001
50	4.210	1249977.01	499974.61	0.99	0.99	BB	2.5001
51	4.304	1274962.42	512887.82	1.01	1.01	BB	2.4859
52	4.382	1299958.02	519968.84	1.03	1.03	BB	2.5001
53	4.457	1324972.02	529970.61	1.05	1.05	BB	2.5001
54	4.543	1349967.67	539970.54	1.07	1.07	BB	2.5001
55	4.638	1374956.92	593738.24	1.09	1.09	BB	2.3158
56	4.715	1399962.42	559969.61	1.11	1.11	BB	2.5001
57	4.790	1424968.37	569967.29	1.13	1.13	BB	2.5001
58	4.887	1449956.02	579965.06	1.15	1.15	BB	2.5001
59	4.955	1474945.52	589963.00	1.17	1.17	BB	2.5001
60	5.055	1499949.42	646399.72	1.19	1.19	BB	2.3205
61	5.135	1524955.82	609963.84	1.21	1.21	BB	2.5001
62	5.216	1549956.47	619964.05	1.23	1.23	BB	2.5001
63	5.301	1574936.52	629960.06	1.25	1.25	BB	2.5001
64	5.374	1599945.07	639962.27	1.27	1.27	BB	2.5001
65	5.465	1624960.32	649963.49	1.29	1.29	BB	2.5001
66	5.551	1649957.57	659962.52	1.31	1.31	BB	2.5001
67	5.629	1674942.42	669960.37	1.33	1.33	BB	2.5001
68	5.715	1699952.22	679963.63	1.35	1.35	BB	2.5001
69	5.800	1724958.17	689962.30	1.37	1.37	BB	2.5001
70	5.887	1749958.52	702204.24	1.39	1.39	BB	2.4921
71	5.970	1774938.32	712159.55	1.41	1.41	BB	2.4923
72	6.047	1799941.92	719959.51	1.43	1.43	BB	2.5001
73	6.126	1824957.12	729961.12	1.45	1.45	BB	2.5001
74	6.210	1849954.17	739960.47	1.47	1.47	BB	2.5001
75	6.305	1874944.97	802590.89	1.49	1.49	BB	2.3361
76	6.377	1899942.82	759960.49	1.50	1.50	BB	2.5001
77	6.470	1924950.92	771892.94	1.52	1.52	BB	2.4938
78	6.539	1949957.42	779957.00	1.54	1.54	BB	2.5001
79	6.623	1974944.52	789958.18	1.56	1.56	BB	2.5001
80	6.715	1999944.22	799959.91	1.58	1.58	BB	2.5001
81	6.789	2024956.22	809957.30	1.60	1.60	BB	2.5001
82	6.880	2049963.62	819959.62	1.62	1.62	BB	2.5001
83	6.963	2074944.02	829957.65	1.64	1.64	BB	2.5001
84	7.046	2099938.03	839957.06	1.66	1.66	BB	2.5001
85	7.123	2124947.23	849955.29	1.68	1.68	BB	2.5001
86	7.220	2149955.83	861483.67	1.70	1.70	BB	2.4956
87	7.295	2174952.43	869958.12	1.72	1.72	BB	2.5001
88	7.386	2199939.93	879956.57	1.74	1.74	BB	2.5001
89	7.467	2224949.73	889954.84	1.76	1.76	BB	2.5001
90	7.548	2249960.13	899955.06	1.78	1.78	BB	2.5001
91	7.635	2274948.63	911159.52	1.80	1.80	BB	2.4968
92	7.718	2299935.73	919954.49	1.82	1.82	BB	2.5001
93	7.795	2324950.23	929953.51	1.84	1.84	BB	2.5001
94	7.881	2349957.23	939953.49	1.86	1.86	BB	2.5001
95	7.972	2374944.93	1.01e+06	1.88	1.88	BB	2.3595
96	8.054	2399932.93	959952.98	1.90	1.90	BB	2.5001
97	8.135	2424940.93	969949.84	1.92	1.92	BB	2.5001
98	8.209	2449956.73	979951.48	1.94	1.94	BB	2.5001
99	8.298	2474944.83	989949.84	1.96	1.96	BB	2.5001
100	8.379	2499940.18	999952.34	1.98	1.98	BB	2.5001

1.26e+08 5.08e+07 100.00 100.00

Warning -- Signal level out-of-range in peak

Missing Component Report
Component Expected Retention (Calibration File)

All components were found

Software Version : 6.3.2.0646
Operator : service
Sample Number :
AutoSampler :
Instrument Name :
Interface Serial # :
Delay Time : 0.00 min
Sampling Rate : 10.0006 pts/s
Sample Volume : 1.000000 µL
Sample Amount : 1.0000
Data Acquisition Time : 01-Jan-80 12:00:01 AM

Date : 31-Mar-24 3:21:13 PM
Sample Name :
Study :
Rack/Vial : 0/1
Channel : A
A/D mV Range : 1000
End Time : 8.50 min

Area Reject : 0.000000
Dilution Factor : 1.00
Cycle : 1

Raw Data File : D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 3dat-SS420x.raw
Result File : D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 3dat-SS420x.rst [Editing in Progress]
Inst Method : DEFAULT from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 3dat-SS420x.raw
Proc Method : E:\Calibra from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 3dat-SS420x.rst [Editing in Progress]
Calib Method : E:\Calibration\Calibration QA HPL I 23 2016\Method\Software Cal from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 3dat-SS420x.rst [Editing in Progress]
Report Format File: DEFAULT.rpt
Sequence File :

DEFAULT REPORT

Peak #	Time [min]	Area [µV·s]	Height [µV]	Area [%]	Norm. Area [%]	BL	Area/Height [s]
1	0.816	30028.48	8572.66	0.15	0.15	BB	3.5028
2	1.063	16146.02	4955.97	0.08	0.08	BB	3.2579
3	1.251	239893.85	54127.89	1.21	1.21	BB	4.4320
4	1.481	6957.15	3189.61	0.04	0.04	BB	2.1812
5	1.642	317252.92	78206.12	1.60	1.60	BV	4.0566
6	1.783	1264626.26	338316.70	6.37	6.37	VB	3.7380
7	2.117	73179.02	21464.61	0.37	0.37	BB	3.4093
8	2.294	11729.50	5107.78	0.06	0.06	BB	2.2964
9	2.583	3205944.81	985243.14	16.15	16.15	BV	3.2540
10	2.732	736843.89	208870.02	3.71	3.71	VB	3.5278
11	3.079	34998.66	11516.75	0.18	0.18	BB	3.0389
12	3.385	1012797.19	341362.76	5.10	5.10	BB	2.9669
13	3.654	262028.39	79218.69	1.32	1.32	BV	3.3077
14	3.753	96286.47	27297.65	0.48	0.48	VV	3.5273
15	3.855	1262692.44	368387.51	6.36	6.36	VE	3.4276
16	3.953	100547.77	32900.12	0.51	0.51	EV	3.0562
17	4.113	1024569.01	275385.94	5.16	5.16	VE	3.7205
18	4.234	36364.97	11606.39	0.18	0.18	EB	3.1332
19	4.614	1637999.14	436244.00	8.25	8.25	BE	3.7548
20	4.797	61668.85	16416.08	0.31	0.31	EV	3.7566
21	4.933	1103776.89	323145.66	5.56	5.56	VV	3.4157
22	5.129	3484302.79	792493.98	17.55	17.55	VV	4.3966
23	5.279	96887.45	26319.41	0.49	0.49	VV	3.6812
24	5.373	75294.67	20847.88	0.38	0.38	VV	3.6116
25	5.519	2103875.08	508344.01	10.60	10.60	VV	4.1387
26	5.689	126779.57	33676.74	0.64	0.64	VB	3.7646
27	5.911	20302.15	6845.74	0.10	0.10	BB	2.9657
28	6.398	655346.16	181450.75	3.30	3.30	BV	3.6117
29	6.604	177376.86	50524.92	0.89	0.89	VB	3.5107
30	7.037	107577.92	29737.55	0.54	0.54	BB	3.6176
31	7.375	192377.99	54127.06	0.97	0.97	BV	3.5542
32	7.496	114192.46	27874.17	0.58	0.58	VV	4.0967
33	7.641	23849.60	6839.42	0.12	0.12	VB	3.4871
34	8.060	20086.11	5350.81	0.10	0.10	BB	3.7538
35	8.280	104478.34	27187.61	0.53	0.53	BV	3.8429
36	8.434	13844.79	4086.97	0.07	0.07	VB	3.3875
19852903.62		5.41e+06	100.00	100.00			

Warning -- Signal level out-of-range in peak

Software Version : 6.3.2.0646
Operator : service
Sample Number :
AutoSampler :
Instrument Name :
Interface Serial # :
Delay Time : 0.00 min
Sampling Rate : 10.0006 pts/s
Sample Volume : 1.000000 µL
Sample Amount : 1.0000
Data Acquisition Time : 01-Jan-80 12:00:01 AM

Date : 31-Mar-24 3:16:24 PM
Sample Name :
Study :
Rack/Vial : 0/1
Channel : A
A/D mV Range : 1000
End Time : 8.50 min

Area Reject : 0.000000
Dilution Factor : 1.00
Cycle : 1

Raw Data File : D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 2dat-SS420x.raw
Result File : D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 2dat-SS420x.rst [Editing in Progress]
Inst Method : DEFAULT from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 2dat-SS420x.raw
Proc Method : E:\Calibra from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 2dat-SS420x.rst [Editing in Progress]
Calib Method : E:\Calibration\Calibration QA HPL I 23 2016\Method\Software Cal from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 2dat-SS420x.rst [Editing in Progress]
Report Format File: DEFAULT.rpt
Sequence File :

DEFAULT REPORT

Peak #	Time [min]	Area [µV·s]	Height [µV]	Area [%]	Norm. Area [%]	BL	Area/Height [s]
1	1.745	51000865.31	499992.91	33.33	33.33	MM	102.0032
2	5.120	1.02e+08	999997.88	66.67	66.67	MM	102.0009
1.53e+08		1.50e+06	100.00	100.00			

Warning -- Signal level out-of-range in peak

Missing Component Report
Component Expected Retention (Calibration File)

All components were found

Software Version : 6.3.2.0646
Operator : service
Sample Number :
AutoSampler :
Instrument Name :
Interface Serial # :
Delay Time : 0.00 min
Sampling Rate : 10.0006 pts/s
Sample Volume : 1.000000 µL
Sample Amount : 1.0000
Data Acquisition Time : 01-Jan-80 12:00:01 AM

Date : 31-Mar-24 2:37:56 PM
Sample Name :
Study :
Rack/Vial : 0/1
Channel : A
A/D mV Range : 1000
End Time : 8.50 min

Area Reject : 0.000000
Dilution Factor : 1.00
Cycle : 1

Raw Data File : D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 1dat-SS420x.raw
Result File : D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 1dat-SS420x.rst [Editing in Progress]
Inst Method : DEFAULT from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 1dat-SS420x.raw
Proc Method : E:\Calibra from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 1dat-SS420x.rst [Editing in Progress]
Calib Method : E:\Calibration\Calibration QA HPL | 23 2016\Method\Software Cal from D:\DATA\DATA\PMOQ2023\Software Calibration\Software Calibration 1dat-SS420x.rst [Editing in Progress]
Report Format File: DEFAULT.rpt
Sequence File :

DEFAULT REPORT

Peak #	Time [min]	Area [µV·s]	Height [µV]	Area [%]	Norm. Area [%]	BL	Area/Height [s]
1	0.476	489086.85	31252.72	1.59	1.59	BB	15.6494
2	1.897	978247.20	62493.55	3.17	3.17	BB	15.6536
3	3.318	1957326.85	124988.33	6.35	6.35	BB	15.6601
4	4.738	3915645.14	250001.18	12.70	12.70	BB	15.6625
5	6.159	7832807.33	499999.35	25.40	25.40	BB	15.6656
6	7.580	15667284.11	999990.93	50.80	50.80	BB	15.6674
		30840397.48	1.97e+06	100.00	100.00		

Warning -- Signal level out-of-range in peak

Missing Component Report
Component Expected Retention (Calibration File)

All components were found

Reference Certificate
Index

Product Description:

Product Name:	GC FID Standards 1-5	Composition:	n-Tetradecane and n-Hexadecane mixtures in Hexane
Batch Number:	211-FID	Part Code:	VSOL-GC100/5

Certified Values:

Standard	n-Tetradecane Concentration (µg/mL)	n-Hexadecane Concentration (µg/mL)
GC FID Standard 1	0.0	252.2
GC FID Standard 2	20.3	252.2
GC FID Standard 3	101.4	252.2
GC FID Standard 4	404.6	252.2
GC FID Standard 5	807.1	252.2

Preparation Information:

The standards are prepared using high purity materials, and tested for conformity by analytical methods, developed by V:KIT Ltd.

Homogeneity Information:

The standard is considered homogeneous for typically used aliquots of approximately 1 µL to 1.5 mL.

Intended Use:

The standards are intended for use to qualify a capillary gas chromatograph equipped with FID for injection precision, carryover, response linearity and retention time reproducibility.

Instruction for Use:

Ensure the ampoule is intact and undamaged. To open hold the ampoule with both hands, with one thumb against the narrow top section. Pull the bottom of the ampoule towards you while pushing the top section away from you with easy, even pressure. **Caution!** Appropriate PPE should be worn whilst handling the ampoules. Using a clean pipette transfer an appropriate amount of each standard, to separate GC autosampler vials, ensuring each is capped to prevent contamination.

Traceability Information:

a) Gravimetric Calibration

The weighing instruments used were calibrated with weights that are certified traceable to NIST (NBS) test no. 822/254143 using NIST HB44 calibration procedure and tolerances.

b) GC Instrumentation Calibration

The GC equipment is qualified routinely, using appropriate certified test and measuring equipment. The GC system performance is further verified prior to use.

Confidentiality Statement

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Packaging and Storage Conditions:

The standard is contained in brown glass ampoules, with a fill volume of approximately 1.5mL. Standards are supplied in a cardboard box, with vial dividers to protect vials during shipping. The standards should be retained in their box prior to use, and stored at ambient temperature, avoiding extremes of temperature and humidity.

Hazard Information:

Refer to the product Safety Datasheet (SDS) for relevant hazardous information.

Quality Information:

V:Kit Ltd. operate a quality management system the scope of which covers the manufacture, certification and sales of chemical standard solutions, software, measuring and test equipment (including calibration) used in the qualification of chemical analysis equipment.



Certificate No: 2596
ISO 9001

Validity Information:

Expiry date:	31 August 2025
Certifying Officer:	Neil Gowans BSc (Hons), Quality Manager
Issue Date:	15 August 2022

Contact Details:

V:KIT Ltd
Congleton, CW12 1LB
UNITED KINGDOM
info@v-kit.com
www.v-kit.com

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01.08.002 F014 v002

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Certificate of Calibration Simulated Calibration of Thermometer

Issued by V:KIT Ltd

Certificate No: 4078-DTM

Issue Date: 13-Jan-2023

V:KIT Ltd

16 John Bradshaw Court
Alexandria Way
Congleton,
Cheshire, CW12 1LB, UK
Tel: +44 (0) 1260 591385
www.v-kit.com - info@v-kit.com

Customer: MESHCO TECH CO., LTD.
Address: 82 Moo18, Buengkamproi
Lamlukka, Pathum thani 12150
Thailand

Unit Under Test: 2-Ch Thermometer Type K
Serial Number: 1531-0234
Manufacturer: V:KIT Ltd
Model: VKIT-1531

Customer PO No.: PO2023-01-001
Date of Receipt: 07-Dec-2022
Calibration performed by: Daniel John
Calibration Date: 13-Jan-2023

Equipment Condition: Acceptable
Calibration Range: 0 - 400°C
Ambient Temperature: 20.6°C
Expiry Date: 12-Jan-2024

Calibration Method

The unit under test was calibrated using V:Kit Quality Management System procedure ref 06.09.002. The test equipment used are certified and traceable to recognised National Standards. The unit under test was tested 'As Found'. If required the unit under test was adjusted to bring it within a pre-defined specification and re-tested to provide the Calibration Results ("As Left") reported in this certificate.

Test Equipment Used

Calibration Equipment:	Identification:	Certificate ID:	Calibration Date:	Expiry Date:
Signal Calibrator	Ametek 1371098	01661	25-Nov-2021	24-Nov-2023
Digital Thermometer	Ametek 1293031	01668	30-Nov-2021	29-Nov-2023
Temperature Probe	Ametek 585197-02	01668	30-Nov-2021	29-Nov-2023

Calibration Results ("As Left")

T1	Applied Temp. °C	Indicated Temp. °C	Deviation °C	Specification °C	Uncertainty °C
	0.0	0.1	0.1	± 0.7	0.47
	25.0	25.1	0.1	± 0.7	0.47
	50.0	50.1	0.1	± 0.8	0.47
	100.0	100.1	0.1	± 1.0	0.47
	250.0	250.0	0.0	± 1.4	0.47
	400.0	399.8	0.2	± 1.9	0.47
T2	Applied Temp. °C	Indicated Temp. °C	Deviation °C	Specification °C	Uncertainty °C
	0.0	0.0	0.0	± 0.7	0.47
	25.0	25.0	0.0	± 0.7	0.47
	50.0	50.0	0.0	± 0.8	0.47
	100.0	100.0	0.0	± 1.0	0.47
	250.0	249.9	0.1	± 1.4	0.47
	400.0	399.7	0.3	± 1.9	0.47

Approved By: Tom Gowans

Approval Date: 13-Jan-2023



Certificate of Calibration Gas Flowmeter

Issued by V:KIT Ltd

Certificate No: 4075-GFM

Issue Date: 20-Dec-2022

V:KIT Ltd

16 John Bradshaw Court
Alexandria Way
Congleton,
Cheshire, CW12 1LB, UK
Tel: +44 (0) 1260 591385
www.v-kit.com - info@v-kit.com

Customer: MESHCO TECH CO., LTD.
Address: 82 Moo18, Buengkamproi
Lamlukka, Pathum thani 12150
Thailand

Customer PO No.: PO2023-01-001
Date of Receipt: 07-Dec-2022
Calibration performed by: Tom Gowans
Calibration Date: 20-Dec-2022

Manufacturer: V:KIT Ltd
Model: VKIT-GFM3
Equipment Condition: Acceptable
Serial Number: 950577
Calibration Range: 0 - 500 mL/min
Test Media: Nitrogen
Reference Temperature: 0.0 °C
Expiry Date: 19-Dec-2023

Calibration Method

The flowmeter was tested and the indicated flow readings compared against reference flow rates using mass flow standards calibrated in an ISO 17025 accredited laboratory.

Test Equipment Used

Calibration Equipment:	Identification:	Certificate ID:	Calibration Date:	Expiry Date:
High Flow controller	Bronkhorst F-201CV s/n: M21209881A	BHTG28/5934430	05-May-2021	04-May-2023
Low Flow controller	Bronkhorst F-201CV s/n: M21209881B	BHTG74/5949355	18-May-2021	17-May-2023
Digital Thermometer	Ametek 1293031	01668	30-Nov-2021	29-Nov-2023
Temperature Probe	Ametek 585197-02	01668	30-Nov-2021	29-Nov-2023

Calibration Results ("As Left")

Reference Flow (mL/min)	Indicated Flow (mL/min)	Flow Accuracy (%)
0.0	0.0	0.0
10.0	9.9	-1.0
50.0	50.5	1.0
100.0	100.4	0.4
200.0	200.6	0.3
400.0	400.9	0.2

Limit: Flow Accuracy ≤ 3.0 %

Uncertainty of Measurement: ± 0.4 mL/min or 2.5 %, whichever is greater

Approved By: Tom Gowans

Approval Date: 20-Dec-2022



Certificate of Calibration Calibration of Digital Pressure Meter

Issued by V:KIT Ltd

Certificate No: 4071-DMA

Issue Date: 24-Jan-2023

V:KIT Ltd

16 John Bradshaw Court
Alexandria Way
Congleton
Cheshire, CW12 1LB, UK
Tel: +44 (0) 1260 591385
www.v-kit.com - info@v-kit.com

Customer: MESHCO TECH CO., LTD.

Address: 82 Moo18, Buengkamproi
Lamlukka, Pathum thani 12150
Thailand

Customer PO No.: PO2023-01-001

Unit Under Test: Pressure Meter for GC Inlet

Manufacturer: V:KIT Ltd

Model: VKIT-DMA2

Equipment Condition: New

Serial Number: DMA-0543

Calibration performed by: Tom Gowans

Calibration Date: 24-Jan-2023

Expiry Date: 23-Jan-2024

Calibration Method

The Unit Under Test was calibrated against measuring equipment whose values are traceable to recognised National Standards using QMS procedure 06.09.007.

Test Equipment Used

Calibration Equipment:	Identification:	Certification/ Calibration Details:	Expiry:
Pressure Source	CN10635094	3959-EPC	02-Nov-2023

Calibration Results ("As Left")

Actual Pressure (psi)	UUT Indicated Pressure (psi)	Absolute Deviation (psi)	Acceptance Criteria (psi)
0.0	0.0	0.0	0.0
10.0	10.0	0.0	0.1
15.0	14.9	0.1	0.2
25.0	24.9	0.1	0.3
50.0	49.9	0.1	0.5
80.0	80.2	0.2	0.8

Approved By: Tom Gowans

Approval Date: 24-Jan-2023



Chromatography Data System Validator Certificate of Calibration

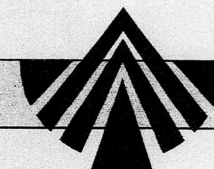
ValidatorTM Chromatography Data System Validator

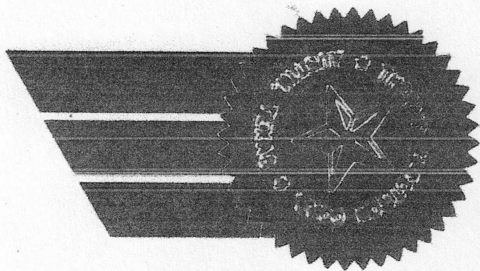
The undersigned officers of Axxiom Chromatography, Inc. certify that this ValidatorTM unit, Serial Number 2455103, has been tested and calibrated to an NIST traceable standard on 11/10/2009.

Specific test data for this instrument is on file at Axxiom's home office location at 11968 Challenger Court, Moorpark, California, USA....and will be supplied upon request of an authorized distributor or end user

Presented by

Axxiom Chromatography Inc
11968 Challenger Court
Moorpark, California 93021-7121
USA





Thermo
ELECTRON CORPORATION

**TRACE DSQ GC/MS
SERVICE &
INSTALLATION COURSE**

Prasittisent Maliphan

Certificate No. 146

*Has successfully completed 32 hours training and is
qualified to install and conduct service on
the Trace DSQ GC/MS.*

Instructor Signature

August 6, 2004
Date



CERTIFICATE

The Certification Body
of TÜV SÜD Asia Pacific TÜV SÜD Group
certifies that



บริษัท เมชโคเทค จำกัด
MESHCO TECH CO., LTD.

MESHCO TECH CO., LTD.

82 Moo 18, Buengkamproi, Lamlukka, Pathumthani 12150, Thailand

has established and applies
a Quality Management System for

**Trading, Calibration and Maintenance Service of
Chromatography and Analytical Instruments
(HPLC, LC-MS, GC, GC-MS, IC and Spectrophotometer).**

An audit was performed, Report No. **721243408**.

Proof has been furnished that the requirements according to

ISO 9001:2015

are fulfilled. The certificate is valid from 2023-05-11 until **2026-05-10**.

Certificate Registration No.: TUV100 11 4870

2023-05-11



TÜV SÜD Group



Accreditation by the Joint Accreditation System
of Australia and New Zealand, Ltd.
www.jas-anz.org/register



Certificate of Registration

This is to certify that the Management System of:

V:Kit Limited

16 John Bradshaw Court, Alexandria Way, Congleton Business Park, Congleton CW12 1LB

has been approved by Alcumus ISOQAR and is compliant with the requirements of:

ISO 9001: 2015



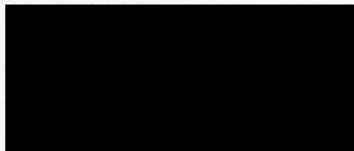
Certificate Number: 2596-QMS-001
Initial Registration Date: 20/03/2001
Previous Expiry Date: 20/03/2022
Recertification Audit Date: 01/02/2022
Re-issue Date: 04/02/2022
Current Expiry Date: 20/03/2025

Scope of Registration:

The manufacture, certification and sales of chemical standard solutions, software, measuring and test equipment (including calibration) used in the qualification of chemical analysis equipment.

Signed:

Alyn Franklin, Chief Executive Officer
(on behalf of Alcumus ISOQAR)



This certificate will remain current subject to the company maintaining its system to the required standard. This will be monitored regularly by Alcumus ISOQAR. Further clarification regarding the scope of this certificate and the applicability of the relevant standards' requirement may be obtained by consulting Alcumus ISOQAR

Alcumus ISOQAR Limited, Cobra Court, 1 Blackmore Road, Stretford, Manchester M32 0QY.

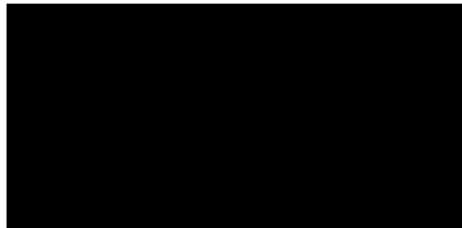
T: 0161 865 3699 E: isoqarenquiries@alcumus.com W: alcumus.com/isoqar

This certificate is the property of Alcumus ISOQAR and must be returned on request.

4.6 เอกสารสอบเทียบเครื่องมือ

(บริษัท เอ็มเม็กซ์ แอสโซซิเอชั่น จำกัด ทะเบียนเลขที่ [REDACTED])

ใบรับรองการสอบเทียบ “เครื่อง Gas Chromatography-FID”
(Calibration Certificate of Gas Chromatography-FID)



Certificate of System Qualification

GC-OQ

System ID: GC_FID_CN12211142
Organization Name: Emex Association Co.,Ltd.
Organization Location: 29 Rama 2, Soi 30, Bangmod, Jomthong, Bangkok 10150, Thailand

Date: September 12, 2023 1:49:31 PM
EQP Name: AgilentRecommended
EQP Revision: GC.02.51
Overall Qualification Status: Pass

System Inspection and Basic Safety and Operation

Name: 7890
Setpoint Status: Pass

Overall System Inspection and Basic Safety and Operation Test Status

Pass

Inlet Pressure Decay

Name: 7890
Front SSL
Setpoint Status: Pass
Pressure: 25.0 psi
Pressure Change: 0.1 psi /5 minutes
Agilent Recommended: >= -2.0 and <= 0.5

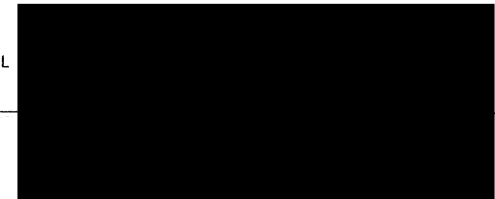
Overall Inlet Pressure Decay Test Status

Pass

Inlet Pressure Accuracy

Name: 7890
Front SSL

Date: September 12, 2023 1:49:31 PM
System ID: GC_FID_CN12211142



Setpoint Status: Pass

	Setpoint		Actual	
Inlet Pressure:	25.0	psi	25.1	psi
Accuracy:			0.1	psi
Agilent Recommended:			<= 1.2	

Overall Inlet Pressure Accuracy Test Status

Pass

Detector Flow Accuracy

Name: 7890

Front FID

Setpoint Status: Pass

Flow Type: Fuel

Setpoint:	30.0	mL/min	Measured Flow:	29.8	mL/min
Accuracy:		0.2	mL/min		
Agilent Recommended:		<= 10.0	% setpoint	(3.0	ml/min)

Limit is percentage of setpoint or 0.5 ml/minute, whichever is largest.

Setpoint Status: Pass

Flow Type: Oxidizer

Setpoint:	400.0	mL/min	Measured Flow:	398	mL/min
Accuracy:		2.0	mL/min		
Agilent Recommended:		<= 10.0	% setpoint	(40.0	ml/min)

Limit is percentage of setpoint or 0.5 ml/minute, whichever is largest.

Setpoint Status: Pass

Flow Type: Makeup

Setpoint:	25.0	mL/min	Measured Flow:	24.8	mL/min
Accuracy:		0.2	mL/min		
Agilent Recommended:		<= 10.0	% setpoint	(2.5	ml/min)

Limit is percentage of setpoint or 0.5 ml/minute, whichever is largest.

Date: September 12, 2023 1:49:31 PM

System ID: GC_FID_CN12211142

Overall Detector Flow Accuracy Test Status

Pass

GC Oven Temperature Accuracy

Name: 7890

Setpoint Status: Pass

Zone: Oven

Setpoint/Actual

Temperature:	230.0	231.2	°C
Accuracy:		1.2	°C
Agilent Recommended:		>= -1.0	% setpoint in K (-5.0 °C)
		<= 1.0	% setpoint in K (5.0 °C)

Setpoint Status: Pass

Zone: Oven

Setpoint/Actual

Temperature:	100.0	100.2	°C
Accuracy:		0.2	°C
Agilent Recommended:		>= -1.0	% setpoint in K (-3.7 °C)
		<= 1.0	% setpoint in K (3.7 °C)

Overall GC Oven Temperature Accuracy Test Status

Pass

GC Oven Temperature Stability

Name: 7890

Setpoint Status: Pass

Setpoint/Average

Temperature:	100.0	100.25	°C
Stability:		0.1	°C
Agilent Recommended:		<= 0.5	

Overall GC Oven Temperature Stability Test Status

Pass

Date: September 12, 2023 1:49:31 PM

System ID: GC_FID_CN12211142

Scouting Run

Tested Combination1 Front SSL / Front FID
Injection Tower
Name: 7693A

Setpoint Status: Completed

Injection Volume on Column: 1.0 uL

Overall Scouting Run Status

Completed

Noise and Drift

Tested Combination1 Front SSL / Front FID
Name: 7890

Setpoint Status: Pass

Base Signal: 14.4 pA

ASTM Noise Drift
pA pA/Hr
0.06 1.38
Agilent Recommended: <= 0.10 <= 2.50

Status: Pass Pass

Overall Noise and Drift Test Status

Pass

Injection Precision

Tested Combination1 Front SSL / Front FID
Name: 7693A

Date: September 12, 2023 1:49:31 PM
System ID: GC_FID_CN12211142

Page

Setpoint Status: Pass

Injection Volume on Column: 1.0 uL

Area RSD: 0.23 % Retention Time RSD: 0.33 %

Agilent Recommended: <= 3.00 <= 1.00

Overall Injection Precision Test Status

Pass

Signal to Noise

Tested Combination1 Front SSL / Front FID
Injection Tower
Name: 7890

Setpoint Status: Pass

Signal to Noise: 657777

Agilent Recommended: >= 300000

Overall Signal to Noise Test Status

Pass

Date: September 12, 2023 1:49:31 PM
System ID: GC_FID_CN12211142

Instrument Details

Purpose
This section describes the as found system configuration.

Details

System

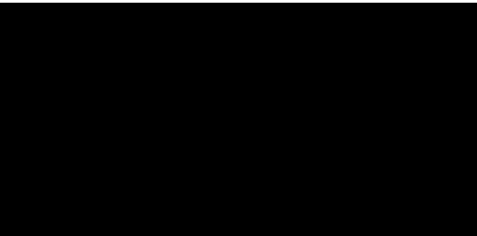
System ID	GC_FID_CN12211142
Manufacturer	Agilent Technologies
Name	7890
Flow Data Input	Manual Data
Temperature Data Input	Manual Data or Other Data Logging

Tested Combination1

Injection Technique	Injection Tower
Inlet	Front
Detector	Front
LTM Included?	No

Sampler 1

Manufacturer	Agilent Technologies
Type	Injection Tower
Name	7693A
Model Number	G4513A
Serial Number	CN12290137
Firmware Revision	A.10.08
Usage	Sample Injection
Location	Front
Syringe Volume (µL)	10



Sampler 2

Manufacturer	Agilent Technologies
Type	Tray
Name	7693A
Model Number	G4514A
Serial Number	CN12230009
Firmware Revision	A.10.16
Vial Heater	Not installed

Mainframe 1

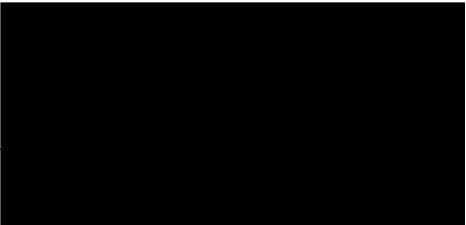
Manufacturer	Agilent Technologies
Name	7890
Model Number	G3440A
Serial Number	CN12211142
Firmware Revision	A.01.15
Oven Type	Standard

Inlet 1

Manufacturer	Agilent Technologies
Name	7890
Type	SSL
Location	Front
Carrier Gas	Helium
Control Type	Electronic Pressure Control (EPC)
Purged Inlet	Yes

Detector 1

Manufacturer	Agilent Technologies
Name	7890
Type	FID
Adapter	Capillary
Control Type	Electronic Pressure Control (EPC)
Location	Front
Makeup Gas	Nitrogen



Electronic Signature

Purpose

This signature page was created and published because the ACE sign-off action was executed, which is valid for the entire document, including attachments. The ACE sign-off is an electronic signature that requires two distinct identification components: unique username and personal password. The Agilent representative who has delivered this service understands the meaning and legal status of an electronic signature. As a trained official operator, the Agilent representative has a unique password and logon to access ACE and electronically sign this document. (Other e-signatures can be applied to this document using a Document Content Management or other suitable method defined in your data access and control procedures.)

Details

Full Name of Signer: Sulkifli Mama
Logged On User Name: sulkifli.mama@agilent.com
Signature Creation Date: September 12, 2023
Reason for Signature: Executed protocol and published this original version of document

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Date: September 12, 2023 1:49:31 PM
System ID: GC_FID_CN12211142

User Name: sulkifli.mama
Report Generated by Hostname: AG-5CG2030XXV
System Id: GC_FID_CN12211142
Print Date: September 12, 2023 1:49:33 PM

6066184127_Emex_OQGC_CN12211142 Transaction log :

Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
September 12, 2023 10:26:17 AM	Audit	SessionCreated	Session	None
September 12, 2023 10:26:17 AM	Start	Configuration	Session	None
September 12, 2023 10:26:17 AM	Audit	Entitlement	Licensing	User is FieldEngineer and does not require an unlock code
September 12, 2023 10:46:01 AM	Audit	EqpLoaded	Session	EQP details for primary technique [Gc] - File path: [ProtocolPacks/Gc/Configurations/02.51/Gc.02.51.eqp], EQP File Name: [Gc.02.51.eqp], EQP Name: [AgilentRecommended], Protocol Revision [Gc.02.51]
September 12, 2023 10:46:08 AM	End	Configuration	Session	None
September 12, 2023 10:46:13 AM	Start	Qualification	Session	OQ
September 12, 2023 10:46:13 AM	Start	Execution	System Inspection and Basic Safety and Operation - 7890: - Qualitative Test - No setpoints associated	None
September 12, 2023 10:48:07 AM	End	Execution	System Inspection and Basic Safety and Operation - 7890: - Qualitative Test - No setpoints associated	Run Count : 1
September 12, 2023 10:48:10 AM	Start	Execution	Inlet Pressure Decay - Front SSL: - Pressure Controlled Inlet - S: 25.0 psi - L: >= -2.0 psi and <= 0.5 psi	None

Date: September 12, 2023 1:49:31 PM
System ID: GC_FID_CN12211142

User Name: sulkifil.mama
Report Generated by Hostname: AG-5CG2030XXV

System Id: GC_FID_CN12211142
Print Date: September 12, 2023 1 49:33 PM

6006184127_Emex_OQGC_CN12211142 Transaction log :

Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
September 12, 2023 10:48:33 AM	End	Execution	Inlet Pressure Decay - Front SSL: - Pressure Controlled Inlet - S: 25.0 psi - L: >= -2.0 psi and <= 0.5 psi	Run Count : 1
September 12, 2023 10:48:40 AM	Start	Execution	Inlet Pressure Accuracy - Front SSL: - Pressure Controlled Inlet - S: 25.0 psi - L: <= 1.2 psi	None
September 12, 2023 10:48:54 AM	End	Execution	Inlet Pressure Accuracy - Front SSL: - Pressure Controlled Inlet - S: 25.0 psi - L: <= 1.2 psi	Run Count : 1
September 12, 2023 10:49:01 AM	Start	Execution	Detector Flow Accuracy - Front FID: - Type : Fuel - S: 30.0 mL/min - L: <= 10.0% setpoint	None
September 12, 2023 10:49:36 AM	Audit	Data	Detector Flow Accuracy - Front FID: - Type : Fuel - S: 30.0 mL/min - L: <= 10.0% setpoint	Manual Data Entry
September 12, 2023 10:49:38 AM	End	Execution	Detector Flow Accuracy - Front FID: - Type : Fuel - S: 30.0 mL/min - L: <= 10.0% setpoint	Run Count : 1
September 12, 2023 10:50:28 AM	Start	Execution	Detector Flow Accuracy - Front FID: - Type : Oxidizer - S: 400.0 mL/min - L: <= 10.0% setpoint	None
September 12, 2023 10:51:08 AM	Audit	Data	Detector Flow Accuracy - Front FID: - Type : Oxidizer - S: 400.0 mL/min - L: <= 10.0% setpoint	Manual Data Entry
September 12, 2023 10:51:11 AM	End	Execution	Detector Flow Accuracy - Front FID: - Type : Oxidizer - S: 400.0 mL/min - L: <= 10.0% setpoint	Run Count : 1
September 12, 2023 10:52:15 AM	Start	Execution	Detector Flow Accuracy - Front FID: - Type : Makeup - S: 25.0 mL/min - L: <= 10.0% setpoint	None

Page 2 / 6

User Name: sulkifil.mama
Report Generated by Hostname: AG-5CG2030XXV

System Id: GC_FID_CN12211142
Print Date: September 12, 2023 1 49:33 PM

6006184127_Emex_OQGC_CN12211142 Transaction log :

Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
September 12, 2023 10:53:03 AM	Audit	Data	Detector Flow Accuracy - Front FID: - Type : Makeup - S: 25.0 mL/min - L: <= 10.0% setpoint	Manual Data Entry
September 12, 2023 10:53:07 AM	End	Execution	Detector Flow Accuracy - Front FID: - Type : Makeup - S: 25.0 mL/min - L: <= 10.0% setpoint	Run Count : 1
September 12, 2023 10:53:10 AM	Start	Execution	GC Oven Temperature Accuracy - 7890: - Temperature : Oven - S: 230.0°C - L: >= -1.0 AND <= 1.0 % setpoint in K	None
September 12, 2023 10:54:39 AM	Audit	Data	GC Oven Temperature Accuracy - 7890: - Temperature : Oven - S: 230.0°C - L: >= -1.0 AND <= 1.0 % setpoint in K	Manual Data Entry
September 12, 2023 10:54:41 AM	End	Execution	GC Oven Temperature Accuracy - 7890: - Temperature : Oven - S: 230.0°C - L: >= -1.0 AND <= 1.0 % setpoint in K	Run Count : 1
September 12, 2023 10:54:46 AM	Start	Execution	GC Oven Temperature Accuracy - 7890: - Temperature : Oven - S: 100.0°C - L: >= -1.0 AND <= 1.0 % setpoint in K	None
September 12, 2023 11:06:02 AM	Audit	Data	GC Oven Temperature Accuracy - 7890: - Temperature : Oven - S: 100.0°C - L: >= -1.0 AND <= 1.0 % setpoint in K	Manual Data Entry
September 12, 2023 11:06:04 AM	End	Execution	GC Oven Temperature Accuracy - 7890: - Temperature : Oven - S: 100.0°C - L: >= -1.0 AND <= 1.0 % setpoint in K	Run Count : 1
September 12, 2023 11:06:07 AM	Start	Execution	GC Oven Temperature Stability - 7890: - Temperature : Oven - S: 100.0°C - L: <= 0.5°C	None

Page 3 / 6

User Name: sulikdli.mama
Report Generated by Hostname: AG-5CG2030XXV

System Id: GC_FID_CN12211142
Print Date: September 12, 2023 1:49:33 PM

6006184127_Emex_OQGC_CN12211142 Transaction log :

Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
September 12, 2023 11:40:11 AM	Audit	Data	GC Oven Temperature Stability - 7890: - Temperature : Oven - S: 100.0°C - L: <= 0.5°C	Manual Data Entry
September 12, 2023 11:40:13 AM	End	Execution	GC Oven Temperature Stability - 7890: - Temperature : Oven - S: 100.0°C - L: <= 0.5°C	Run Count : 1
September 12, 2023 1:22:16 PM	Start	Execution	GC Scouting Run - Injection Tower, Front SSL, Front FID: - Part of System Preparation - No limits associated	None
September 12, 2023 1:27:32 PM	Audit	AccClosed	Session	None
September 12, 2023 1:28:55 PM	Audit	AccRestarted	Session	None
September 12, 2023 1:28:56 PM	Audit	SessionReloaded	Session	None
September 12, 2023 1:29:01 PM	Start	Qualification	Session	OQ
September 12, 2023 1:29:01 PM	Start	Execution	GC Scouting Run - Injection Tower, Front SSL, Front FID: - Part of System Preparation - No limits associated	None
September 12, 2023 1:31:01 PM	Audit	Data	GC Scouting Run - Injection Tower, Front SSL, Front FID: - Part of System Preparation - No limits associated	Data files Path : F:\Data\EMEX\IOQ2023_GC-FID 2023-09-12 12-06-24\SC.D\FID1A.ch
September 12, 2023 1:31:48 PM	End	Execution	GC Scouting Run - Injection Tower, Front SSL, Front FID: - Part of System Preparation - No limits associated	Run Count : 1

Date: September 12, 2023 1:49:31 PM
System ID: GC_FID_CN12211142

User Name: sulikdli.mama
Report Generated by Hostname: AG-5CG2030XXV

System Id: GC_FID_CN12211142
Print Date: September 12, 2023 1:49:33 PM

6006184127_Emex_OQGC_CN12211142 Transaction log :

Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
September 12, 2023 1:31:51 PM	Start	Execution	Noise and Drift - Front FID: - Detector FID - L (Noise): <= 0.10 pA - L (Drift): <= 2.50 pA/hour	None
September 12, 2023 1:32:09 PM	Audit	Data	Noise and Drift - Front FID: - Detector FID - L (Noise): <= 0.10 pA - L (Drift): <= 2.50 pA/hour	Data files Path : F:\Data\EMEX\IOQ2023_GC-FID 2023-09-12 12-06-24\ND_02.D\FID1A.ch
September 12, 2023 1:32:40 PM	End	Execution	Noise and Drift - Front FID: - Detector FID - L (Noise): <= 0.10 pA - L (Drift): <= 2.50 pA/hour	Run Count : 1
September 12, 2023 1:32:49 PM	Start	Execution	Injection Precision - Injection Tower, Front SSL, Front FID: - GC - L (Area): <= 3.00% - L (Ret. Time): <= 1.00%	None
September 12, 2023 1:33:08 PM	Audit	Data	Injection Precision - Injection Tower, Front SSL, Front FID: - GC - L (Area): <= 3.00% - L (Ret. Time): <= 1.00%	Data files Path : F:\Data\EMEX\IOQ2023_GC-FID 2023-09-12 12-06-24\IP_2.D\FID1A.ch
September 12, 2023 1:33:08 PM	Audit	Data	Injection Precision - Injection Tower, Front SSL, Front FID: - GC - L (Area): <= 3.00% - L (Ret. Time): <= 1.00%	Data files Path : F:\Data\EMEX\IOQ2023_GC-FID 2023-09-12 12-06-24\IP_3.D\FID1A.ch
September 12, 2023 1:33:08 PM	Audit	Data	Injection Precision - Injection Tower, Front SSL, Front FID: - GC - L (Area): <= 3.00% - L (Ret. Time): <= 1.00%	Data files Path : F:\Data\EMEX\IOQ2023_GC-FID 2023-09-12 12-06-24\IP_4.D\FID1A.ch
September 12, 2023 1:33:08 PM	Audit	Data	Injection Precision - Injection Tower, Front SSL, Front FID: - GC - L (Area): <= 3.00% - L (Ret. Time): <= 1.00%	Data files Path : F:\Data\EMEX\IOQ2023_GC-FID 2023-09-12 12-06-24\IP_5.D\FID1A.ch

Date: September 12, 2023 1:49:31 PM
System ID: GC_FID_CN12211142

User Name: sulkiti.mamaSystem Id: GC_FID_CN12211142
Report Generated by Hostname: AG-5CG2030XXVPrint Date: September 12, 2023 1:49:33 PM

6006184127_Emex_OQGC_CN12211142 Transaction log :

Time	Transaction State	Activity Performed	Type of Transaction	Optional Information
September 12, 2023 1:33:08 PM	Audit	Data	Injection Precision - Injection Tower, Front SSL, Front FID: - GC - L (Area): <= 3.00% - L (Ret. Time): <= 1.00%	Data files Path : F:\Data\EMEX\OQ2023_GC- FID 2023-09-12 12-06-24\IP_6.D\FID1A.ch
September 12, 2023 1:33:08 PM	Audit	Data	Injection Precision - Injection Tower, Front SSL, Front FID: - GC - L (Area): <= 3.00% - L (Ret. Time): <= 1.00%	Data files Path : F:\Data\EMEX\OQ2023_GC- FID 2023-09-12 12-06-24\IP_7.D\FID1A.ch
September 12, 2023 1:33:32 PM	End	Execution	Injection Precision - Injection Tower, Front SSL, Front FID: - GC - L (Area): <= 3.00% - L (Ret. Time): <= 1.00%	Run Count : 1
September 12, 2023 1:33:42 PM	Start	Execution	Signal to Noise - Injection Tower, Front SSL, Front FID: - Detector FID - L: >= 300000	None
September 12, 2023 1:33:54 PM	Audit	Data	Signal to Noise - Injection Tower, Front SSL, Front FID: - Detector FID - L: >= 300000	Data files Path : F:\Data\EMEX\OQ2023_GC- FID 2023-09-12 12-06-24\SN.D\FID1A.ch
September 12, 2023 1:34:27 PM	End	Execution	Signal to Noise - Injection Tower, Front SSL, Front FID: - Detector FID - L: >= 300000	Run Count : 1
September 12, 2023 1:34:50 PM	End	Qualification	Session	OQ
September 12, 2023 1:34:50 PM	Start	Reporting	Session	None
September 12, 2023 1:48:10 PM	Audit	Reporting	Session	Report Generated : Certificate
September 12, 2023 1:48:36 PM	Audit	Reporting	Session	Report Generated : Report