

测试报告

样品信息			
样品名称	20 种全氟烷基化合物	编 号	Z20220207-001
样品重量	/	剂 型	/
收样日期	/	测试期间	2022/02./10-2022/2/18
样品描述	/		
测试需求			
测试成分	PFBA、PFPeA、PFHxA、PFHpA、PFOA、PFNA、PFDA、 PFUnDA、PFDODA、PFtriDA、PFTreDA、PFHxDA、PFODA、 PFBS、PFPeS、PFHxS、PFHpS、PFOS、PFNS、PFDS		
参考标准			
参考标准	SN/T5222-2019	标样	有
仪器信息			
测试仪器	超高效液相串联四级杆	仪器型号	Waters ACQuity H CLASS Xevo TQ-Smicro

● 色谱条件：

色谱柱：	月旭 Ultimate®UHPLC XB-C18(2.1×150 mm,1.8 μm)		
流动相：	A 相:5 mmol/L 乙酸铵水溶液 B 相:5 mmol/L 乙酸铵甲醇溶液		
	时间(min)	A(%)	B(%)
	0	90	10
	3.0	70	30
	13.0	0	100
	14.0	90	10
	20.0	90	10



柱温：	40 °C
流速：	0.3 mL/min
进样量：	1 μL
注意事项：	

● 质谱条件：

电离模式	ESI-
毛细管电压	1 KV
脱溶剂气温度	350°C
脱溶剂气流速	900L/H
锥孔气流速	100L/H
离子源温度	100 摄氏度
注意事项	

● 流动相的配置：

流动相 A（5 mmol/L 乙酸铵水溶液）：精密称取乙酸铵 0.1930 g，加超纯水 500 mL，经 0.22 μm 滤膜抽滤，超声，即得；

流动相 A（5 mmol/L 乙酸铵甲醇溶液）：精密称取乙酸铵 0.1928 g，加甲醇 500 mL，经 0.22 μm 滤膜抽滤，超声，即得；

● 样品溶液的配置：

20 种全氟烷基混标：取浓度为 1ppm 的 20 种全氟烷基混标溶液 100 μL，加甲醇 900 μL 稀释，混匀，经 0.22 μm 滤膜过滤，即得浓度为 100 ppb 的混标溶液。

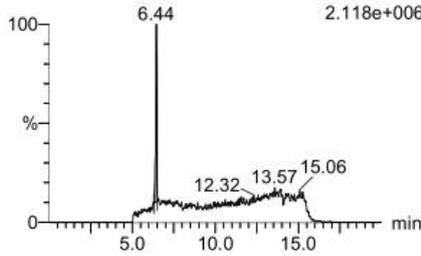
● 谱图和数据

(1) 20 种混标中各目标物定量离子图



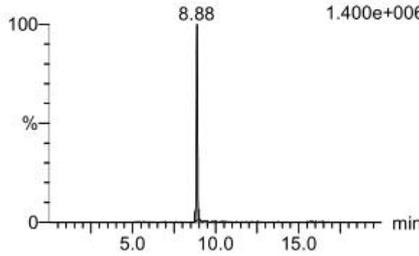
PFBA

PFAS-XB150-100ppb F1:MRM of 1 channel,ES-
212.9 > 169
2.118e+006



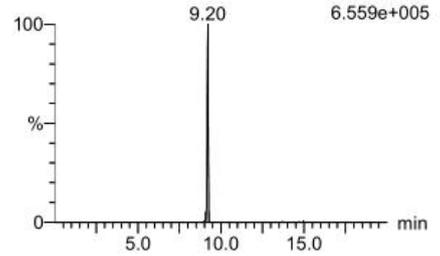
PFPeA

PFAS-XB150-100ppb F2:MRM of 1 channel,ES-
262.9 > 219
1.400e+006



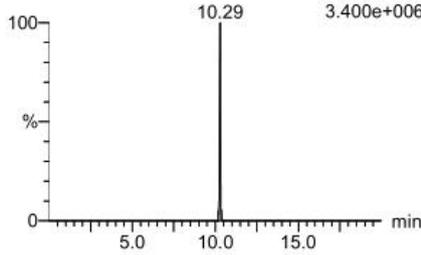
PFBS

PFAS-XB150-100ppb F3:MRM of 2 channels,ES-
298.9 > 99.1
6.559e+005



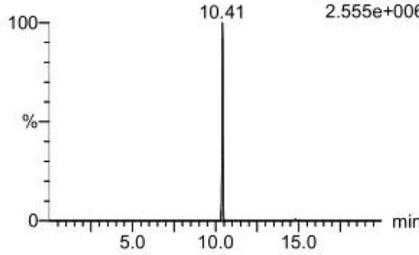
PFHxA

PFAS-XB150-100ppb F4:MRM of 2 channels,ES-
312.9 > 269
3.400e+006



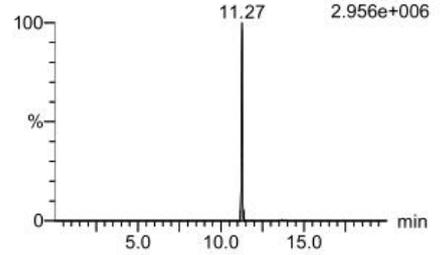
PFPeS

PFAS-XB150-100ppb F5:MRM of 2 channels,ES-
348.9 > 80.1
2.555e+006



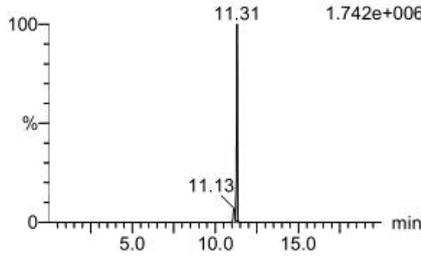
PFHpA (1)

PFAS-XB150-100ppb F6:MRM of 2 channels,ES-
362.9 > 319
2.956e+006



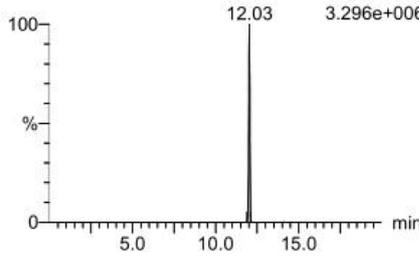
PFHxS (1)

PFAS-XB150-100ppb F7:MRM of 2 channels,ES-
398.9 > 80.1
1.742e+006



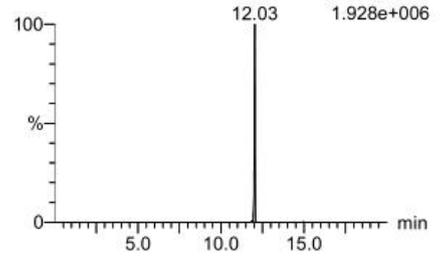
PFOA (1)

PFAS-XB150-100ppb F8:MRM of 2 channels,ES-
412.9 > 369
3.296e+006



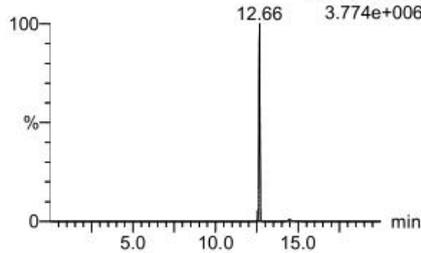
PFHpS

PFAS-XB150-100ppb F9:MRM of 2 channels,ES-
448.9 > 80.2
1.928e+006



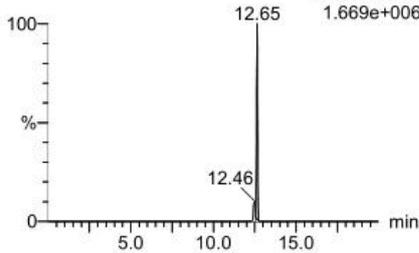
PFNA

PFAS-XB150-100ppb F10:MRM of 2 channels,ES-
462.9 > 418.9
3.774e+006



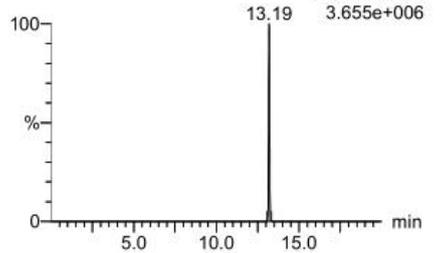
PFOS

PFAS-XB150-100ppb F11:MRM of 2 channels,ES-
498.9 > 80.2
1.669e+006

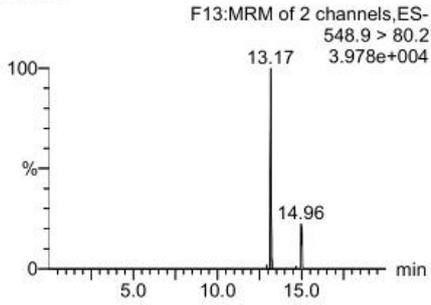


PFDA

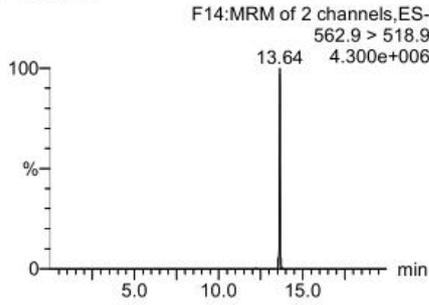
PFAS-XB150-100ppb F12:MRM of 2 channels,ES-
512.9 > 468.9
3.655e+006



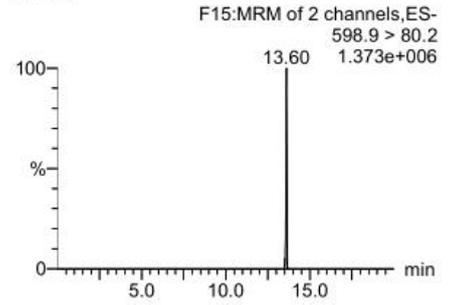
PFNS



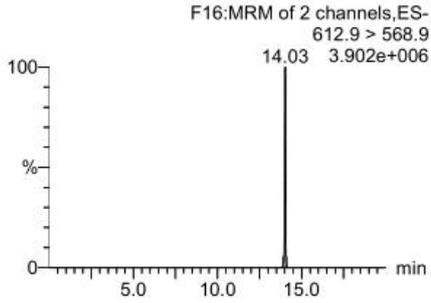
PFUnDA



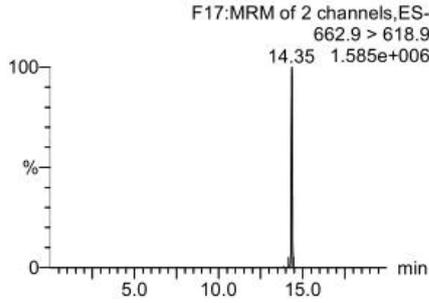
PFDS



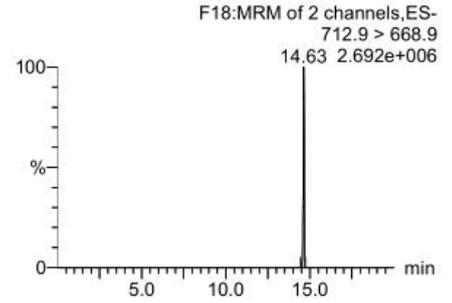
PFDODA



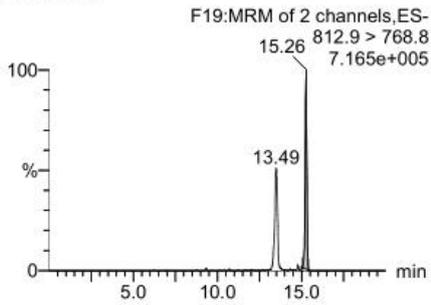
PFTriDA



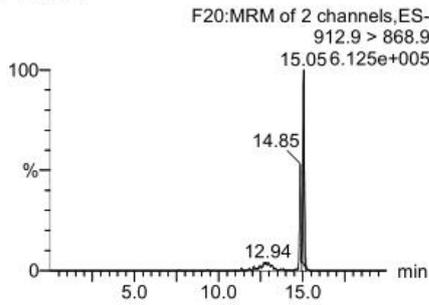
PFTreDA



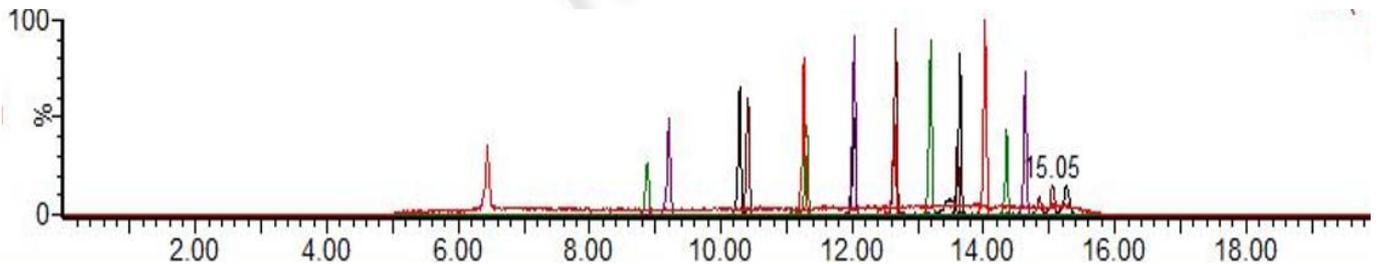
PFHxDA



PFODA



(2) 20种混标中各目标物色谱结果叠加图:



全氟烷基化合物主要质谱参数

名称	CAS号	保留时间	母离子	子离子	锥孔电压	碰撞能
PFBA	375-22-4	6.44	212.9	169	10	10



PFPeA	2706-90-3	8.88	262.9	219	10	5
PFHxA	307-24-4	10.29	312.9	269	5	10
				119		20
PFHpA	375-85-9	11.27	362.9	319	15	10
				169		15
PFOA	335-67-1	12.03	412.9	369	10	10
				169		15
PFNA	375-95-1	12.66	462.9	418.9	10	10
				219		15
PFDA	335-76-2	13.19	512.9	468.9	15	10
				219		15
PFUnDA	2058-94-8	13.64	562.9	518.9	25	10
				269		20
PFDoDA	307-55-1	14.03	612.9	568.9	30	10
				169		25
PFtriDA	72629-94-8	14.35	662.9	618.9	5	10
				169		30
PFTreDA	376-06-7	14.63	712.9	668.9	10	15
				169		25
PFHxDA	67905-19-5	15.26	812.9	768.9	40	10
				169.2		40
PFODA	16517-11-6	15.05	912.9	868.9	35	15
				169.2		35
PFBS	29420-49-3	9.20	298.9	80.1	15	30
				99.1		30
PFPeS	2706-91-4	10.41	348.9	80.1	10	30
				99.1		30
PFHxS	3871-99-6	11.31	398.9	80.1	10	35
				99.1		30
PFHpS	375-92-8	12.03	448.9	80.2	15	35
				99.1		35



PFOS	1763-23-1	12.65	498.9	80.2	15	40
				99.1		40
PFNS	N/A	13.17	548.9	80.2	20	40
				99.2		40
PFDS	335-77-3	13.60	598.9	80.2	25	40
				99.1		40

● 结论：

使用月旭 Ultimate®UHPLC XB-C18(2.1×150 mm,1.8 μm)色谱柱，在该检测条件下，可以满足检测要求。

日期: 2022/02/17

