

安捷伦 6420 液质联用仪检测器打拿极的清洗

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摘要: 安捷伦 6420 液质联用仪调谐异常, 经排查为打拿极有污染, 经过清洗后, 调谐顺利通过。

关键词: 6420 液质联用仪, 打拿极, 污染, 清洗, 调谐

前面说到单位一台尘封多年的 6420 因为扩项需要使用, 经过一天的折腾后, 总算能进样分析了。可是出峰是没有出峰的。那先做个调谐吧, 调谐过程是一波三折。从我连怎么看喷雾都不知道, 到调谐液污染, 清洗离子源, 重新安装调整挡片..., 最后得到一片黄绿色的调谐报告。那还搞了个啥, 继续问工程师。

Parameter	Value
Gas Temp	300
Gas Flow	6
Nebulizer	15
Capillary	4000

Positive Results												
Analyzer: MS1 Polarity: Positive Width: Unit												
m/z	m/z Expected	Tolerance	Delta	Result	FWHM	FWHM Expected	Tolerance	Delta	Result	Abundance	Minimum1	Result
117.96	118.09	0.14	-0.13	Pass	25.00	0.70	0.14	24.30	Adjust	869	0	Pass
321.38	322.05	0.14	-0.67	Adjust	25.00	0.70	0.14	24.30	Adjust	1684	0	Pass
621.75	622.03	0.14	-0.28	Adjust	24.99	0.70	0.14	24.29	Adjust	1433	0	Pass
921.96	922.01	0.14	-0.05	Pass	24.99	0.70	0.14	24.29	Adjust	1319	0	Pass
1222.37	1221.99	0.14	0.38	Adjust	24.99	0.70	0.14	24.29	Adjust	2125	0	Pass
1822.18	1821.95	0.14	0.23	Adjust	24.99	0.70	0.14	24.29	Adjust	1670	0	Pass

Positive Results												
Analyzer: MS2 Polarity: Positive Width: Unit												
m/z	m/z Expected	Tolerance	Delta	Result	FWHM	FWHM Expected	Tolerance	Delta	Result	Abundance	Minimum1	Result
117.37	118.09	0.14	-0.72	Adjust	25.00	0.70	0.14	24.30	Adjust	1508	0	Pass
322.50	322.05	0.14	0.45	Adjust	25.00	0.70	0.14	24.30	Adjust	8288	0	Pass
621.33	622.03	0.14	-0.70	Adjust	24.99	0.70	0.14	24.29	Adjust	1389	0	Pass
922.11	922.01	0.14	0.10	Pass	24.99	0.70	0.14	24.29	Adjust	1499	0	Pass
1221.85	1221.99	0.14	-0.14	Pass	24.99	0.70	0.14	24.29	Adjust	919	0	Pass
1821.94	1821.95	0.14	-0.01	Pass	24.99	0.70	0.14	24.29	Adjust	1346	0	Pass

Positive Results												
Analyzer: MS1 Polarity: Positive Width: Wide												
m/z	m/z Expected	Tolerance	Delta	Result	FWHM	FWHM Expected	Tolerance	Delta	Result	Abundance	Minimum1	Result
118.02	118.09	0.30	-0.07	Pass	25.00	1.20	0.60	23.80	Adjust	1383	0	Pass
320.86	322.05	0.30	-1.19	Adjust	25.00	1.20	0.60	23.80	Adjust	1393	0	Pass
622.74	622.03	0.30	0.71	Adjust	24.99	1.20	0.60	23.79	Adjust	1285	0	Pass
923.12	922.01	0.30	1.11	Adjust	24.99	1.20	0.60	23.79	Adjust	1182	0	Pass
1222.38	1221.99	0.30	0.39	Adjust	24.99	1.20	0.60	23.79	Adjust	1282	0	Pass
1821.55	1821.95	0.30	-0.40	Adjust	24.99	1.20	0.60	23.79	Adjust	1456	0	Pass

Positive Results												
Analyzer: MS2 Polarity: Positive Width: Wide												
m/z	m/z Expected	Tolerance	Delta	Result	FWHM	FWHM Expected	Tolerance	Delta	Result	Abundance	Minimum1	Result
117.87	118.09	0.30	-0.22	Pass	25.00	1.20	0.60	23.80	Adjust	1340	0	Pass
322.48	322.05	0.30	0.43	Adjust	25.00	1.20	0.60	23.80	Adjust	1954	0	Pass
622.37	622.03	0.30	0.34	Adjust	24.99	1.20	0.60	23.79	Adjust	1473	0	Pass
921.88	922.01	0.30	-0.13	Pass	24.99	1.20	0.60	23.79	Adjust	1432	0	Pass
1222.38	1221.99	0.30	0.39	Adjust	24.99	1.20	0.60	23.79	Adjust	1432	0	Pass

图 0

1. 完成基本操作后, 分别在手动调谐模式下, 观察质谱图, 发现不管 MS1 在调谐液打开还是关闭的情况下, 都有很多杂峰, 如图 1, 图 2. 怀疑是打拿极污染, 需要清洗。

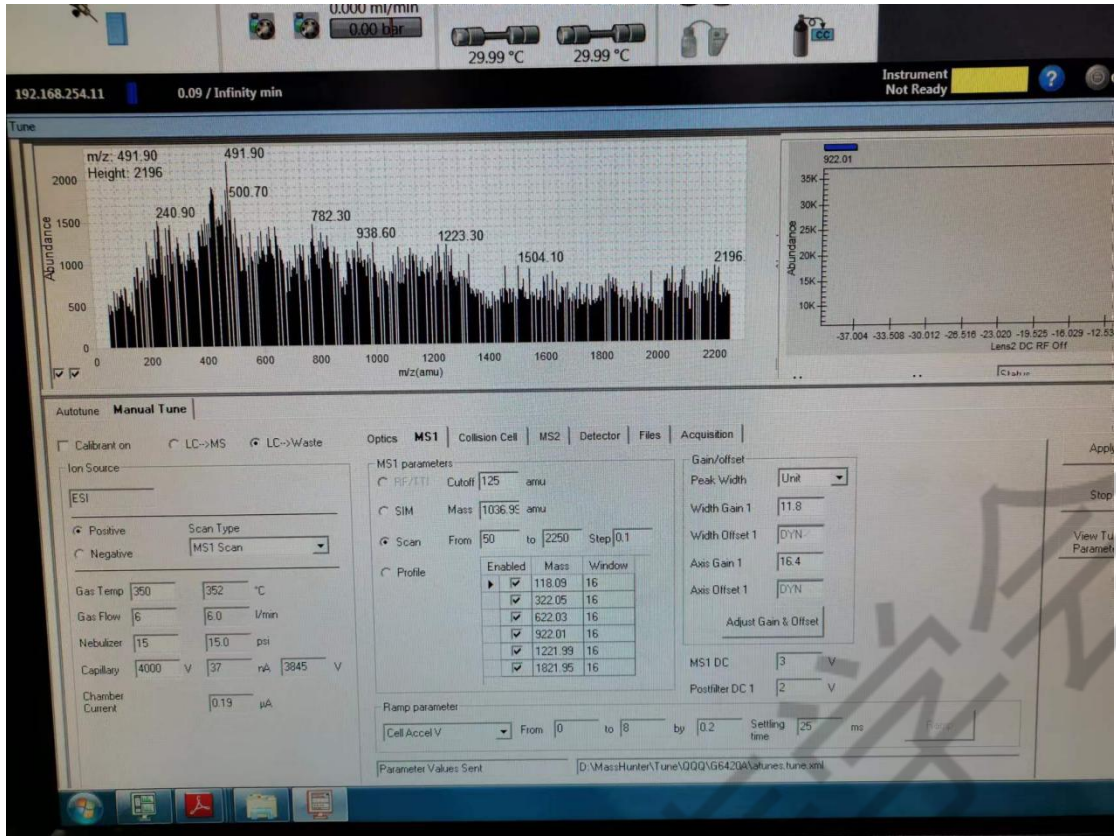


图 1 关闭调谐液下 ms1 扫描

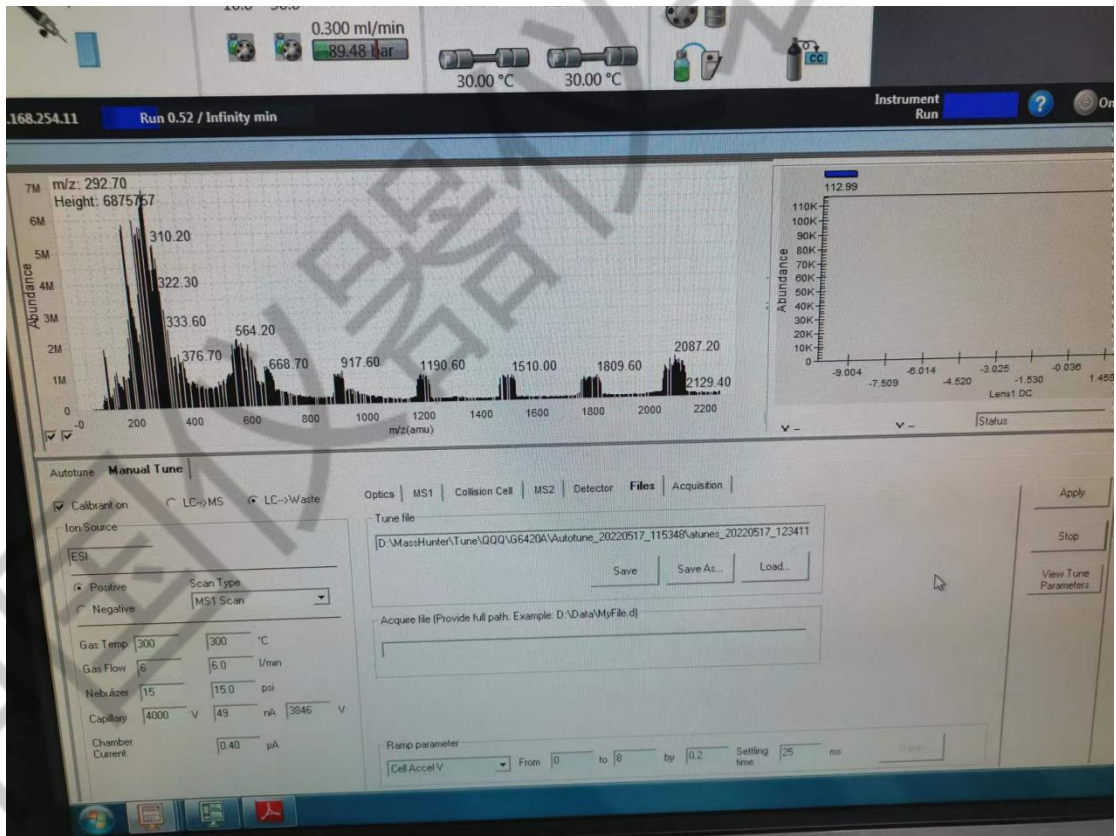


图 2 打开调谐液的 ms1 扫描