**The characterisation of shellac resin by flow injection and liquid chromatography coupled with electrospray ionisation and mass spectrometry**

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**Figure S1.** Total Ion Chromatograms (TICs) obtained by HPLC-ESI-Q-ToF analysis of the methanol extracts of samples **a)** S0, **b)** S1 and **c)** S2. Labels refer to Table 1.

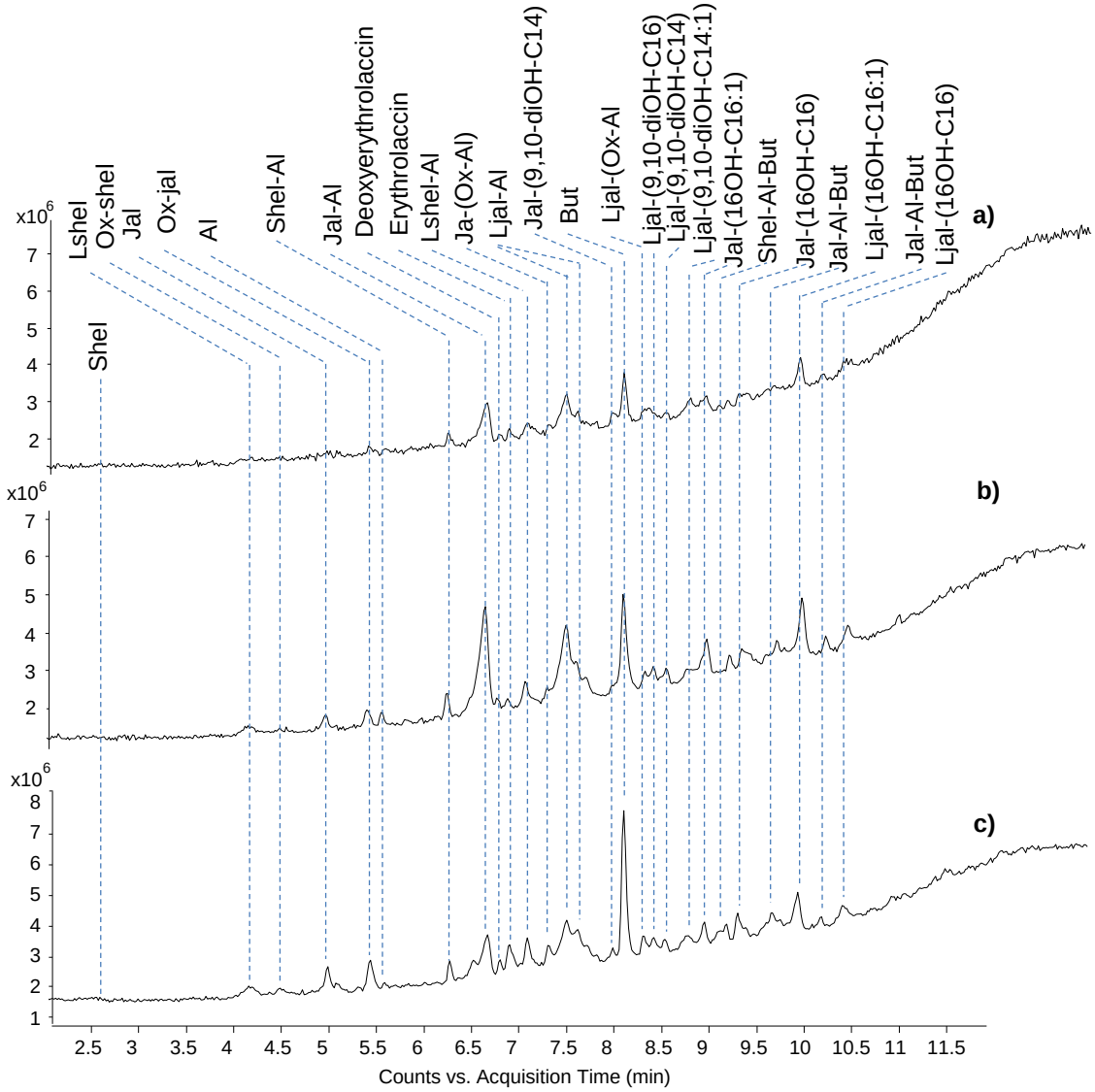
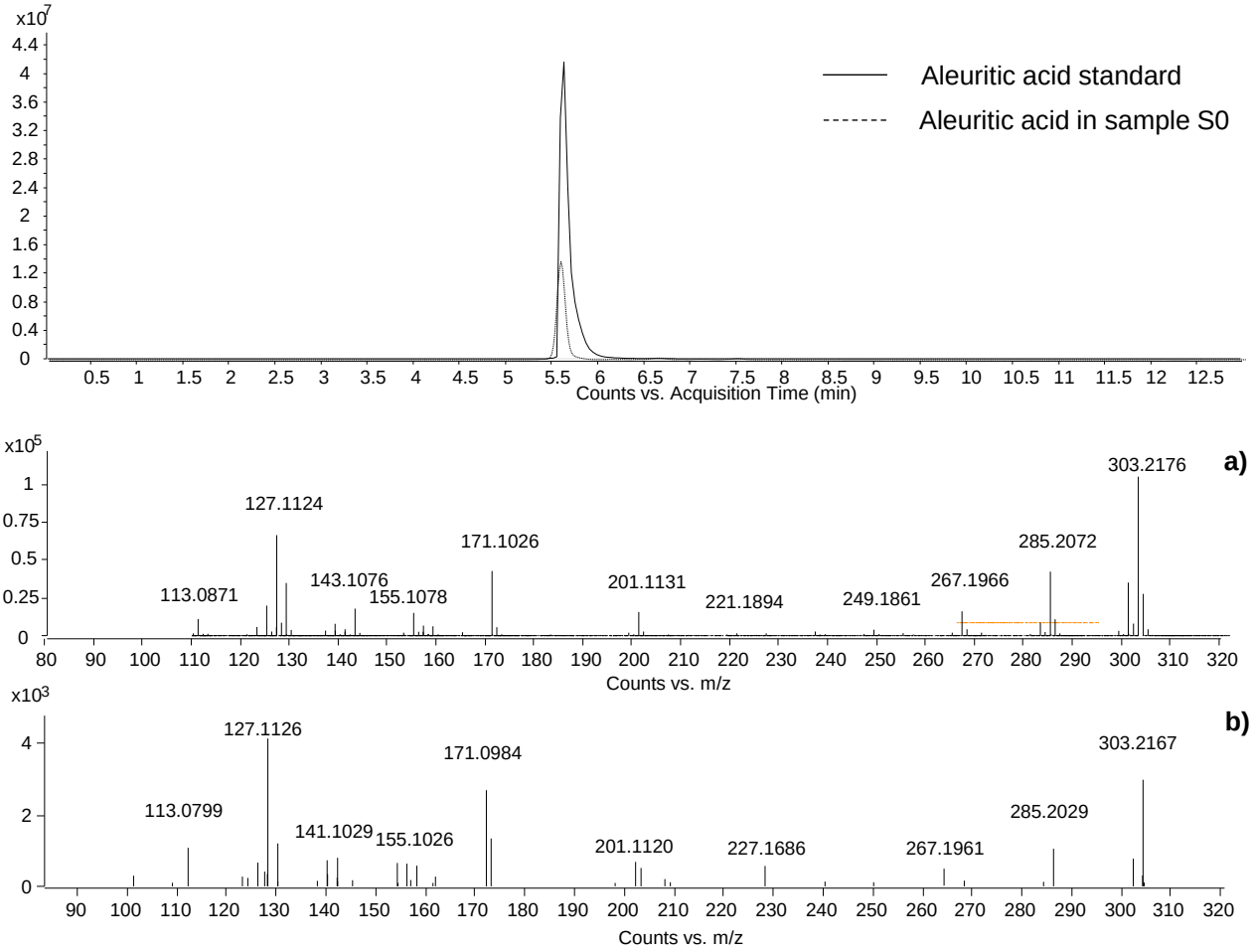
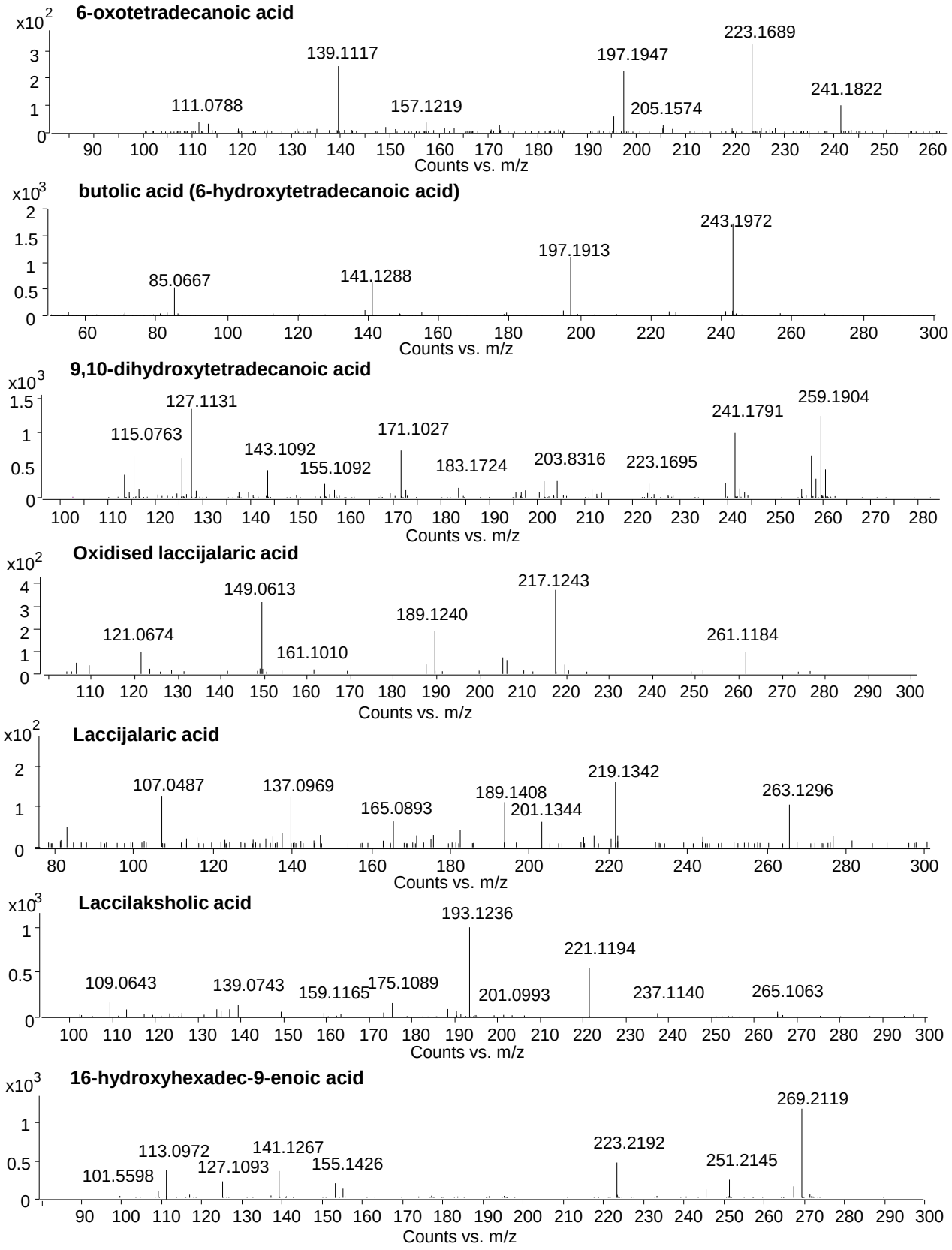


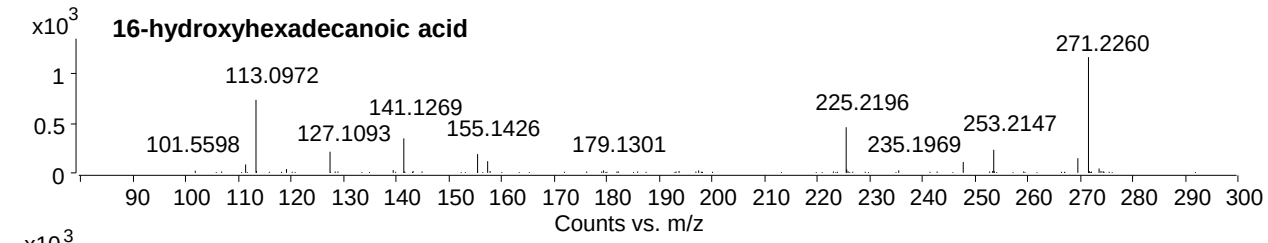
**Figure S2.** Comparison between chromatographic (top) and MS data (bottom) obtained for the reference of aleuritic acid (a) and the molecule identified in sample S0 (b), showing confirmation of the identification.

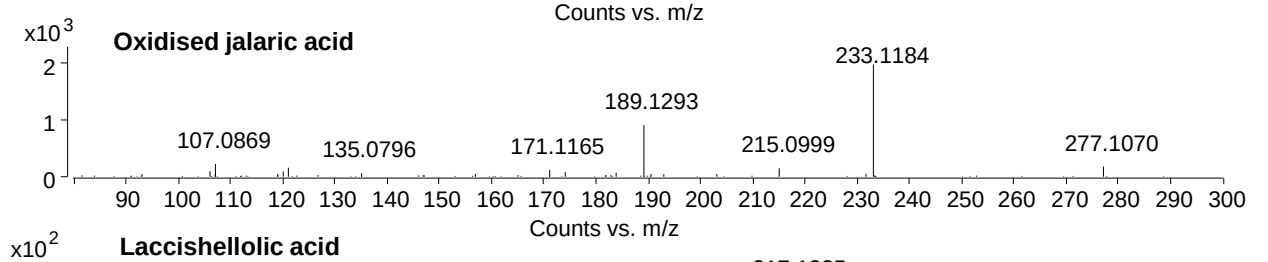


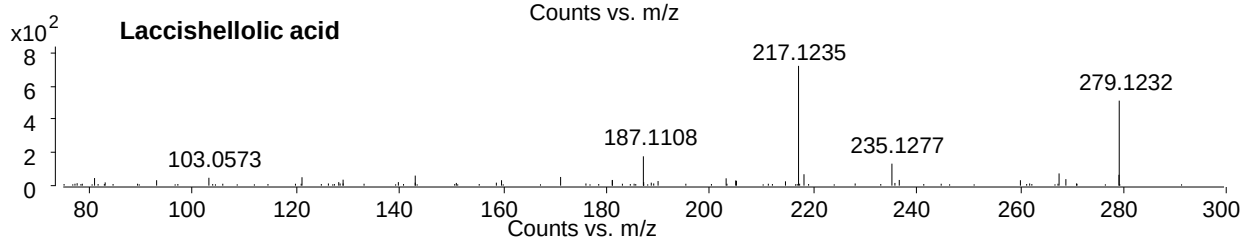
**Appendix - MS/MS spectra of shellac components acquired in negative ionisation mode**

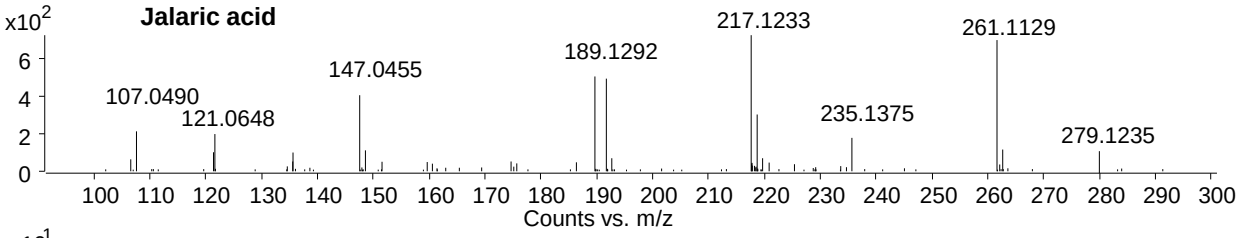
Variable collision energies in the range 20-40 V were adopted, mainly depending on the molecular weight of the molecules.

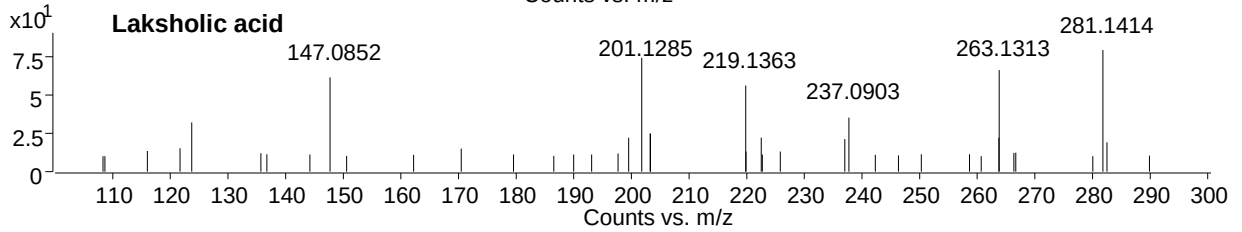


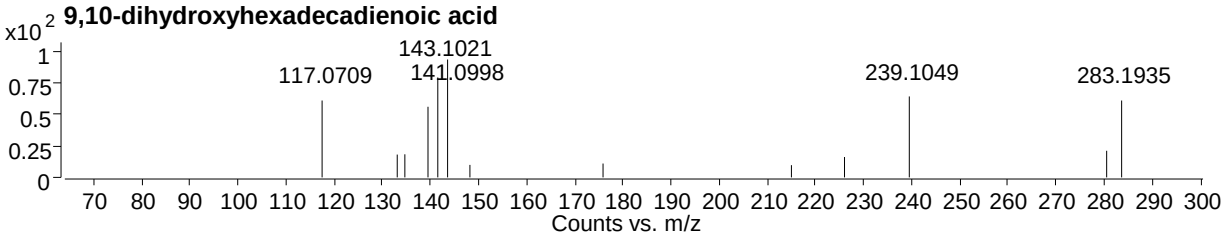

16-hydroxyhexadecanoic acid
x10 3
1
0.5
0
271.2260
113.0972
141.1269
225.2196
253.2147
101.5598
127.1093
155.1426
179.1301
235.1969
90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300
Counts vs. m/z

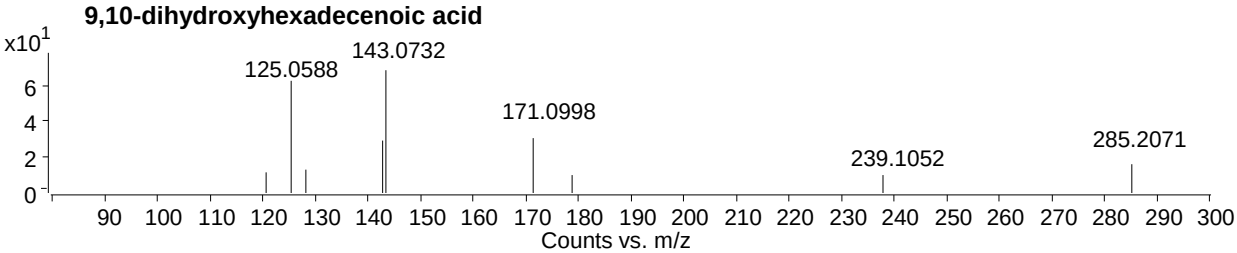

Oxidised jalaric acid
x10 3
2
1
0
233.1184
189.1293
107.0869
135.0796
171.1165
215.0999
277.1070
90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300
Counts vs. m/z

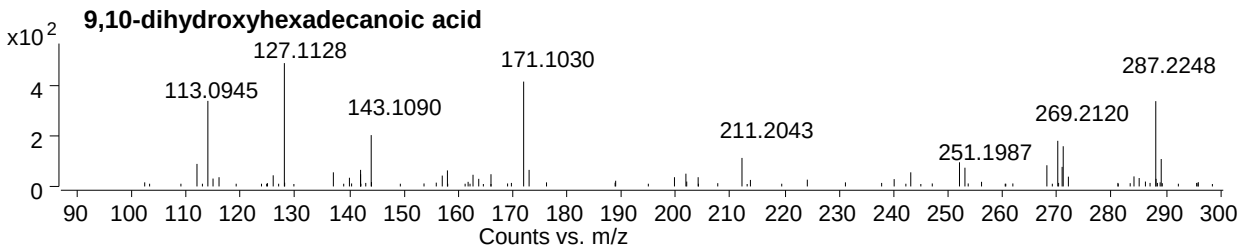

Laccishellolic acid
x10 2
8
6
4
2
0
217.1235
279.1232
187.1108
235.1277
103.0573
80 100 120 140 160 180 200 220 240 260 280 300
Counts vs. m/z

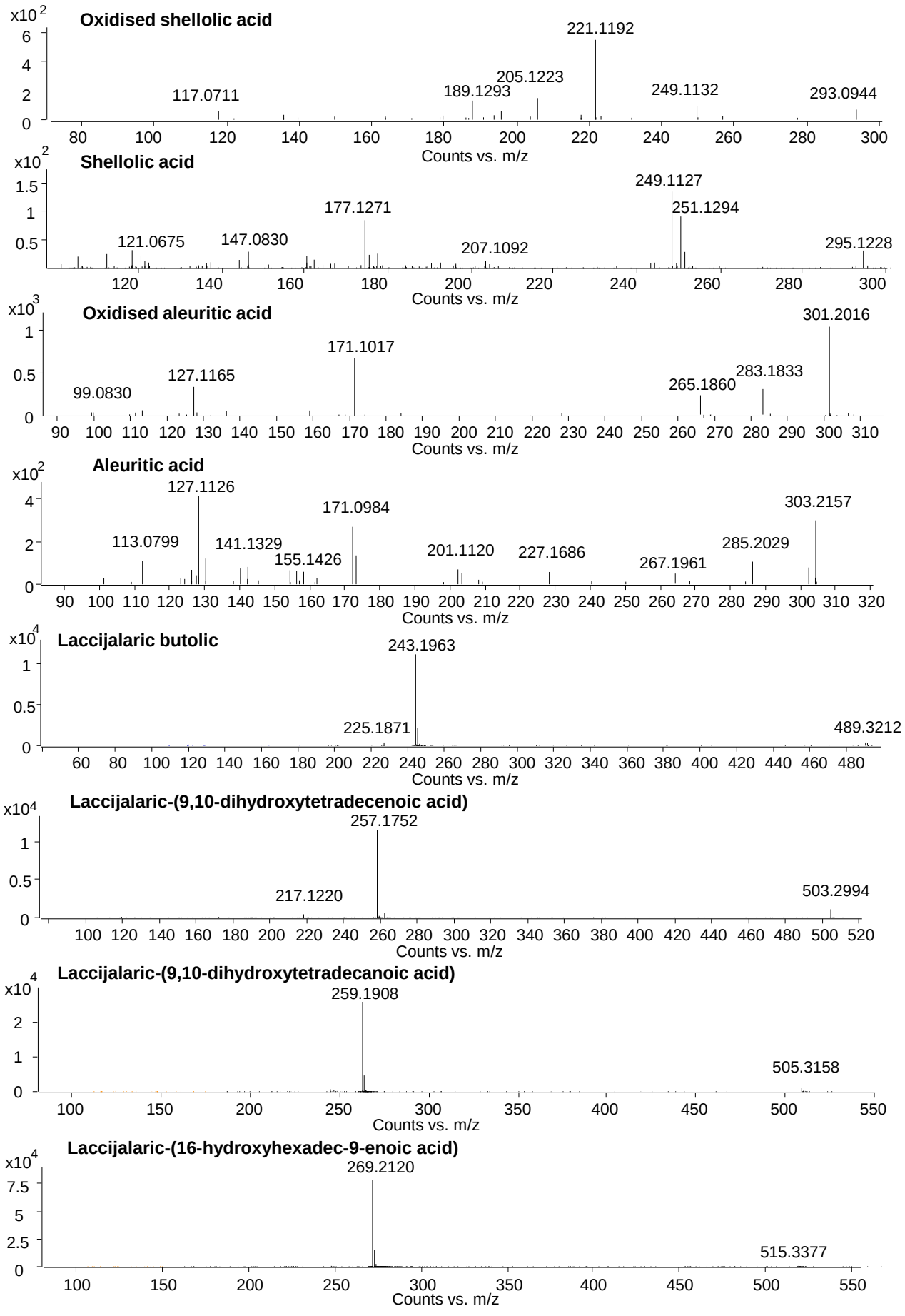

Jalaric acid
x10 2
6
4
2
0
217.1233
261.1129
189.1292
147.0455
107.0490
121.0648
235.1375
279.1235
100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300
Counts vs. m/z

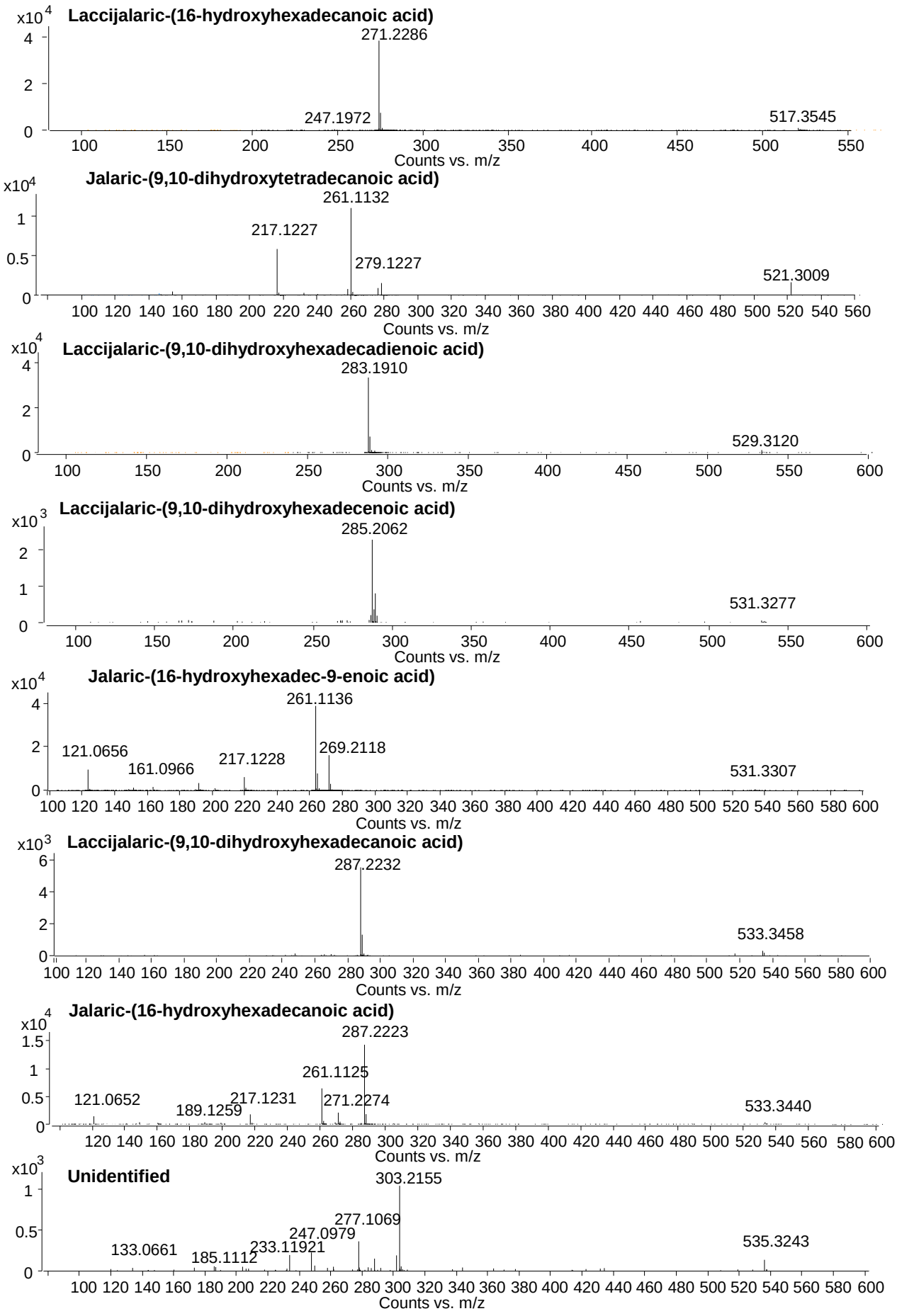

Laksholic acid
x10 1
7.5
5
2.5
0
281.1414
147.0852
201.1285
219.1363
263.1313
237.0903
110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300
Counts vs. m/z

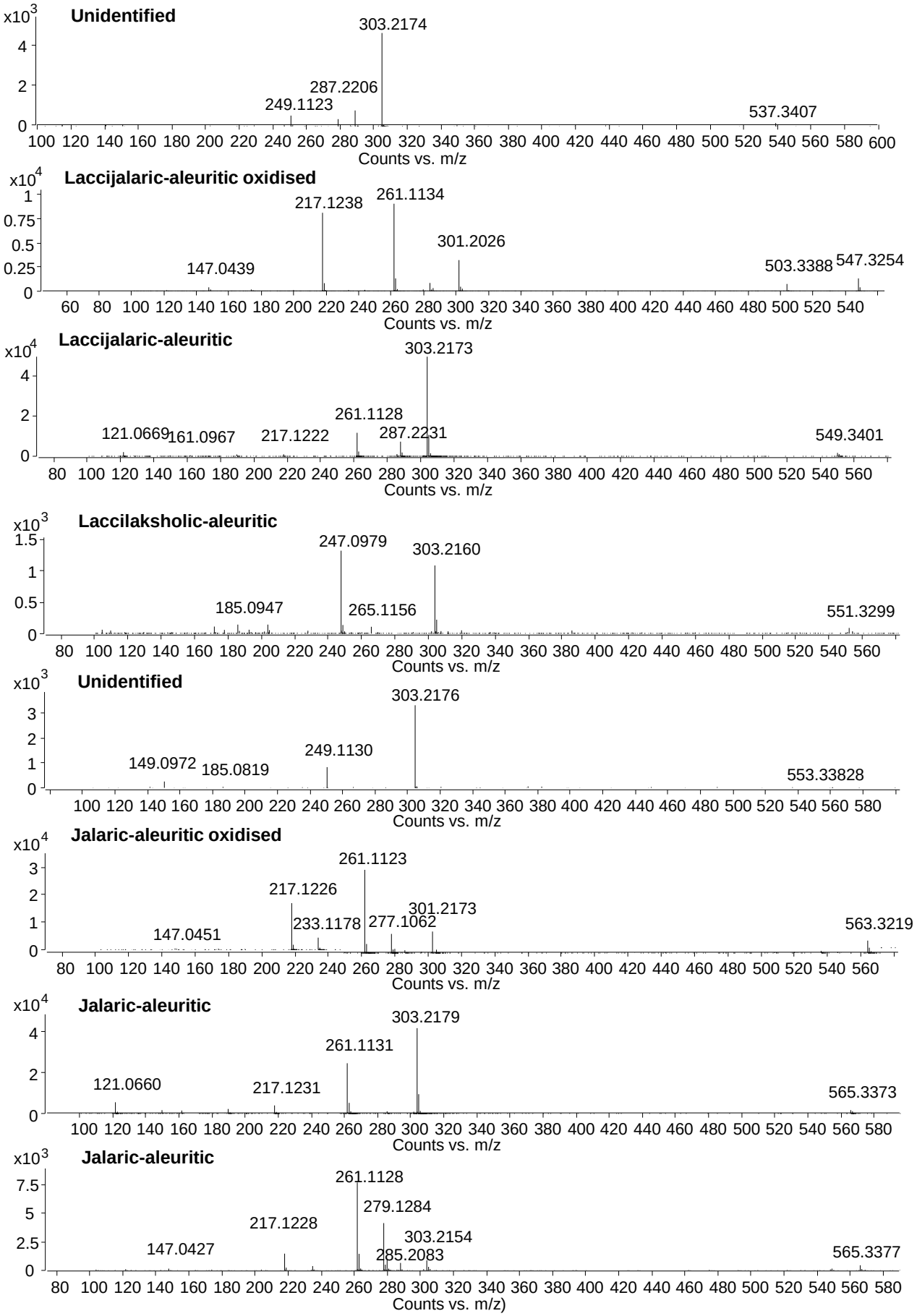

9,10-dihydroxyhexadecadienoic acid
x10 2
1
0.75
0.5
0.25
0
143.1021
141.0998
117.0709
239.1049
283.1935
70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300
Counts vs. m/z

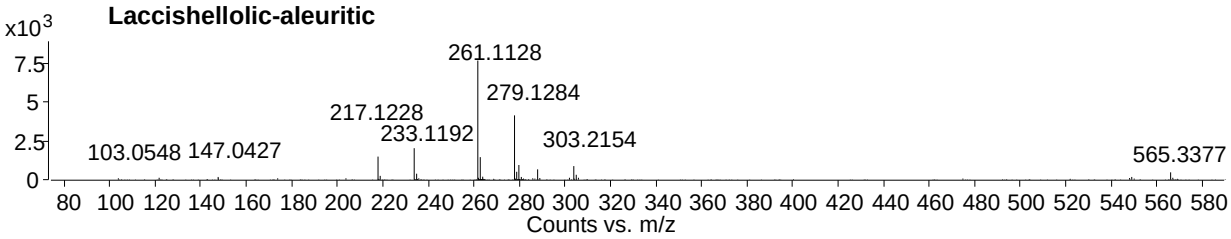

9,10-dihydroxyhexadecenoic acid
x10 1
6
4
2
0
143.0732
125.0588
171.0998
285.2071
239.1052
90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300
Counts vs. m/z

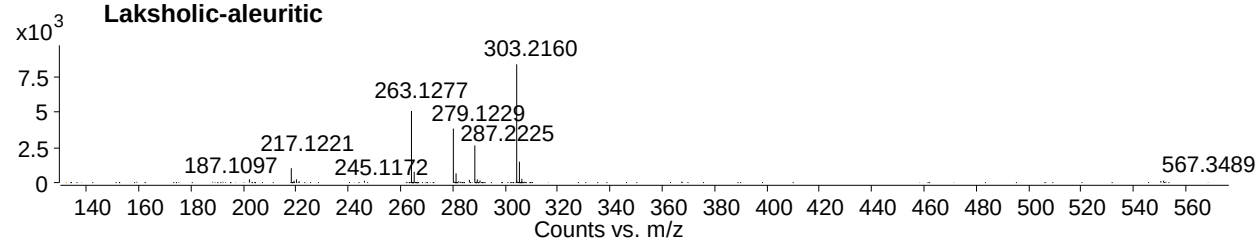

9,10-dihydroxyhexadecanoic acid
x10 2
4
2
0
127.1128
171.1030
287.2248
113.0945
143.1090
269.2120
211.2043
251.1987
90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300
Counts vs. m/z

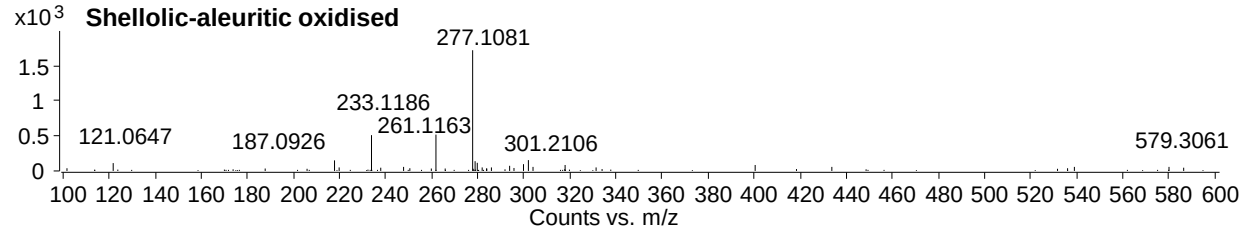

Oxidised shellolic acid
221.1192
205.1223
189.1293
249.1132
117.0711
293.0944
Shellolic acid
249.1127
177.1271
251.1294
121.0675
147.0830
207.1092
295.1228
Oxidised aleuritic acid
301.2016
171.1017
283.1833
127.1165
265.1860
99.0830
Aleuritic acid
127.1126
171.0984
303.2157
113.0799
141.1329
155.1426
201.1120
227.1686
285.2029
267.1961
Laccijalaric butolic
243.1963
225.1871
489.3212
Laccijalaric-(9,10-dihydroxytetradecenoic acid)
257.1752
217.1220
503.2994
Laccijalaric-(9,10-dihydroxytetradecanoic acid)
259.1908
505.3158
Laccijalaric-(16-hydroxyhexadec-9-enoic acid)
269.2120
515.3377
Counts vs. m/z

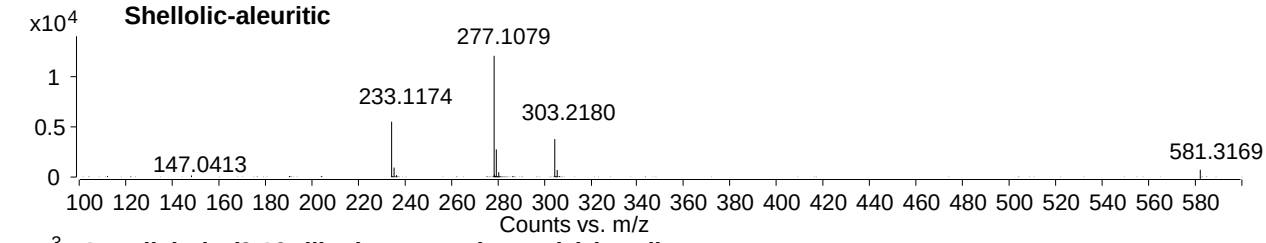

Laccijalaric-(16-hydroxyhexadecanoic acid)
271.2286
247.1972
517.3545
Counts vs. m/z
Jalaric-(9,10-dihydroxytetradecanoic acid)
261.1132
217.1227
279.1227
521.3009
Counts vs. m/z
Laccijalaric-(9,10-dihydroxyhexadecadienoic acid)
283.1910
529.3120
Counts vs. m/z
Laccijalaric-(9,10-dihydroxyhexadecenoic acid)
285.2062
531.3277
Counts vs. m/z
Jalaric-(16-hydroxyhexadec-9-enoic acid)
261.1136
121.0656
161.0966
217.1228
269.2118
531.3307
Counts vs. m/z
Laccijalaric-(9,10-dihydroxyhexadecanoic acid)
287.2232
533.3458
Counts vs. m/z
Jalaric-(16-hydroxyhexadecanoic acid)
287.2223
261.1125
121.0652
189.1259
217.1231
271.2274
533.3440
Counts vs. m/z
Unidentified
303.2155
277.1069
247.0979
133.0661
185.1112
233.11921
535.3243
Counts vs. m/z

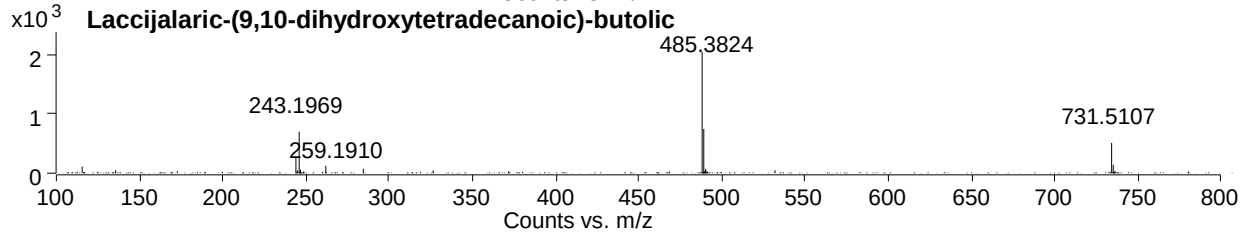

Unidentified
303.2174
287.2206
249.1123
537.3407
Counts vs. m/z
Laccijalaric-aleuritic oxidised
217.1238
261.1134
301.2026
147.0439
503.3388
547.3254
Counts vs. m/z
Laccijalaric-aleuritic
303.2173
261.1128
121.0669
161.0967
217.1222
287.2231
549.3401
Counts vs. m/z
Laccilaksholic-aleuritic
247.0979
303.2160
185.0947
265.1156
551.3299
Counts vs. m/z
Unidentified
303.2176
249.1130
149.0972
185.0819
553.33828
Counts vs. m/z
Jalaric-aleuritic oxidised
261.1123
217.1226
301.2173
233.1178
277.1062
147.0451
563.3219
Counts vs. m/z
Jalaric-aleuritic
303.2179
261.1131
121.0660
217.1231
565.3373
Counts vs. m/z
Jalaric-aleuritic
261.1128
279.1284
217.1228
303.2154
147.0427
285.2083
565.3377
Counts vs. m/z)

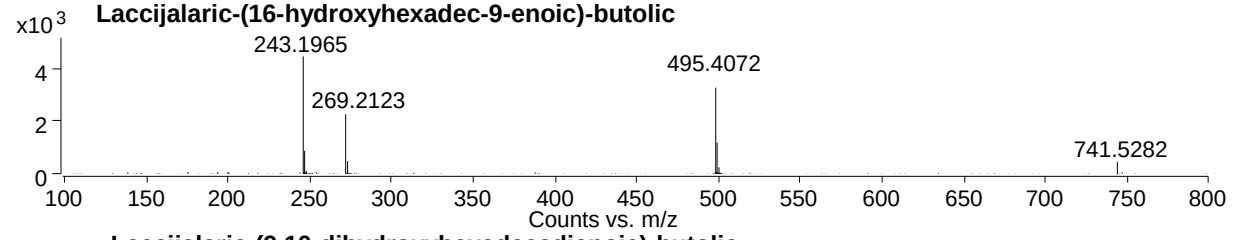

Laccishellolic-aleuritic
x10 3
261.1128
279.1284
217.1228
233.1192
303.2154
103.0548 147.0427
565.3377
Counts vs. m/z

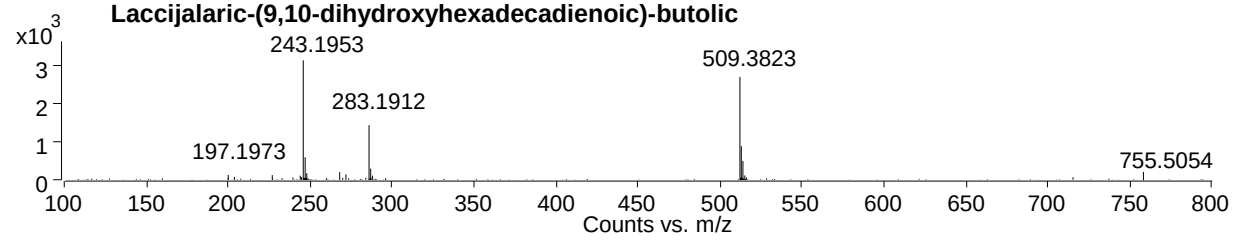

Laksholic-aleuritic
x10 3
303.2160
263.1277
279.1229
287.2225
217.1221
187.1097
245.1172
567.3489
Counts vs. m/z

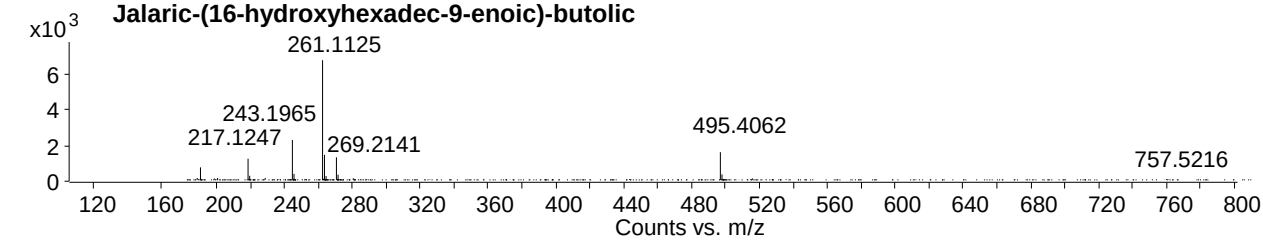

Shellolic-aleuritic oxidised
x10 3
277.1081
233.1186
261.1163
121.0647
187.0926
301.2106
579.3061
Counts vs. m/z

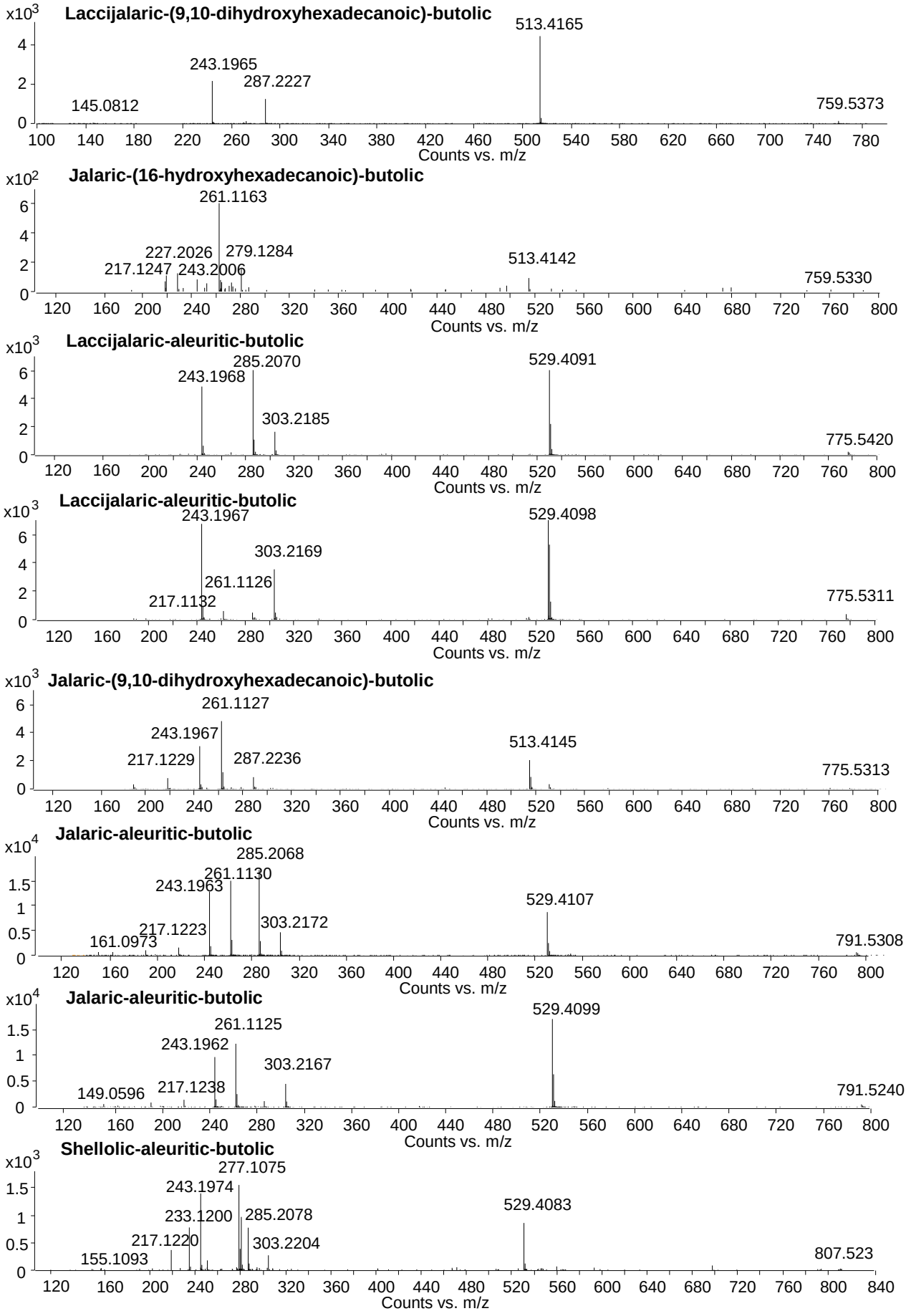

Shellolic-aleuritic
x10 4
277.1079
233.1174
303.2180
147.0413
581.3169
Counts vs. m/z

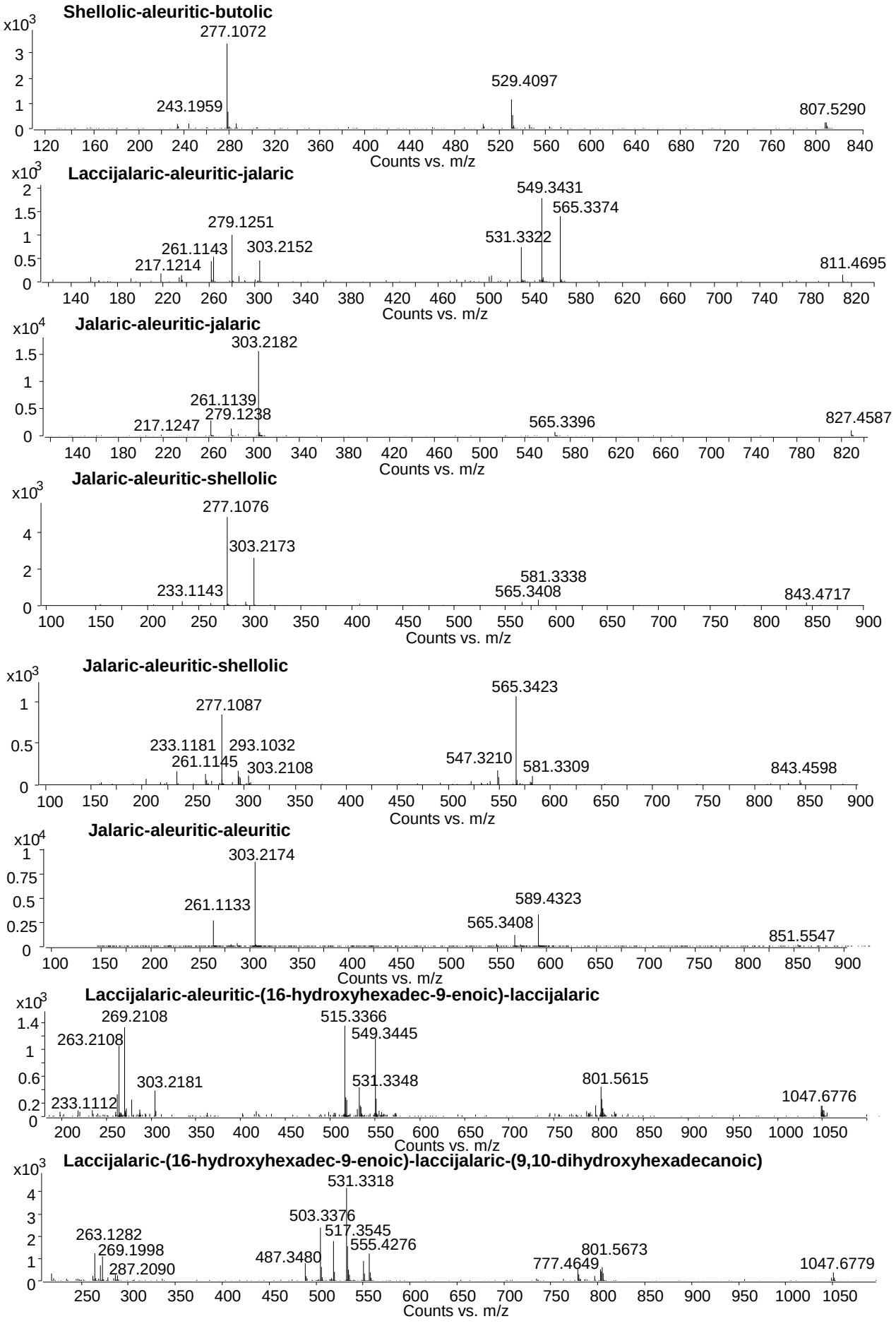

Laccijalaric-(9,10-dihydroxytetradecanoic)-butolic
x10 3
485.3824
243.1969
731.5107
259.1910
Counts vs. m/z

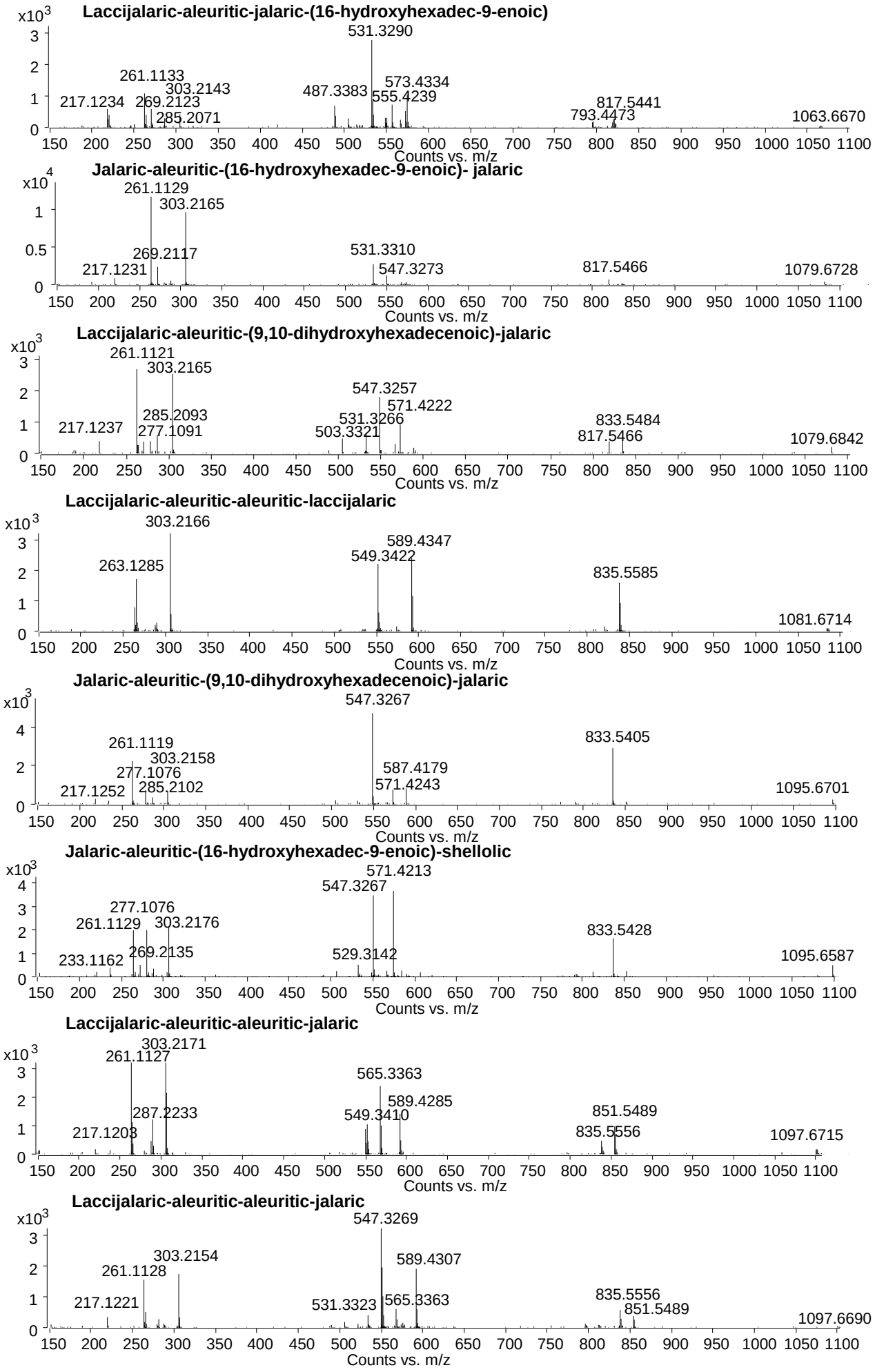

Laccijalaric-(16-hydroxyhexadec-9-enoic)-butolic
x10 3
243.1965
495.4072
269.2123
741.5282
Counts vs. m/z

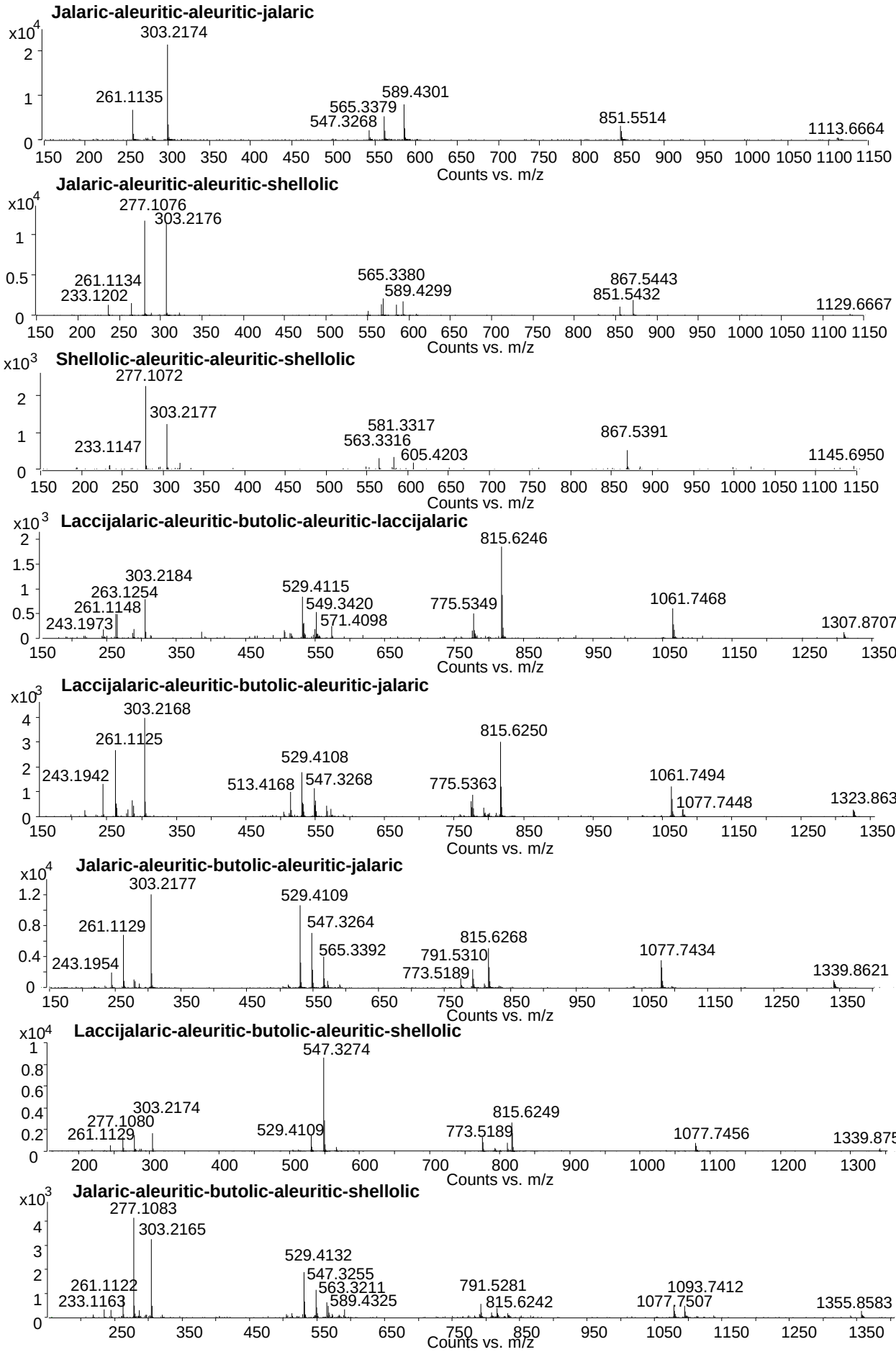

Laccijalaric-(9,10-dihydroxyhexadecadienoic)-butolic
x10 3
243.1953
509.3823
283.1912
197.1973
755.5054
Counts vs. m/z

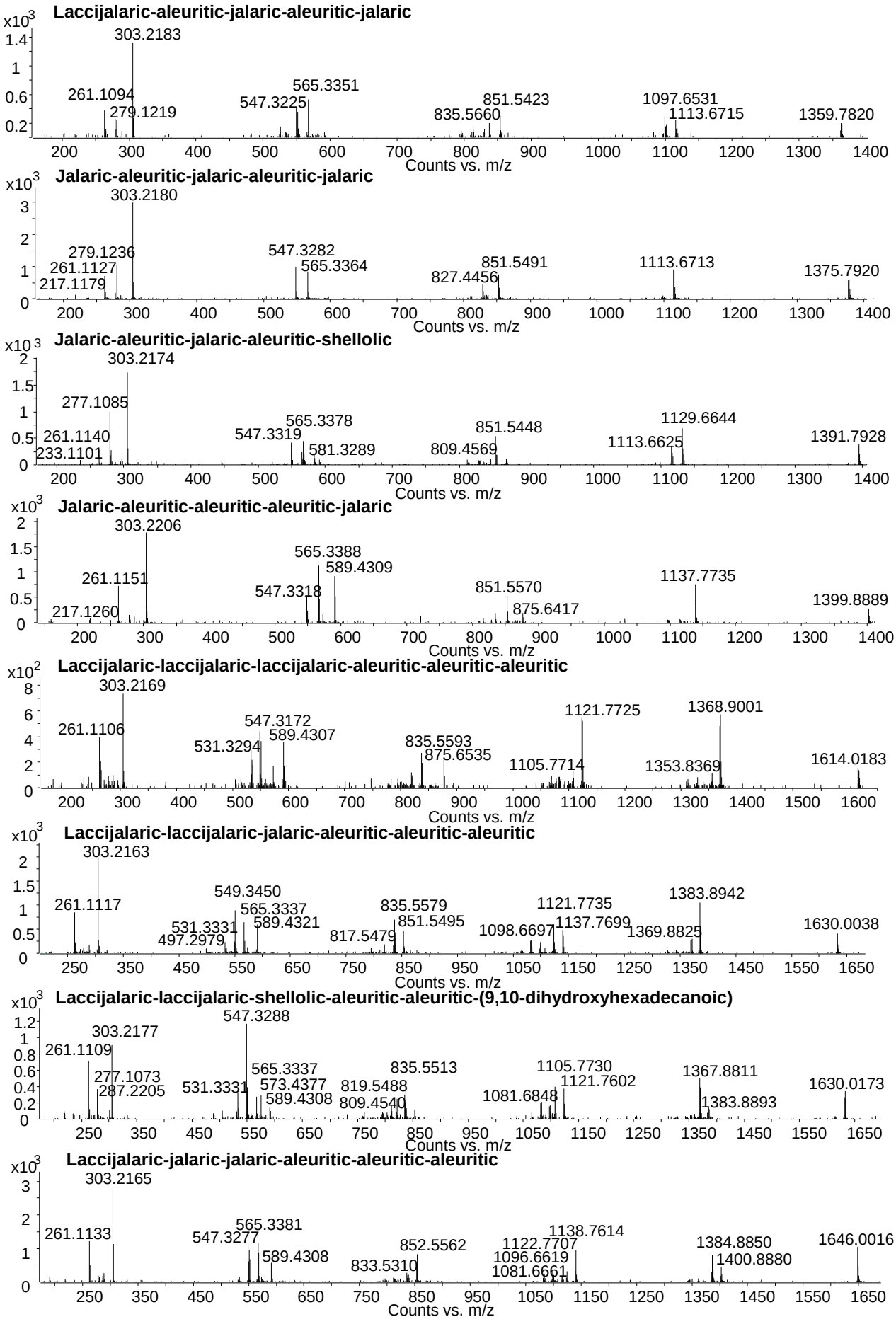

Jalaric-(16-hydroxyhexadec-9-enoic)-butolic
x10 3
261.1125
243.1965
217.1247
269.2141
495.4062
757.5216
Counts vs. m/z

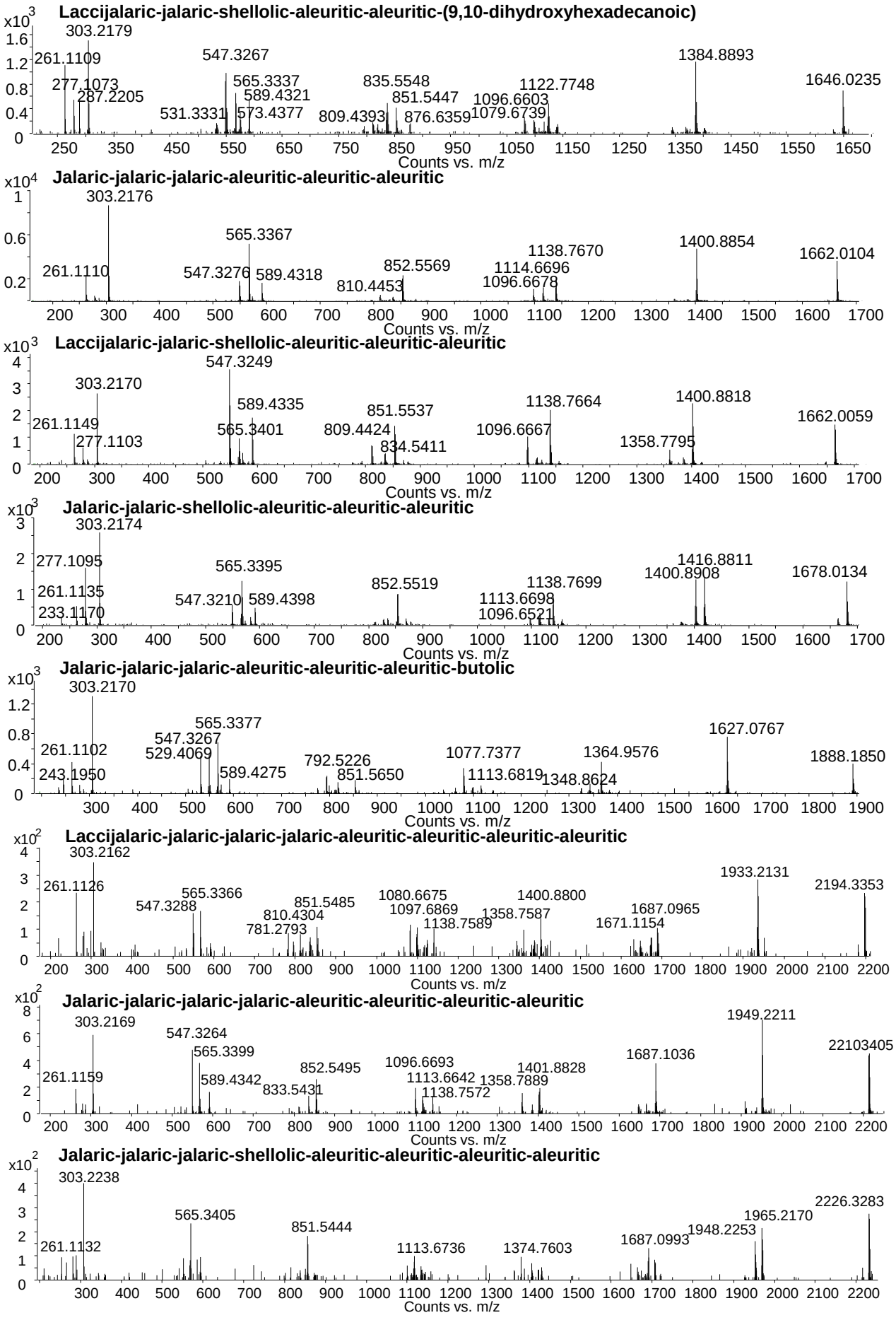

Laccijalaric-(9,10-dihydroxyhexadecanoic)-butolic
513.4165
243.1965
287.2227
145.0812
759.5373
Counts vs. m/z
Jalaric-(16-hydroxyhexadecanoic)-butolic
261.1163
227.2026
279.1284
217.1247
243.2006
513.4142
759.5330
Counts vs. m/z
Laccijalaric-aleuritic-butolic
285.2070
243.1968
529.4091
303.2185
775.5420
Counts vs. m/z
Laccijalaric-aleuritic-butolic
243.1967
529.4098
303.2169
261.1126
217.1132
775.5311
Counts vs. m/z
Jalaric-(9,10-dihydroxyhexadecanoic)-butolic
261.1127
243.1967
513.4145
217.1229
287.2236
775.5313
Counts vs. m/z
Jalaric-aleuritic-butolic
285.2068
261.1130
243.1963
529.4107
217.1223
303.2172
161.0973
791.5308
Counts vs. m/z
Jalaric-aleuritic-butolic
529.4099
261.1125
243.1962
303.2167
149.0596
217.1238
791.5240
Counts vs. m/z
Shellolic-aleuritic-butolic
277.1075
243.1974
529.4083
233.1200
285.2078
217.1220
303.2204
155.1093
807.523
Counts vs. m/z


Shellolic-aleuritic-butolic
x10^3
277.1072
529.4097
243.1959
807.5290
Counts vs. m/z
Laccijalaric-aleuritic-jalaric
549.3431
565.3374
279.1251
531.3322
261.1143
303.2152
217.1214
811.4695
Counts vs. m/z
Jalaric-aleuritic-jalaric
x10^4
303.2182
261.1139
279.1238
217.1247
565.3396
827.4587
Counts vs. m/z
Jalaric-aleuritic-shellolic
277.1076
303.2173
581.3338
233.1143
565.3408
843.4717
Counts vs. m/z
Jalaric-aleuritic-shellolic
565.3423
277.1087
233.1181
293.1032
261.1145
303.2108
547.3210
581.3309
843.4598
Counts vs. m/z
Jalaric-aleuritic-aleuritic
303.2174
261.1133
589.4323
565.3408
851.5547
Counts vs. m/z
Laccijalaric-aleuritic-(16-hydroxyhexadec-9-enoic)-laccijalaric
269.2108
515.3366
263.2108
549.3445
303.2181
531.3348
801.5615
233.1112
1047.6776
Counts vs. m/z
Laccijalaric-(16-hydroxyhexadec-9-enoic)-laccijalaric-(9,10-dihydroxyhexadecanoic)
531.3318
503.3376
263.1282
517.3545
269.1998
555.4276
487.3480
801.5673
777.4649
287.2090
1047.6779
Counts vs. m/z


Laccijalaric-aleuritic-jalaric-(16-hydroxyhexadec-9-enoic)
x10^3
531.3290
261.1133
303.2143
573.4334
487.3383
555.4239
217.1234
269.2123
285.2071
817.5441
793.4473
1063.6670
Counts vs. m/z
Jalaric-aleuritic-(16-hydroxyhexadec-9-enoic)- jalaric
x10^4
261.1129
303.2165
269.2117
531.3310
217.1231
547.3273
817.5466
1079.6728
Counts vs. m/z
Laccijalaric-aleuritic-(9,10-dihydroxyhexadecenoic)-jalaric
x10^3
261.1121
303.2165
547.3257
571.4222
285.2093
531.3266
217.1237
277.1091
503.3321
833.5484
817.5466
1079.6842
Counts vs. m/z
Laccijalaric-aleuritic-aleuritic-laccijalaric
x10^3
303.2166
589.4347
549.3422
263.1285
835.5585
1081.6714
Counts vs. m/z
Jalaric-aleuritic-(9,10-dihydroxyhexadecenoic)-jalaric
x10^3
547.3267
833.5405
261.1119
303.2158
587.4179
277.1076
571.4243
217.1252
285.2102
1095.6701
Counts vs. m/z
Jalaric-aleuritic-(16-hydroxyhexadec-9-enoic)-shellolic
x10^3
571.4213
547.3267
277.1076
261.1129
303.2176
833.5428
269.2135
529.3142
233.1162
1095.6587
Counts vs. m/z
Laccijalaric-aleuritic-aleuritic-jalaric
x10^3
303.2171
261.1127
565.3363
589.4285
287.2233
549.3410
851.5489
217.1203
835.5556
1097.6715
Counts vs. m/z
Laccijalaric-aleuritic-aleuritic-jalaric
x10^3
547.3269
303.2154
589.4307
261.1128
217.1221
531.3323
565.3363
835.5556
851.5489
1097.6690
Counts vs. m/z


Jalaric-aleuritic-aleuritic-jalaric
x10^4
303.2174
261.1135
589.4301
565.3379
547.3268
851.5514
1113.6664
Counts vs. m/z
Jalaric-aleuritic-aleuritic-shellolic
x10^4
277.1076
303.2176
261.1134
233.1202
565.3380
589.4299
867.5443
851.5432
1129.6667
Counts vs. m/z
Shellolic-aleuritic-aleuritic-shellolic
x10^3
277.1072
303.2177
233.1147
581.3317
563.3316
605.4203
867.5391
1145.6950
Counts vs. m/z
Laccijalaric-aleuritic-butolic-aleuritic-laccijalaric
x10^3
815.6246
303.2184
263.1254
261.1148
243.1973
529.4115
549.3420
571.4098
775.5349
1061.7468
1307.8707
Counts vs. m/z
Laccijalaric-aleuritic-butolic-aleuritic-jalaric
x10^3
303.2168
261.1125
815.6250
529.4108
243.1942
513.4168
547.3268
775.5363
1061.7494
1077.7448
1323.8637
Counts vs. m/z
Jalaric-aleuritic-butolic-aleuritic-jalaric
x10^4
303.2177
529.4109
261.1129
547.3264
815.6268
565.3392
791.5310
243.1954
773.5189
1077.7434
1339.8621
Counts vs. m/z
Laccijalaric-aleuritic-butolic-aleuritic-shellolic
x10^4
547.3274
303.2174
277.1080
261.1129
529.4109
815.6249
773.5189
1077.7456
1339.8751
Counts vs. m/z
Jalaric-aleuritic-butolic-aleuritic-shellolic
x10^3
277.1083
303.2165
529.4132
547.3255
261.1122
563.3211
791.5281
1093.7412
233.1163
589.4325
815.6242
1077.7507
1355.8583
Counts vs. m/z


Laccijalaric-aleuritic-jalaric-aleuritic-jalaric
303.2183
261.1094
279.1219
565.3351
547.3225
851.5423
835.5660
1097.6531
1113.6715
1359.7820
Counts vs. m/z
Jalaric-aleuritic-jalaric-aleuritic-jalaric
303.2180
279.1236
261.1127
217.1179
547.3282
565.3364
851.5491
827.4456
1113.6713
1375.7920
Counts vs. m/z
Jalaric-aleuritic-jalaric-aleuritic-shellolic
303.2174
277.1085
261.1140
233.1101
565.3378
547.3319
581.3289
851.5448
809.4569
1129.6644
1113.6625
1391.7928
Counts vs. m/z
Jalaric-aleuritic-aleuritic-aleuritic-jalaric
303.2206
261.1151
217.1260
565.3388
589.4309
547.3318
851.5570
875.6417
1137.7735
1399.8889
Counts vs. m/z
Laccijalaric-laccijalaric-laccijalaric-aleuritic-aleuritic-aleuritic
303.2169
261.1106
547.3172
589.4307
531.3294
835.5593
875.6535
1121.7725
1105.7714
1368.9001
1353.8369
1614.0183
Counts vs. m/z
Laccijalaric-laccijalaric-jalaric-aleuritic-aleuritic-aleuritic
303.2163
261.1117
549.3450
565.3337
531.3331
589.4321
497.2979
835.5579
851.5495
817.5479
1121.7735
1098.6697
1137.7699
1369.8825
1383.8942
1630.0038
Counts vs. m/z
Laccijalaric-laccijalaric-shellolic-aleuritic-aleuritic-(9,10-dihydroxyhexadecanoic)
547.3288
303.2177
261.1109
277.1073
287.2205
565.3337
531.3331
573.4377
589.4308
819.5488
809.4540
835.5513
1105.7730
1121.7602
1081.6848
1367.8811
1383.8893
1630.0173
Counts vs. m/z
Laccijalaric-jalaric-jalaric-aleuritic-aleuritic-aleuritic
303.2165
261.1133
565.3381
547.3277
589.4308
852.5562
833.5310
1138.7614
1122.7707
1096.6619
1081.6661
1384.8850
1400.8880
1646.0016
Counts vs. m/z


Laccijalaric-jalaric-shellolic-aleuritic-aleuritic-(9,10-dihydroxyhexadecanoic)
303.2179
261.1109
547.3267
1384.8893
277.1073
565.3337
835.5548
1646.0235
287.2205
589.4321
851.5447
1122.7748
531.3331
573.4377
809.4393
876.6359
1096.6603
1079.6739
Counts vs. m/z
Jalaric-jalaric-jalaric-aleuritic-aleuritic-aleuritic
303.2176
565.3367
1400.8854
1138.7670
1662.0104
261.1110
547.3276
589.4318
852.5569
1114.6696
810.4453
1096.6678
Counts vs. m/z
Laccijalaric-jalaric-shellolic-aleuritic-aleuritic-aleuritic
547.3249
303.2170
589.4335
851.5537
1138.7664
1400.8818
261.1149
565.3401
809.4424
1096.6667
1662.0059
277.1103
834.5411
1358.7795
Counts vs. m/z
Jalaric-jalaric-shellolic-aleuritic-aleuritic-aleuritic
303.2174
277.1095
565.3395
1416.8811
1400.8908
1678.0134
852.5519
1138.7699
261.1135
547.3210
589.4398
1113.6698
233.1170
1096.6521
Counts vs. m/z
Jalaric-jalaric-jalaric-aleuritic-aleuritic-aleuritic-butolic
303.2170
565.3377
1627.0767
547.3267
261.1102
529.4069
792.5226
1077.7377
1364.9576
1888.1850
243.1950
589.4275
851.5650
1113.6819
1348.8624
Counts vs. m/z
Laccijalaric-jalaric-jalaric-jalaric-aleuritic-aleuritic-aleuritic-aleuritic
303.2162
1933.2131
261.1126
565.3366
2194.3353
547.3288
851.5485
1080.6675
1400.8800
810.4304
1097.6869
1687.0965
781.2793
1358.7587
1138.7589
1671.1154
Counts vs. m/z
Jalaric-jalaric-jalaric-jalaric-aleuritic-aleuritic-aleuritic-aleuritic
303.2169
1949.2211
547.3264
565.3399
22103405
1687.1036
852.5495
1096.6693
261.1159
1401.8828
589.4342
1113.6642
1358.7889
833.5431
1138.7572
Counts vs. m/z
Jalaric-jalaric-jalaric-shellolic-aleuritic-aleuritic-aleuritic-aleuritic
303.2238
2226.3283
565.3405
1965.2170
851.5444
1948.2253
1687.0993
261.1132
1113.6736
1374.7603
Counts vs. m/z