

RBX-FAME 两根色谱柱对比 分析报告

-----武汉谱立

一、客户要求

RBX-FAME/100m*0.25mm*0.25 μ m (SerialNo: 325411D09) 和

RBX-FAME/100m*0.25mm*0.25 μ m (SerialNo: 325411D08) 两根色谱柱的对比

二、仪器和材料

2.1 福立 GC9720 气相色谱仪

2.2 反控工作站

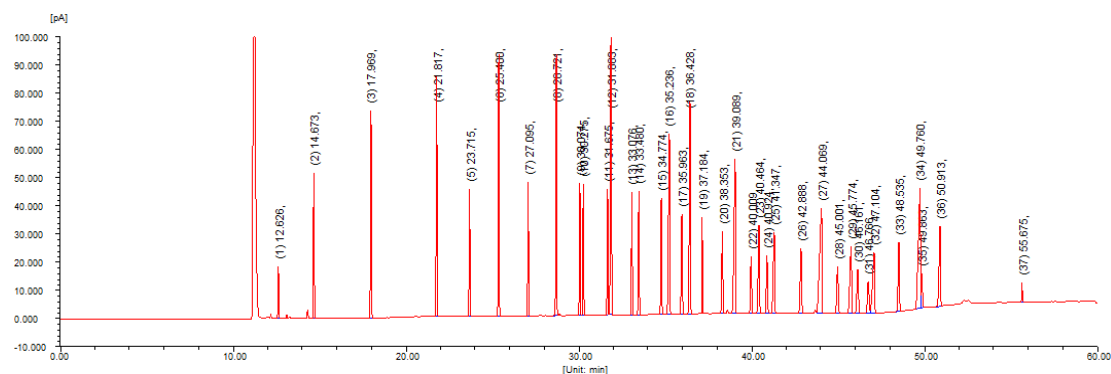
2.3 37 种脂肪酸甲酯混标

三、色谱条件

仪器: 福立气相色谱仪(GC-9720)	COL: 100 $^{\circ}$ C(13min) -10 $^{\circ}$ C/min-180 $^{\circ}$ C (6min) -2 $^{\circ}$ C
检测器: 宽量程 FID 氢火焰检测器	/min-200 $^{\circ}$ C (10min) -10 $^{\circ}$ C/min-230 $^{\circ}$ C (10min)
色谱柱: RBX-FAME/100m*0.25mm*0.25 μ m	INJ: 270 $^{\circ}$ C DET: 240 $^{\circ}$ C
载气: N ₂ 恒流: 0.8ml/min 分流比: 20: 1	进样量: 1.0 μ l
	定量方法: 面积归一法

四、实验

4.1 37 种脂肪酸甲酯混标在色谱柱 (SerialNo: 325411D08) 上的分离谱图及数据



地址: 浙江温岭城东街道百丈南路95号

邮编: 317500

分析员: 蔡赛微

审核: 金迁

电 话: 15657600023

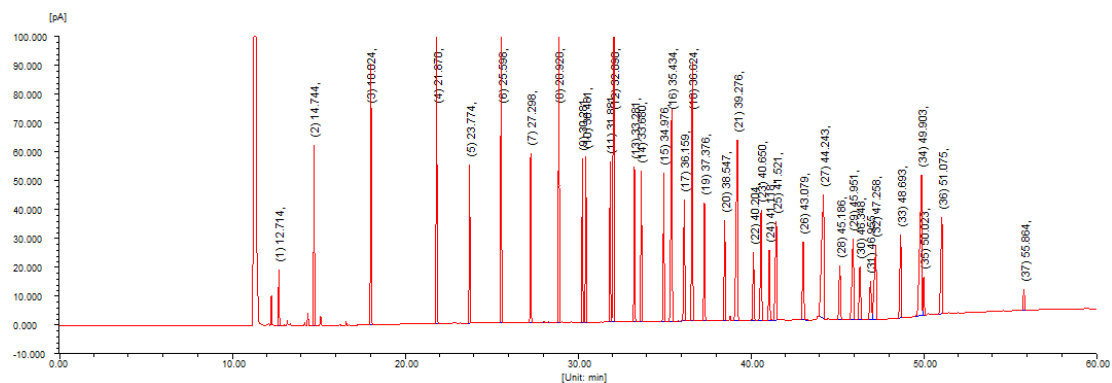
时间: 2021.09.14

峰序	组分名	保留时间[min]	半峰宽[min]	峰高[fA]	峰面积[fA*s]	峰面积[%]	含量[%]
1		12.626	0.053	18474.1	63109.7	0.8789	0.8789
2		14.673	0.057	51861.4	189433.2	2.6383	2.6383
3		17.969	0.057	73884.7	275577.4	3.8380	3.8380
4		21.817	0.054	85335.6	298459.5	4.1567	4.1567
5		23.715	0.052	45249.9	152502.4	2.1239	2.1239
6		25.400	0.053	92992.5	317715.6	4.4249	4.4249
7		27.095	0.052	47668.3	158838.1	2.2122	2.2122
8		28.721	0.055	93010.9	329695.6	4.5918	4.5918
9		30.074	0.052	47140.5	158643.9	2.2095	2.2095
10		30.275	0.055	46995.2	164484.6	2.2908	2.2908
11		31.675	0.055	45074.8	158905.4	2.2131	2.2131
12		31.883	0.065	122050.6	511986.4	7.1306	7.1306
13		33.076	0.057	44026.1	161693.9	2.2520	2.2520
14		33.480	0.059	44340.9	169485.1	2.3605	2.3605
15		34.774	0.062	41415.6	164796.7	2.2952	2.2952
16		35.236	0.086	64417.9	344255.4	4.7945	4.7945
17		35.963	0.073	35682.1	166502.5	2.3189	2.3189
18		36.428	0.069	75489.3	334791.6	4.6627	4.6627
19		37.184	0.065	34580.1	144203.5	2.0084	2.0084
20		38.353	0.069	29564.4	130941.6	1.8237	1.8237
21		39.089	0.101	55163.9	348875.6	4.8589	4.8589
22		40.009	0.076	20268.1	99335.6	1.3835	1.3835
23		40.464	0.082	31331.9	165974.0	2.3116	2.3116
24		40.924	0.076	20734.3	103061.9	1.4354	1.4354
25		41.347	0.095	28848.1	174727.2	2.4335	2.4335
26		42.888	0.090	23144.9	133428.7	1.8583	1.8583
27		44.069	0.151	37491.9	354490.3	4.9371	4.9371
28		45.001	0.094	16625.9	101085.6	1.4078	1.4078
29		45.774	0.111	24038.0	171231.1	2.3848	2.3848
30		46.161	0.102	15791.6	104270.9	1.4522	1.4522
31		46.766	0.106	11402.6	77172.7	1.0748	1.0748
32		47.104	0.129	21829.2	177122.0	2.4668	2.4668
33		48.535	0.084	24671.5	134965.4	1.8797	1.8797
34		49.760	0.132	42869.7	364924.9	5.0824	5.0824
35		49.863	0.077	12508.6	59916.1	0.8345	0.8345
36		50.913	0.095	28703.5	173383.5	2.4148	2.4148
37		55.675	0.088	7036.3	40157.0	0.5593	0.5593



峰序	组分名	保留时间[min]	半峰宽[min]	容量因子	理论塔板数	理论塔板数/米	有效塔板数/米	分离度	拖尾因子
1		12.626	0.053	0.000	310503	0	0	4.867	1.065
2		14.673	0.057	0.000	362855	0	0	3.352	1.011
3		17.969	0.057	0.000	544160	0	0	33.840	0.986
4		21.817	0.054	0.000	893210	0	0	40.573	0.943
5		23.715	0.052	0.000	1137625	0	0	20.954	0.968
6		25.400	0.053	0.000	1272405	0	0	18.835	0.906
7		27.095	0.052	0.000	1523586	0	0	19.067	0.953
8		28.721	0.055	0.000	1492571	0	0	17.892	0.877
9		30.074	0.052	0.000	1829471	0	0	14.792	0.954
10		30.275	0.055	0.000	1699191	0	0	2.219	0.929
11		31.675	0.055	0.000	1837420	0	0	15.024	0.950
12		31.883	0.065	0.000	1319345	0	0	2.038	0.782
13		33.076	0.057	0.000	1843869	0	0	11.423	0.947
14		33.480	0.059	0.000	1763902	0	0	4.071	0.883
15		34.774	0.062	0.000	1742719	0	0	12.557	0.928
16		35.236	0.086	0.000	937258	0	0	3.686	0.757
17		35.963	0.073	0.000	1344521	0	0	5.392	0.874
18		36.428	0.069	0.000	1544124	0	0	3.858	0.791
19		37.184	0.065	0.000	1831695	0	0	6.656	0.896
20		38.353	0.069	0.000	1711601	0	0	10.297	0.930
21		39.089	0.101	0.000	824354	0	0	5.090	0.685
22		40.009	0.076	0.000	1535342	0	0	6.111	0.982
23		40.464	0.082	0.000	1338122	0	0	3.381	0.815
24		40.924	0.076	0.000	1592371	0	0	3.416	0.974
25		41.347	0.095	0.000	1049406	0	0	2.902	0.727
26		42.888	0.090	0.000	1258025	0	0	9.808	0.907
27		44.069	0.151	0.000	469793	0	0	1.764	0.624
28		45.001	0.094	0.000	1260734	0	0	4.467	0.907
29		45.774	0.111	0.000	947807	0	0	4.442	0.748
30		46.161	0.102	0.000	1134660	0	0	2.143	0.903
31		46.766	0.106	0.000	1078362	0	0	3.425	0.994
32		47.104	0.129	0.000	738651	0	0	1.690	0.662
33		48.535	0.084	0.000	1834962	0	0	7.902	0.839
34		49.760	0.132	0.000	787278	0	0	6.667	0.602
35		49.863	0.077	0.000	2323192	0	0	0.578	1.289
36		50.913	0.095	0.000	1602428	0	0	7.080	0.706
37		55.675	0.088	0.000	2234374	0	0	7.002	1.024

4.2 37 种脂肪酸甲酯混标在色谱柱 (SerialNo: 325411D09) 上的分离谱图及数据



地址: 浙江温岭城东街道百丈南路95号

邮编: 317500

分析员: 蔡赛微

审核: 金迁

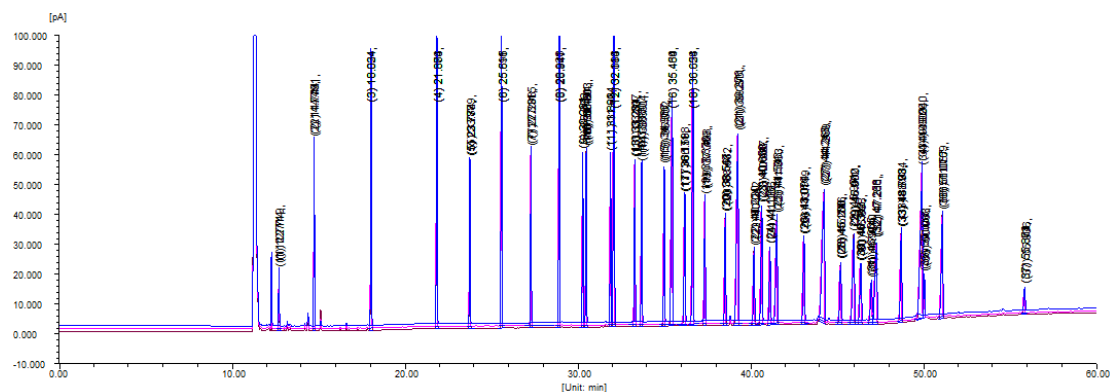
电话: 15657600023

时间: 2021.09.14

峰序	组分名	保留时间[min]	半峰宽[min]	峰高[fA]	峰面积[fA*s]	峰面积[%]	含量[%]
1		12.714	0.048	19626.2	60731.6	0.7128	0.7128
2		14.744	0.052	62761.6	210098.2	2.4658	2.4658
3		18.024	0.054	90959.1	316403.4	3.7134	3.7134
4		21.870	0.053	103797.0	353245.2	4.1458	4.1458
5		23.774	0.051	55139.8	182441.3	2.1412	2.1412
6		25.598	0.053	111342.6	380480.9	4.4655	4.4655
7		27.298	0.051	58861.3	200195.7	2.3496	2.3496
8		28.928	0.055	111467.1	396413.3	4.6525	4.6525
9		30.281	0.052	56888.3	190793.5	2.2392	2.2392
10		30.481	0.054	57703.0	199050.2	2.3361	2.3361
11		31.881	0.054	55902.3	193242.2	2.2680	2.2680
12		32.090	0.068	141373.3	611987.3	7.1825	7.1825
13		33.281	0.056	53994.7	195642.8	2.2961	2.2961
14		33.680	0.061	52354.8	204009.8	2.3943	2.3943
15		34.976	0.060	51610.7	199396.4	2.3402	2.3402
16		35.434	0.091	73696.3	414297.6	4.8624	4.8624
17		36.159	0.075	42402.3	202292.8	2.3742	2.3742
18		36.624	0.070	89975.0	401693.2	4.7144	4.7144
19		37.376	0.066	41140.7	172116.7	2.0200	2.0200
20		38.547	0.068	35165.1	154397.9	1.8121	1.8121
21		39.276	0.107	62933.1	420233.5	4.9320	4.9320
22		40.204	0.074	23841.9	113754.8	1.3351	1.3351
23		40.650	0.082	38291.9	202245.6	2.3736	2.3736
24		41.118	0.076	24446.8	119215.7	1.3992	1.3992
25		41.521	0.096	34515.5	210675.0	2.4726	2.4726
26		43.079	0.089	27352.1	158087.1	1.8554	1.8554
27		44.243	0.158	43331.0	411848.5	4.8336	4.8336
28		45.186	0.095	19229.8	116964.9	1.3728	1.3728
29		45.951	0.113	28439.9	205806.5	2.4154	2.4154
30		46.348	0.100	18755.4	120461.6	1.4138	1.4138
31		46.955	0.102	13498.5	88336.3	1.0368	1.0368
32		47.258	0.131	26229.0	212958.4	2.4994	2.4994
33		48.693	0.085	29200.0	158086.3	1.8554	1.8554
34		49.903	0.142	49137.2	433659.5	5.0896	5.0896
35		50.023	0.072	13435.6	60947.2	0.7153	0.7153
36		51.075	0.096	33596.3	206318.9	2.4214	2.4214
37		55.864	0.087	7599.7	41949.0	0.4923	0.4923

峰序	组分名	保留时间[min]	半峰宽[min]	容量因子	理论塔板数	理论塔板数/米	有效塔板数/米	分离度	拖尾因子
1		12.714	0.048	0.000	388699	0	0	5.338	1.064
2		14.744	0.052	0.000	439707	0	0	23.814	1.028
3		18.024	0.054	0.000	609625	0	0	36.205	0.980
4		21.870	0.053	0.000	943341	0	0	42.197	0.941
5		23.774	0.051	0.000	1188237	0	0	21.479	0.964
6		25.598	0.053	0.000	1276216	0	0	20.522	0.880
7		27.298	0.051	0.000	1587159	0	0	19.181	0.939
8		28.928	0.055	0.000	1514128	0	0	18.049	0.858
9		30.281	0.052	0.000	1854825	0	0	14.803	0.945
10		30.481	0.054	0.000	1765184	0	0	2.215	0.906
11		31.881	0.054	0.000	1931057	0	0	15.263	0.937
12		32.090	0.068	0.000	1233736	0	0	2.011	0.766
13		33.281	0.056	0.000	1933583	0	0	11.279	0.939
14		33.680	0.061	0.000	1688862	0	0	4.007	0.860
15		34.976	0.060	0.000	1882554	0	0	12.611	0.892
16		35.434	0.091	0.000	846180	0	0	3.582	0.744
17		36.159	0.075	0.000	1299263	0	0	5.163	0.864
18		36.624	0.070	0.000	1531084	0	0	3.793	0.792
19		37.376	0.066	0.000	1794724	0	0	6.537	0.913
20		38.547	0.068	0.000	1762922	0	0	10.295	0.924
21		39.276	0.107	0.000	746443	0	0	4.893	0.674
22		40.204	0.074	0.000	1635252	0	0	6.037	0.975
23		40.650	0.082	0.000	1361454	0	0	3.366	0.818
24		41.118	0.076	0.000	1635955	0	0	3.497	0.947
25		41.521	0.096	0.000	1043592	0	0	2.769	0.731
26		43.079	0.089	0.000	1288290	0	0	9.914	0.869
27		44.243	0.158	0.000	432574	0	0	5.535	0.611
28		45.186	0.095	0.000	1244576	0	0	4.374	0.924
29		45.951	0.113	0.000	910718	0	0	4.318	0.729
30		46.348	0.100	0.000	1198041	0	0	2.195	0.899
31		46.955	0.102	0.000	1174030	0	0	3.546	0.929
32		47.258	0.131	0.000	724664	0	0	1.533	0.659
33		48.693	0.085	0.000	1818021	0	0	7.831	0.836
34		49.903	0.142	0.000	681013	0	0	6.270	0.597
35		50.023	0.072	0.000	2674105	0	0	0.656	1.078
36		51.075	0.096	0.000	1557324	0	0	7.363	0.682
37		55.864	0.087	0.000	2301810	0	0	30.754	0.961

4.3 37 种脂肪酸甲酯混标在色谱柱 (SerialNo: 325411D09) 上的重复性谱图及数据



地址: 浙江温岭城东街道百丈南路95号

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分析员: 蔡赛微

审核: 金迁

电话: 15657600023

时间: 2021.09.14



序号	组分名	平均时间	时间RSD%	平均面积	面积RSD%	平均峰高	峰高RSD%	平均含量	含量RSD%	谱图数
1		12.716	0.020	60787.4	1.2526	19553.5	1.5176	0.7021	1.8832	3
2		14.748	0.026	212101.1	0.8622	63094.9	0.5851	2.4497	0.6848	3
3		18.031	0.034	319912.4	0.9515	92130.3	1.1878	3.6949	0.4657	3
4		21.880	0.037	356949.8	0.9287	104880.7	0.8953	4.1227	0.5957	3
5		23.783	0.034	184684.2	1.0617	55524.1	0.7189	2.1330	0.4193	3
6		25.608	0.035	384806.5	1.0397	112058.4	1.0500	4.4444	0.6275	3
7		27.308	0.034	196995.5	1.4085	59017.3	0.7931	2.2757	2.8160	3
8		28.939	0.035	401533.1	1.1074	112868.1	1.0989	4.6375	0.3410	3
9		30.293	0.035	193729.9	1.3189	57215.2	0.4954	2.2374	0.2487	3
10		30.493	0.035	202132.1	1.3206	58470.9	1.2428	2.3345	0.1087	3
11		31.893	0.036	195973.2	1.2093	56633.2	1.1671	2.2634	0.2572	3
12		32.102	0.038	622188.0	1.4204	142815.4	0.9532	7.1858	0.1582	3
13		33.294	0.040	198536.8	1.2624	54477.8	0.7684	2.2930	0.1704	3
14		33.692	0.036	207703.9	1.5443	53603.1	2.0248	2.3988	0.1600	3
15		34.988	0.037	202039.9	1.2883	52167.9	1.1812	2.3334	0.5560	3
16		35.449	0.042	422124.3	1.6092	74399.6	1.1577	4.8751	0.2261	3
17		36.173	0.040	206016.6	1.5773	42791.2	1.3316	2.3793	0.3567	3
18		36.639	0.040	408161.3	1.3780	90077.2	0.2251	4.7139	0.0141	3
19		37.391	0.043	175894.7	1.8858	42340.5	2.5385	2.0314	0.6400	3
20		38.563	0.045	157294.9	1.5961	35799.6	1.5623	1.8166	0.2224	3
21		39.294	0.044	429199.4	1.8377	62879.7	0.2751	4.9567	0.4785	3
22		40.222	0.048	116342.8	1.9494	24505.4	2.3843	1.3436	0.5790	3
23		40.668	0.046	206083.5	1.6302	38661.1	0.8920	2.3800	0.2636	3
24		41.135	0.046	121387.0	1.5527	24811.0	1.2724	1.4019	0.2742	3
25		41.542	0.050	215853.9	2.1011	35507.0	2.4185	2.4928	0.7290	3
26		43.097	0.047	161058.6	1.6146	28072.4	2.2708	1.8601	0.2478	3
27		44.267	0.052	421969.5	2.0886	43938.9	1.3625	4.8731	0.7088	3
28		45.207	0.057	119403.3	1.7724	19608.1	1.8165	1.3790	0.3901	3
29		45.975	0.054	211023.7	2.1882	29328.6	3.4753	2.4370	0.8359	3
30		46.369	0.056	122963.4	1.7777	19054.5	1.5796	1.4201	0.4022	3
31		46.980	0.059	89054.7	2.0897	13467.7	0.3333	1.0286	1.9670	3
32		47.285	0.056	217827.1	2.2824	26391.5	1.9615	2.5156	1.2221	3
33		48.712	0.043	161932.5	2.1104	30003.0	2.3963	1.8701	0.7681	3
34		49.923	0.037	438927.7	1.1293	50383.5	2.4230	5.0694	0.4747	3
35		50.041	0.041	61101.1	0.2631	13797.0	2.2715	0.7057	1.2006	3
36		51.090	0.033	211927.0	2.3413	34425.4	2.0884	2.4474	0.9866	3
37		55.881	0.040	42990.2	2.1166	7797.2	2.2879	0.4965	0.8229	3

五、结果

RBX-FAME/100m*0.25mm*0.25 μ m (SerialNo: 325411D09) 和

RBX-FAME/100m*0.25mm*0.25 μ m (SerialNo: 325411D08) 两根色谱柱对于 37 种脂肪酸甲酯混标的分析保留时间接近, 分离效果也差不多。

以上数据仅供参考, 如有问题请电话联系

