

Supplementary Material

A comparative study on asymmetric reduction of ketones using the growing and resting cells of marine-derived fungi

Hui Liu¹, Bi-Shuang Chen^{1,2,3*}, Fayene Zeferino Ribeiro de Souza⁴, Lan Liu^{1,2,3}

¹ School of Marine Sciences, Sun Yat-Sen University, Guangzhou 510275, People's Republic of China; liuh229@mail.sysu.edu.cn (H. L.); cesllan@mail.sysu.edu.cn (L. L.)

² Guangdong Provincial Key Laboratory of Marine Resources and Coastal Engineering, Guangzhou 510275, China

³ South China Sea Bio-Resource Exploitation and Utilization Collaborative Innovation Center, Sun Yat-Sen University, Guangzhou, 510275, China

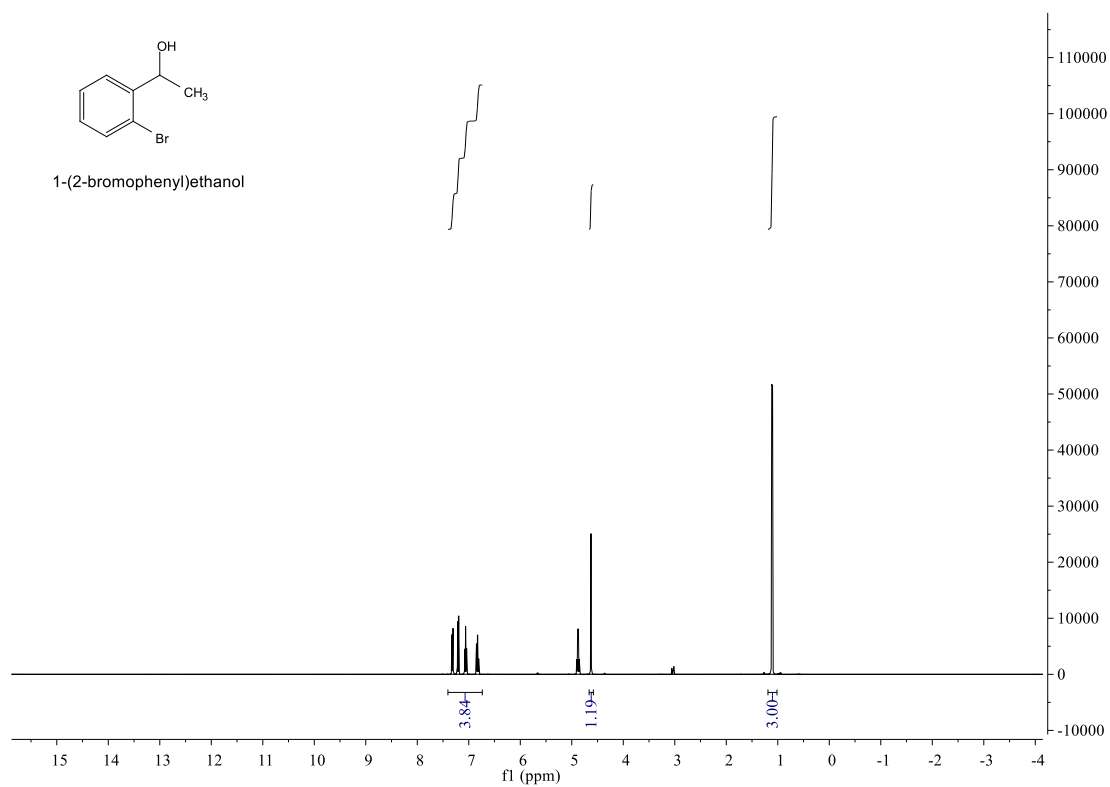
⁴ Departamento de Química, Faculdade de Ciências, UNESP, Bauru 17033-360, Brazil

* Correspondence: chenbsh23@mail.sysu.edu.cn; Tel.: +86-20-84725459

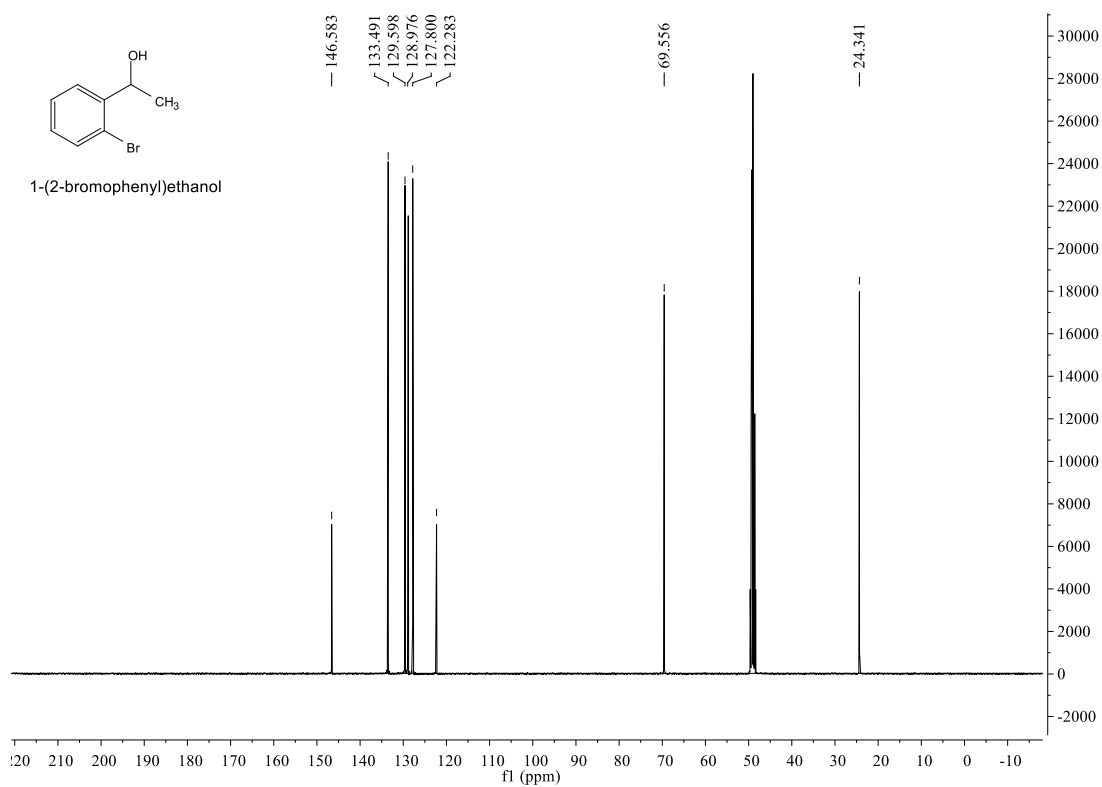
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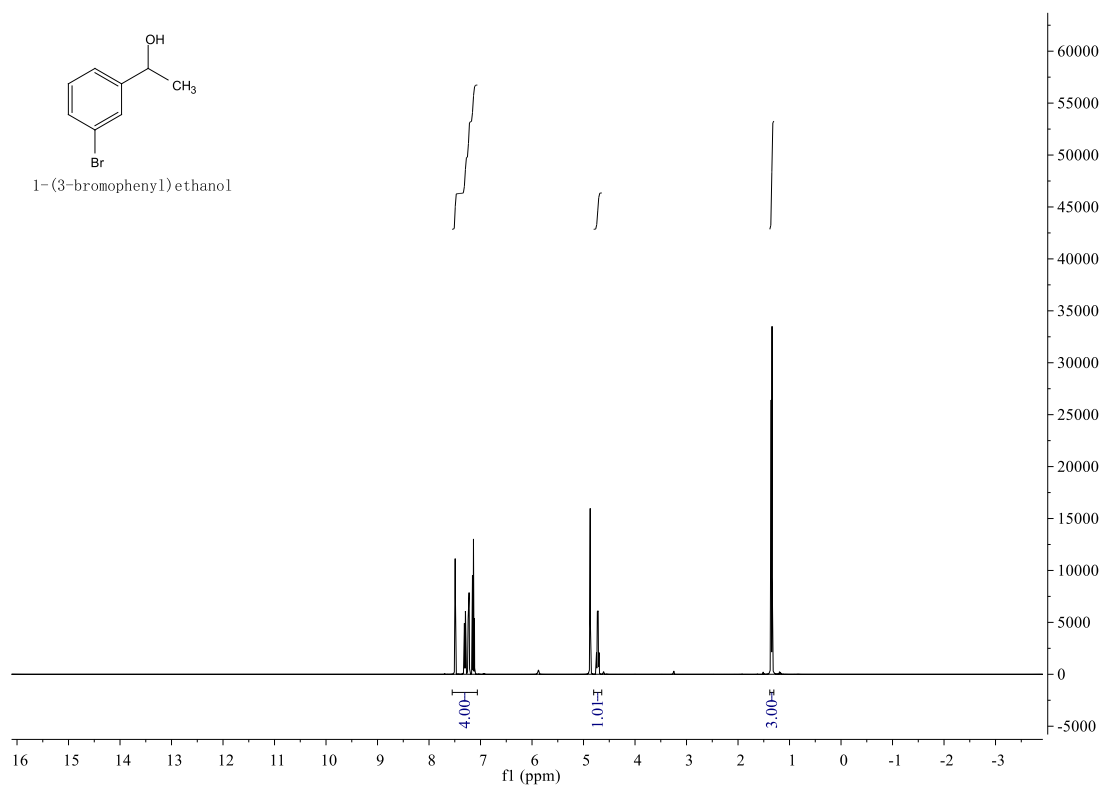
¹H-NMR (2a)



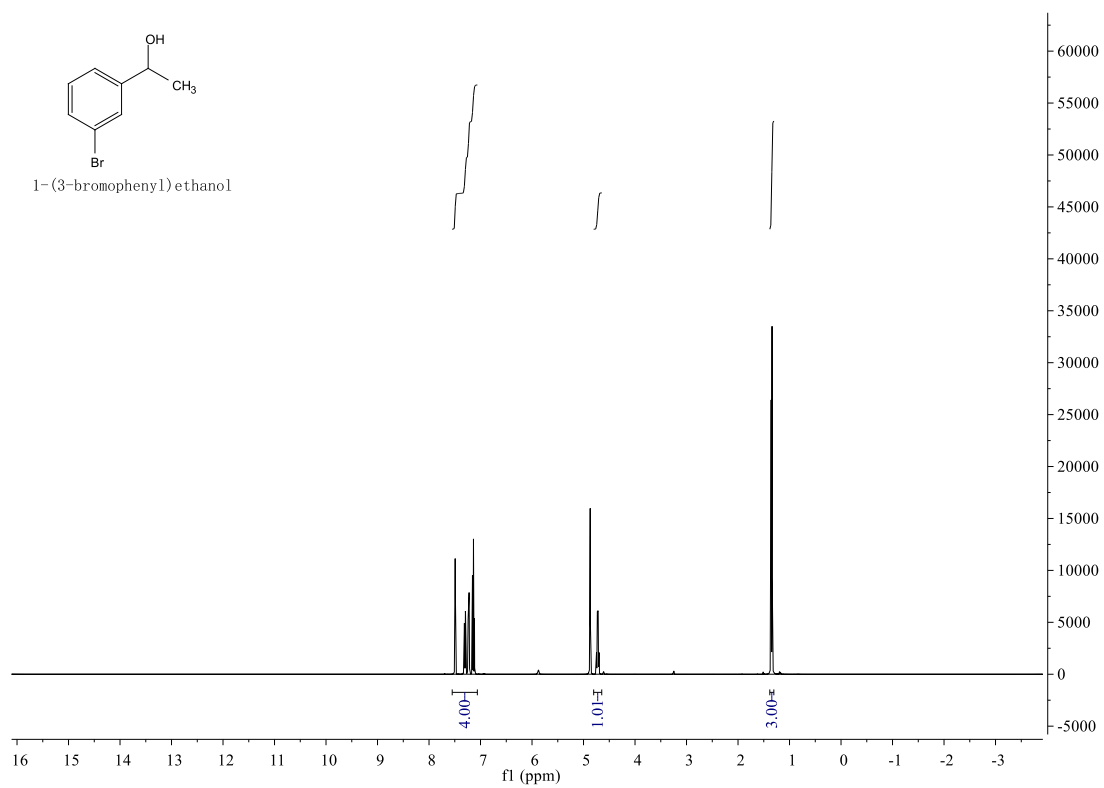
¹³C-NMR (2a)



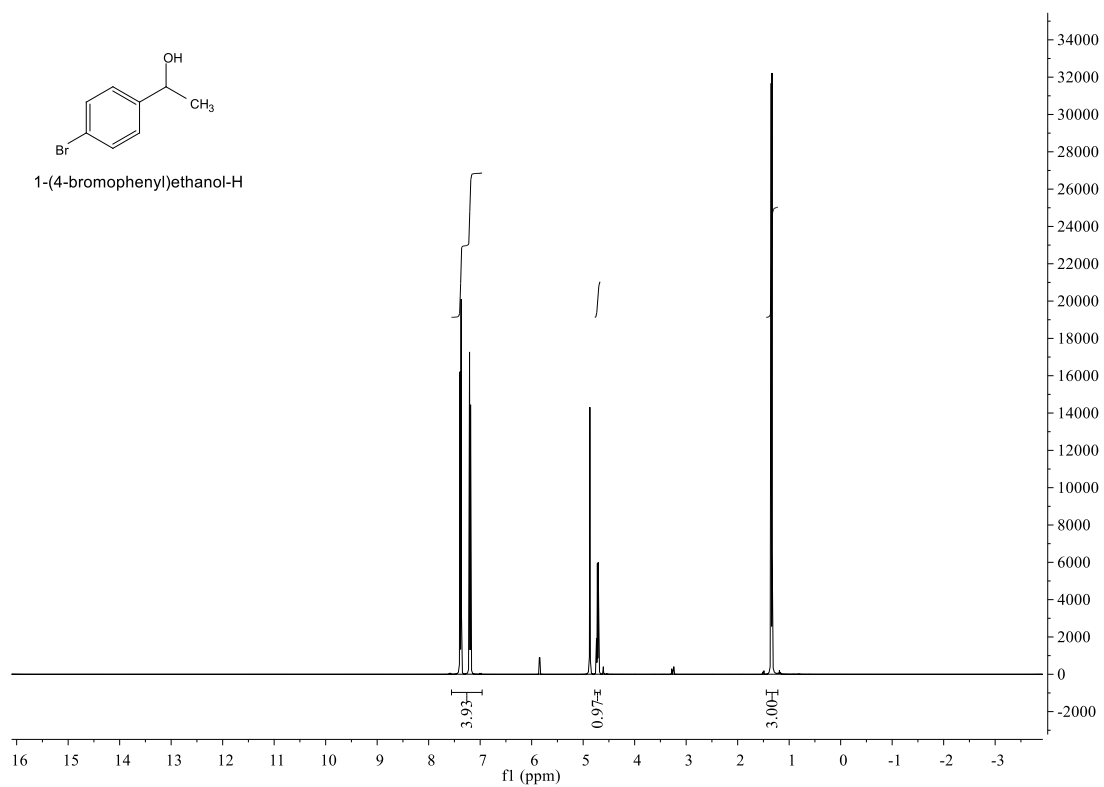
¹H-NMR (2b)



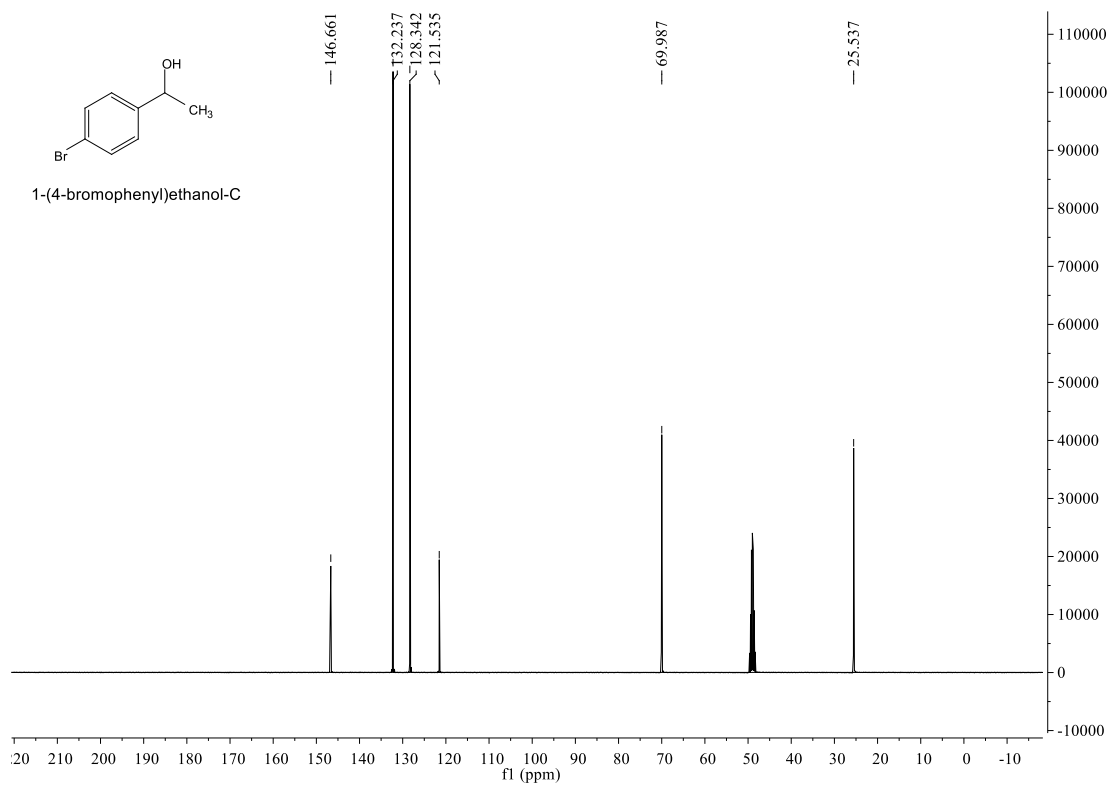
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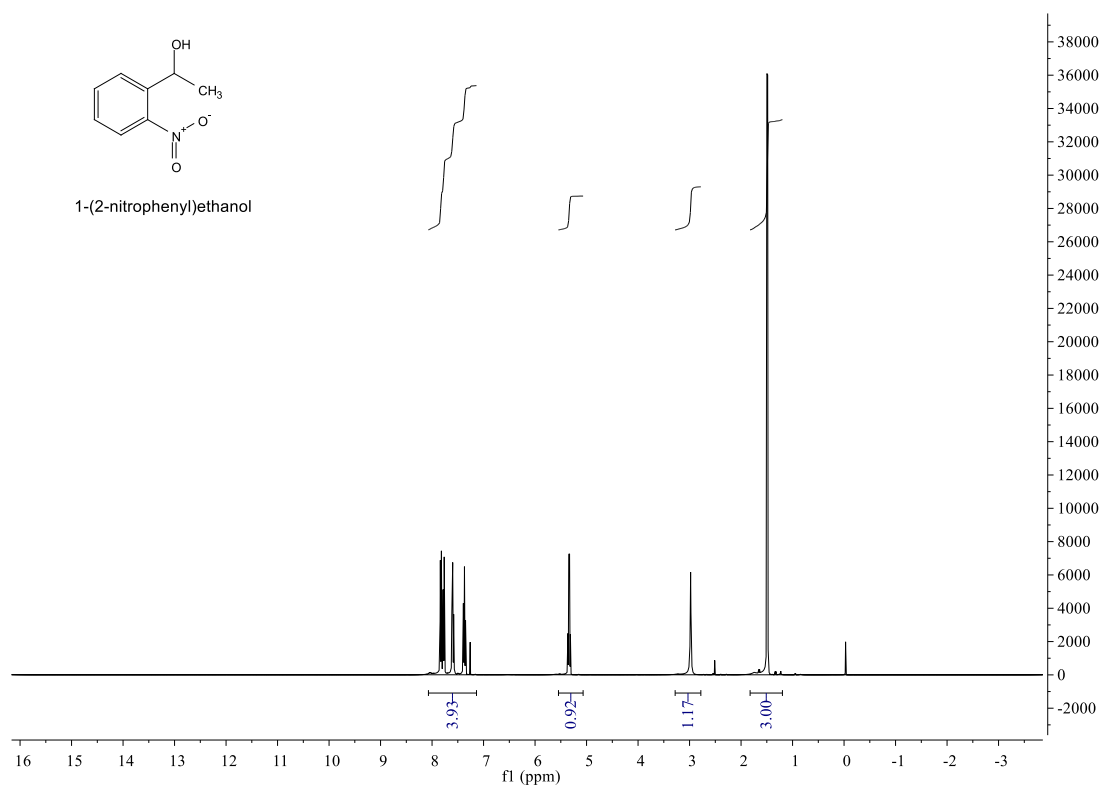
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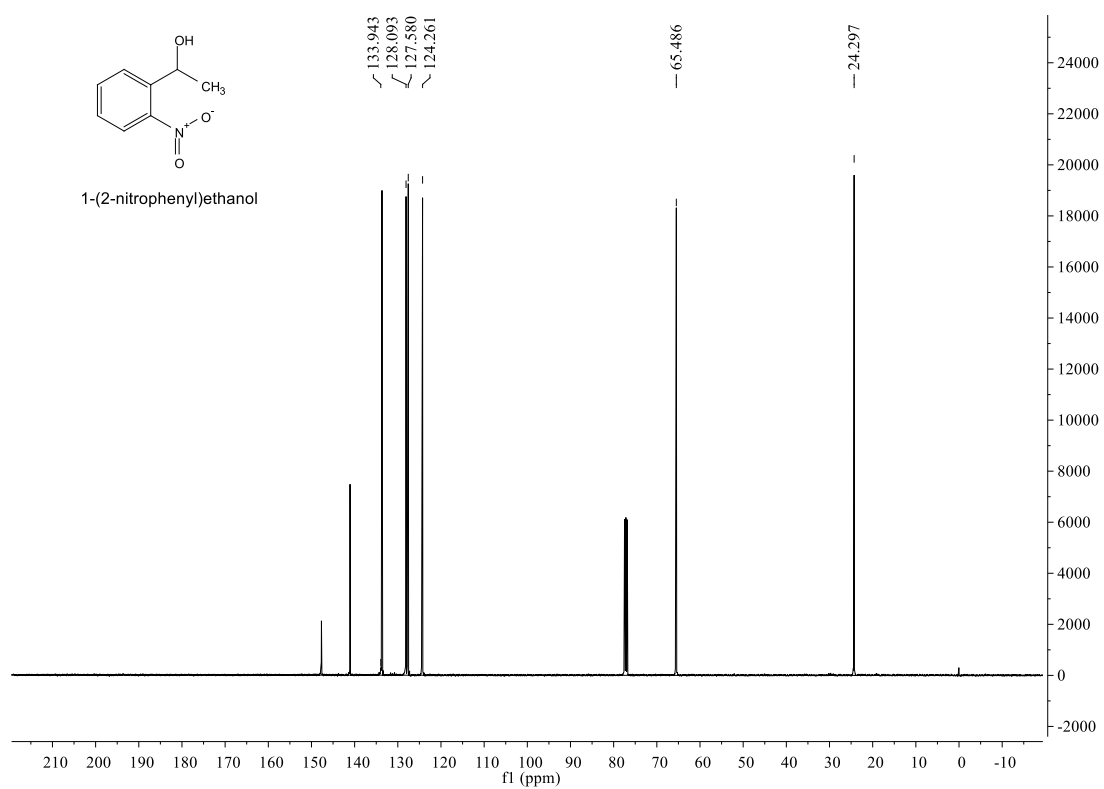
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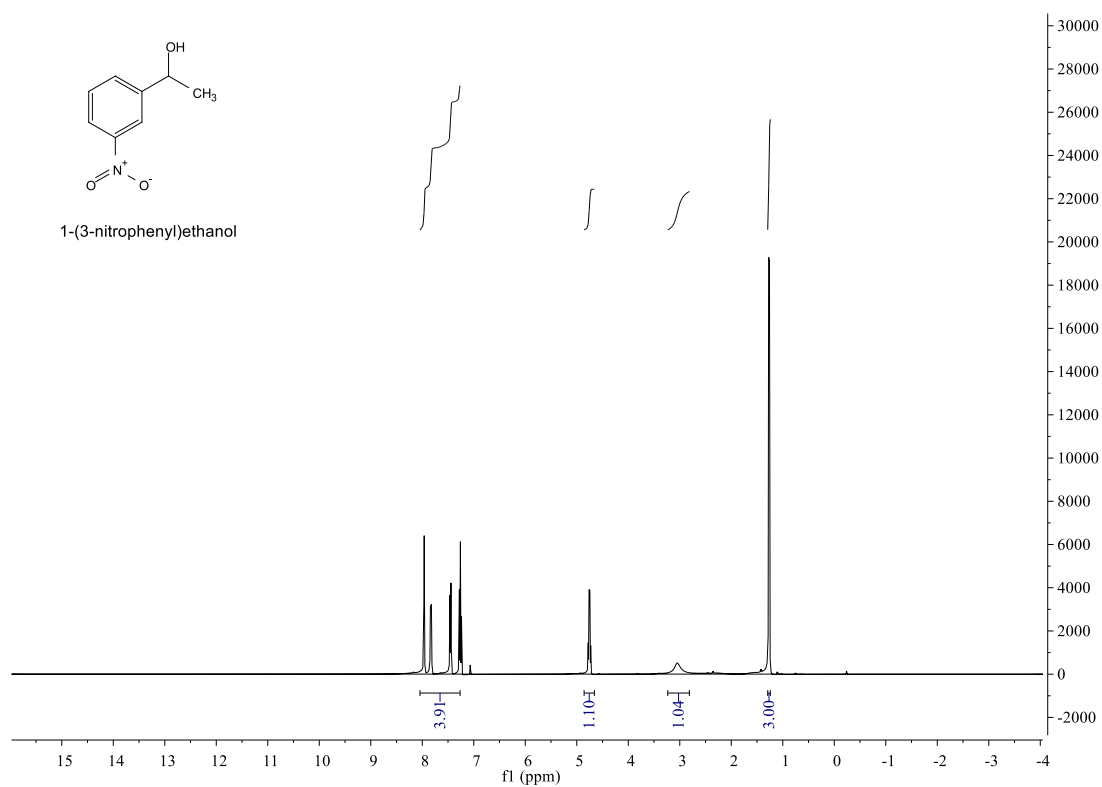
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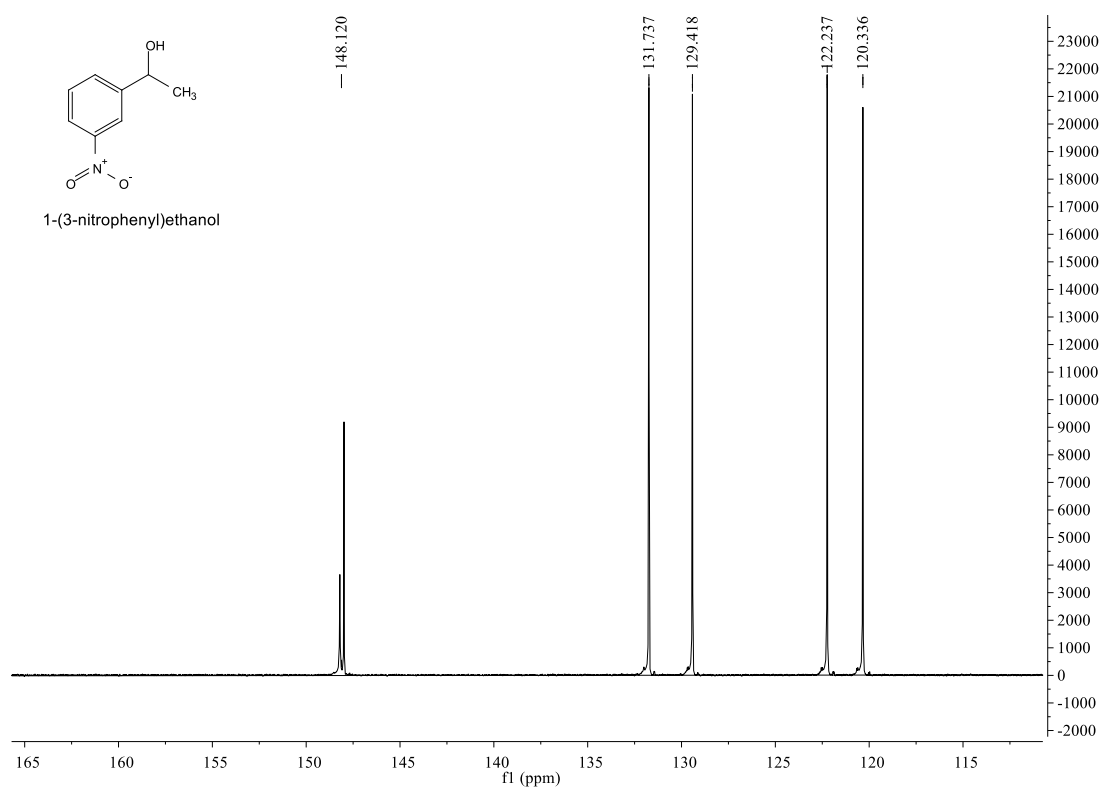
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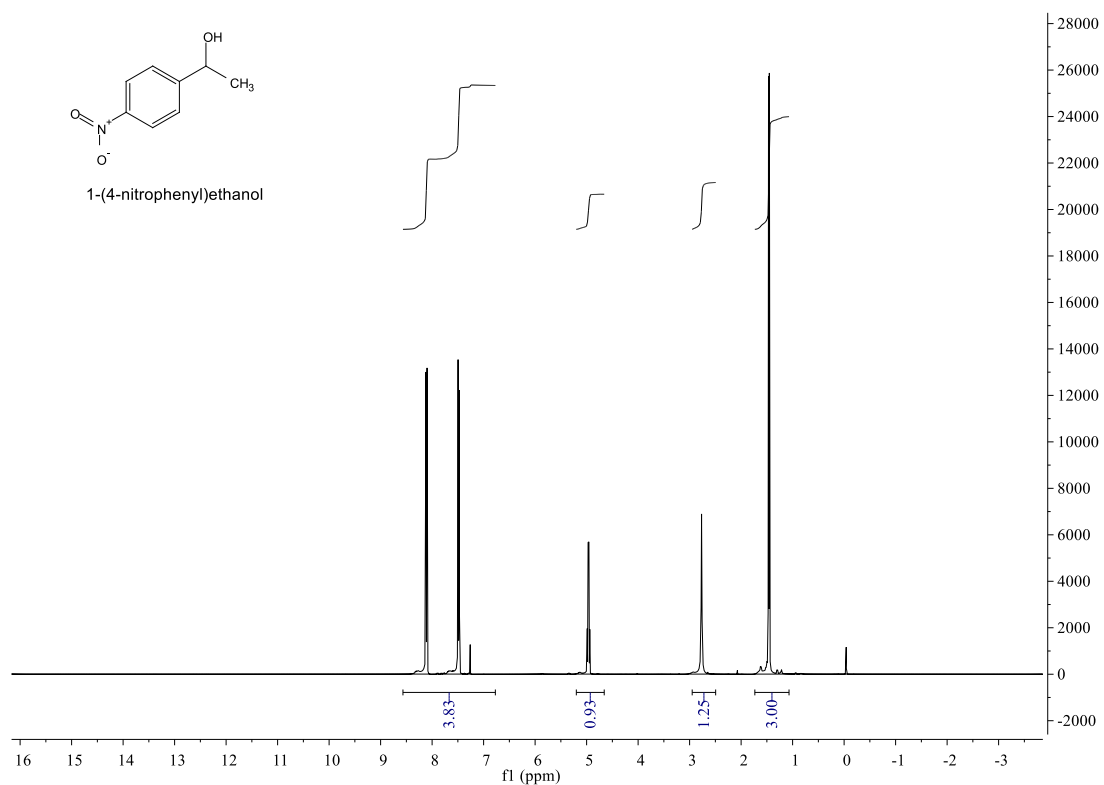
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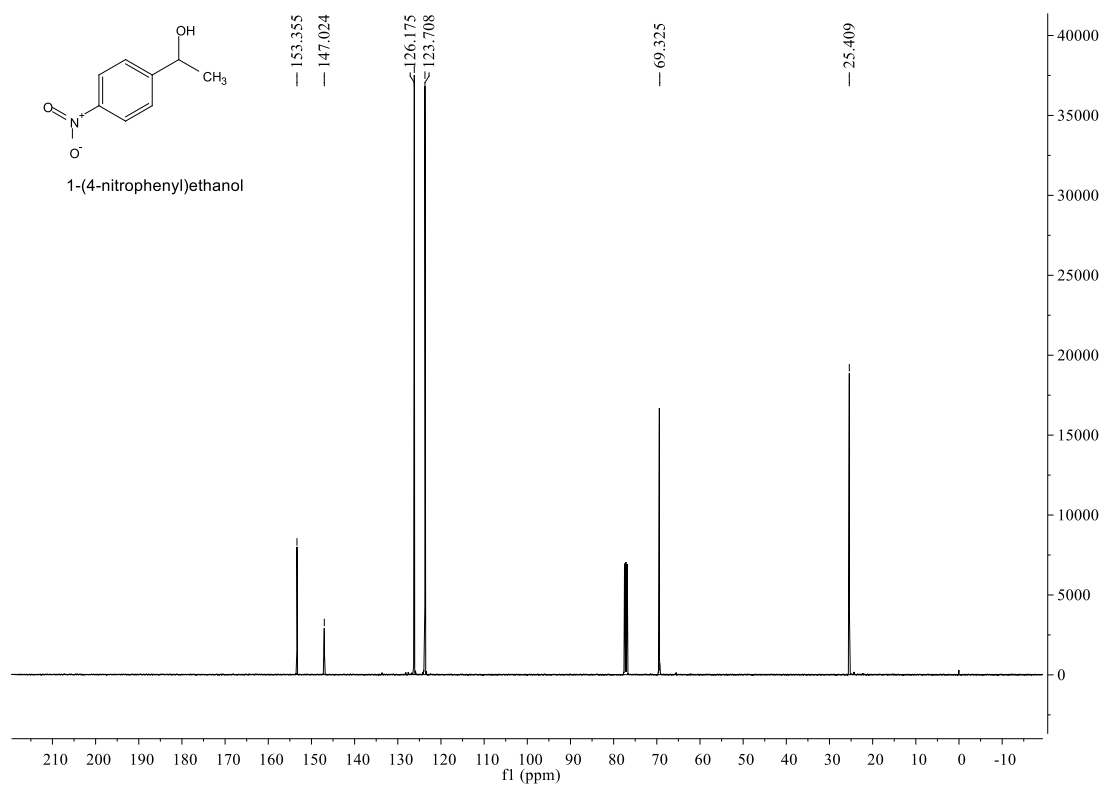
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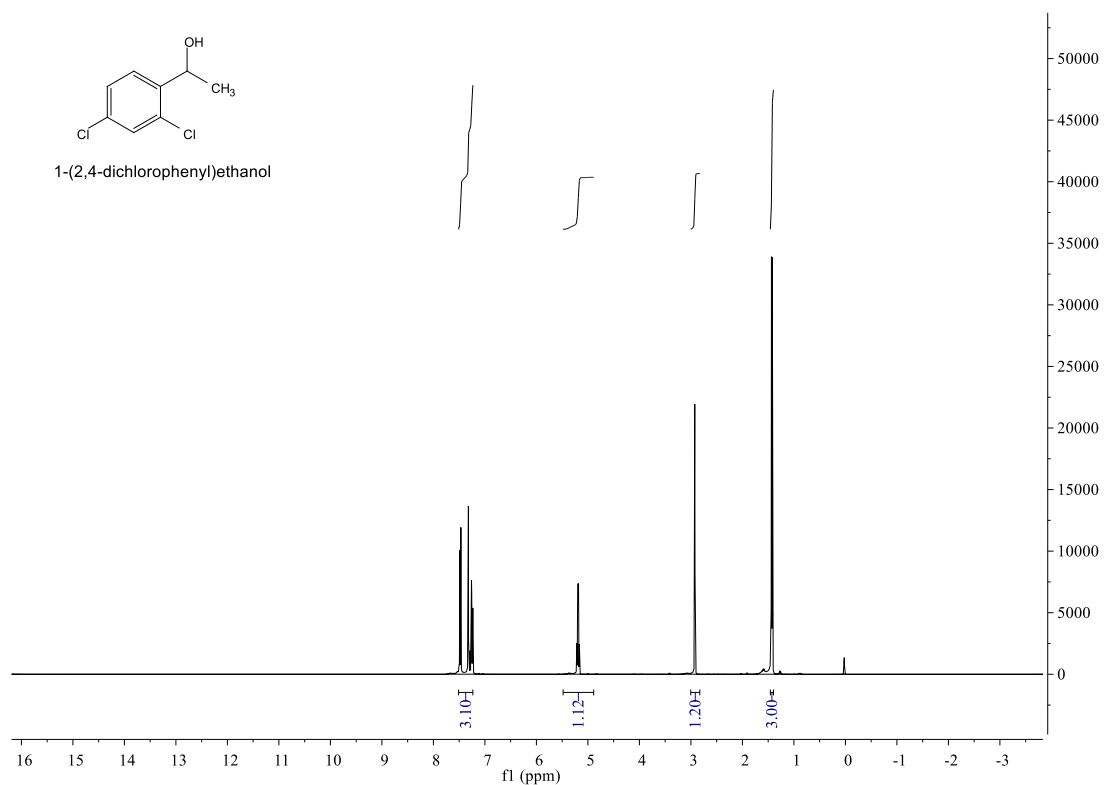
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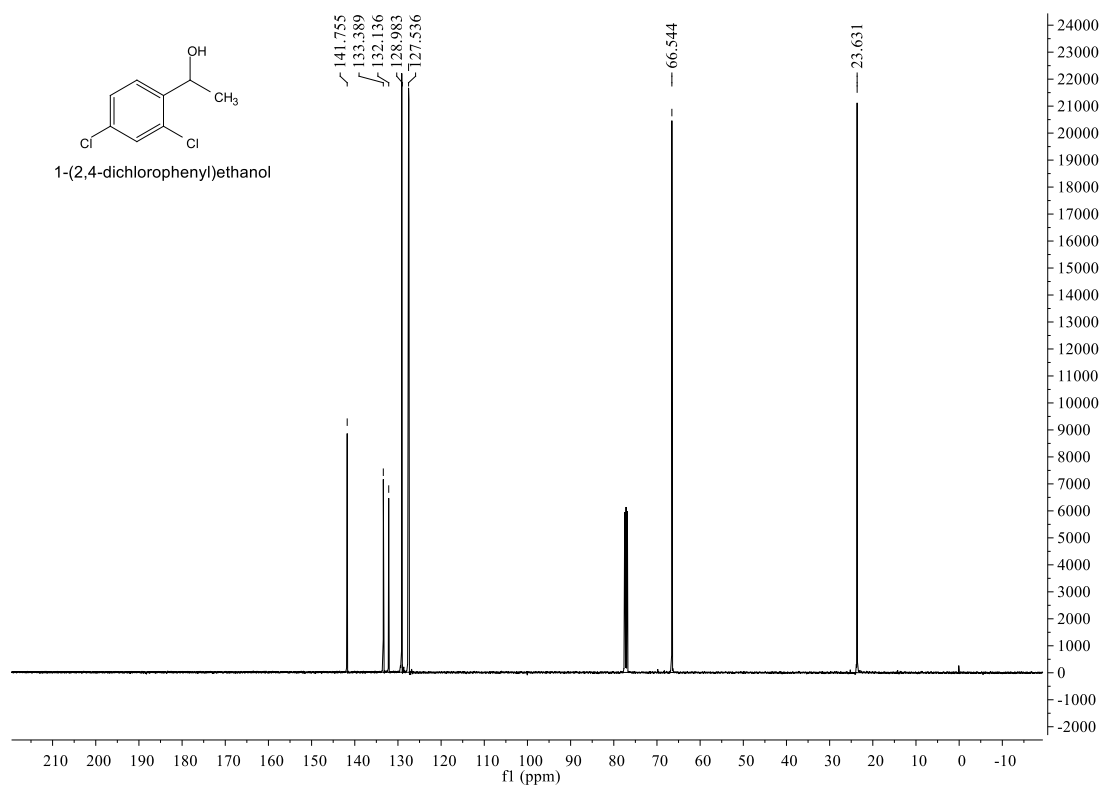
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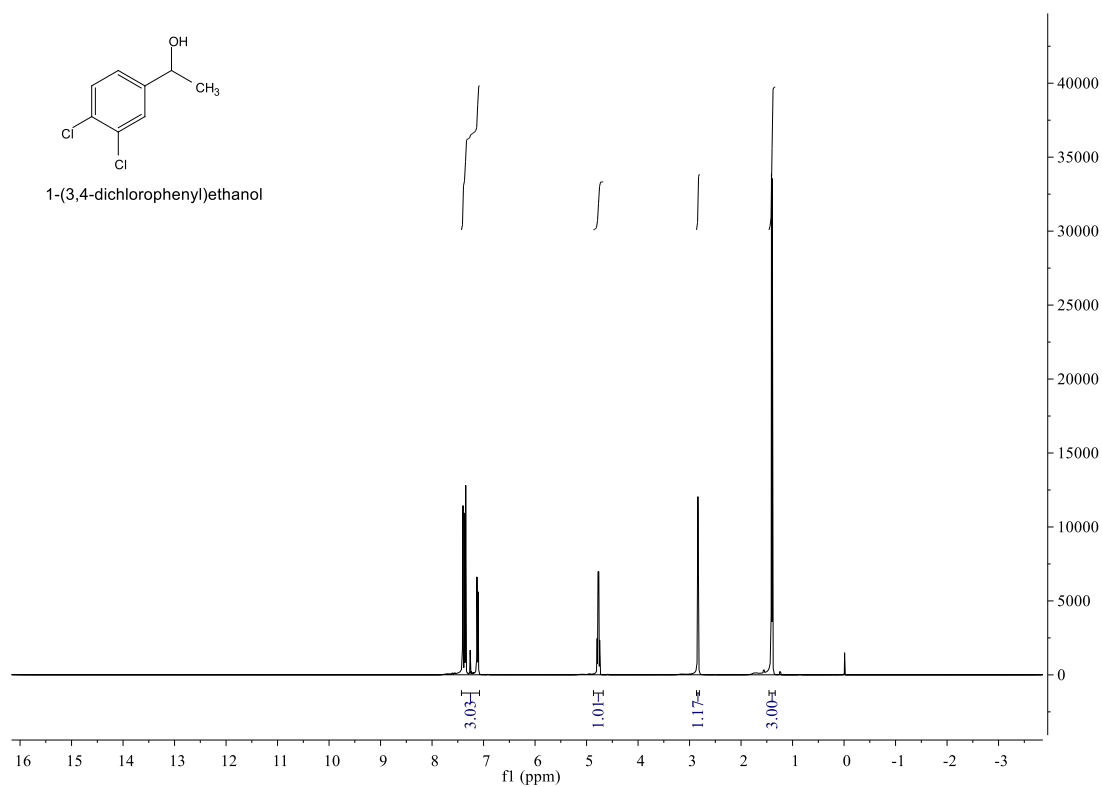
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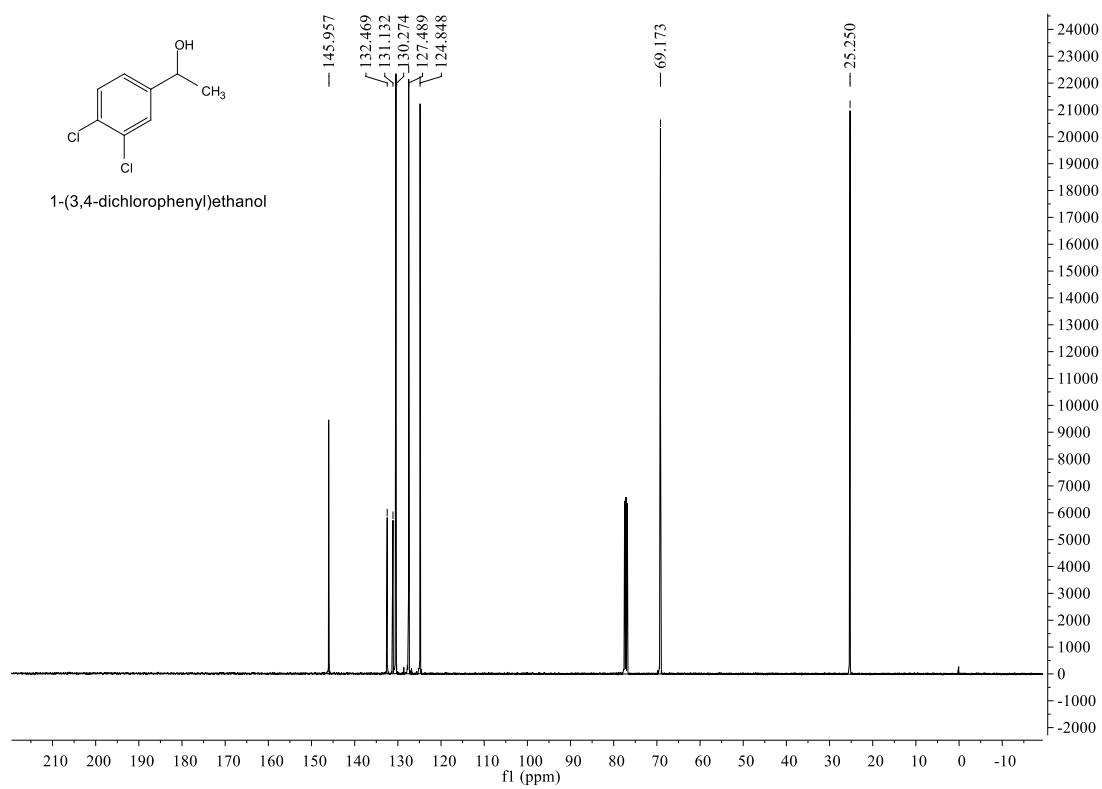
¹³C-NMR (2m)



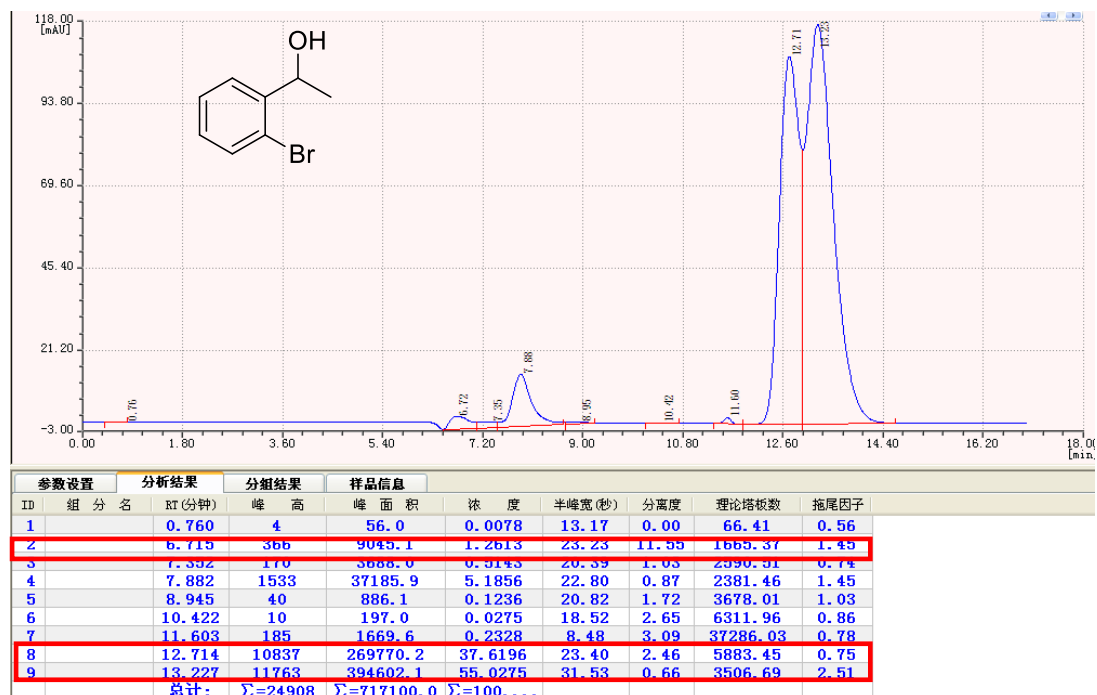
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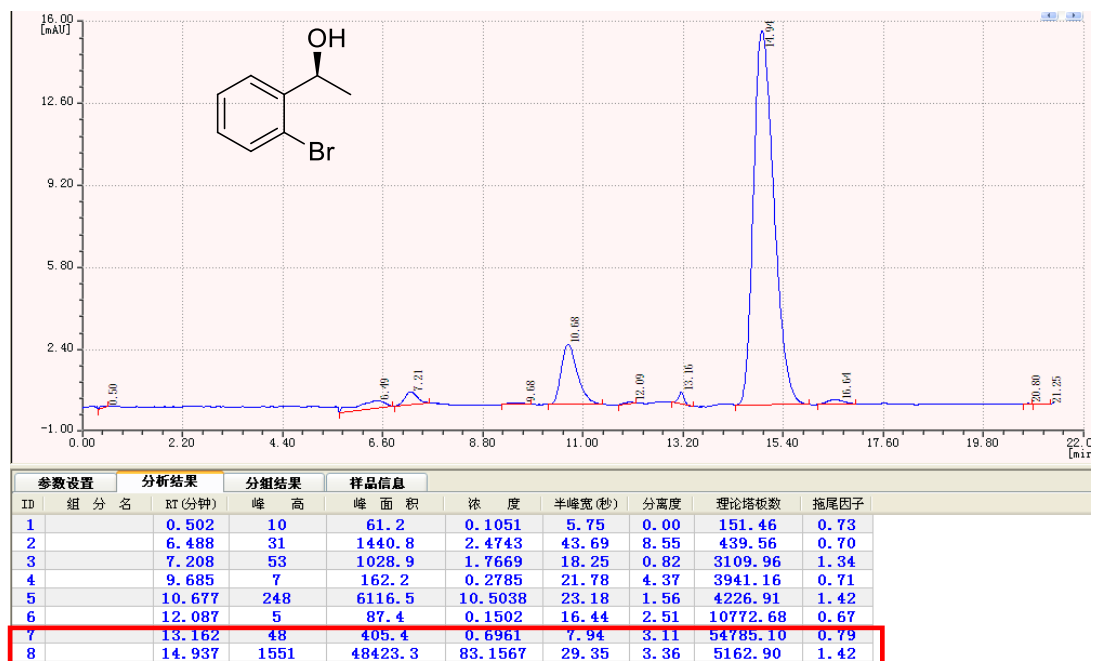
¹³C-NMR (2n)



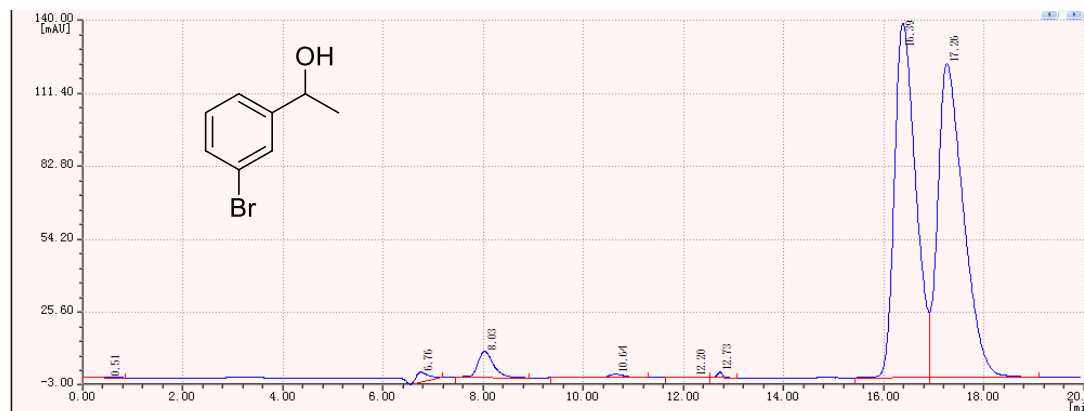
Rac-2a



(S)-2a

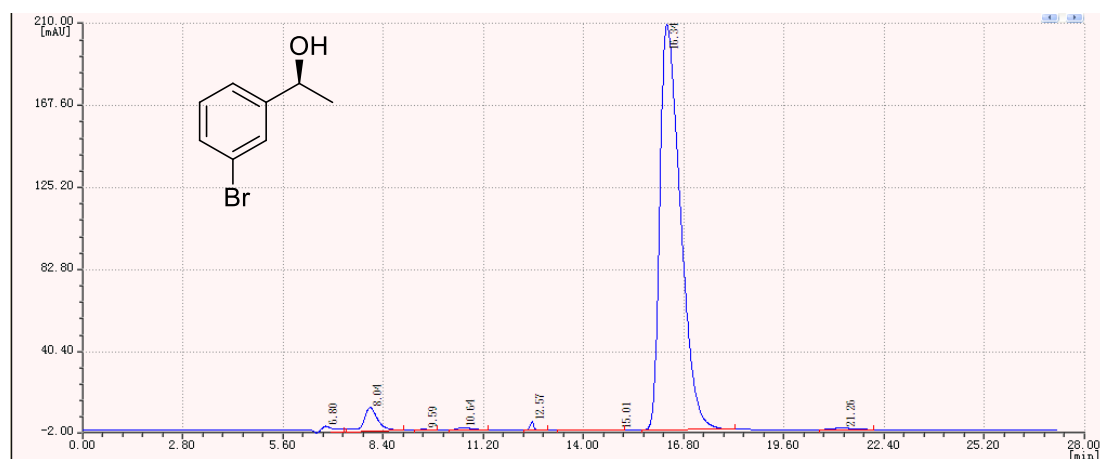


Rac-2b



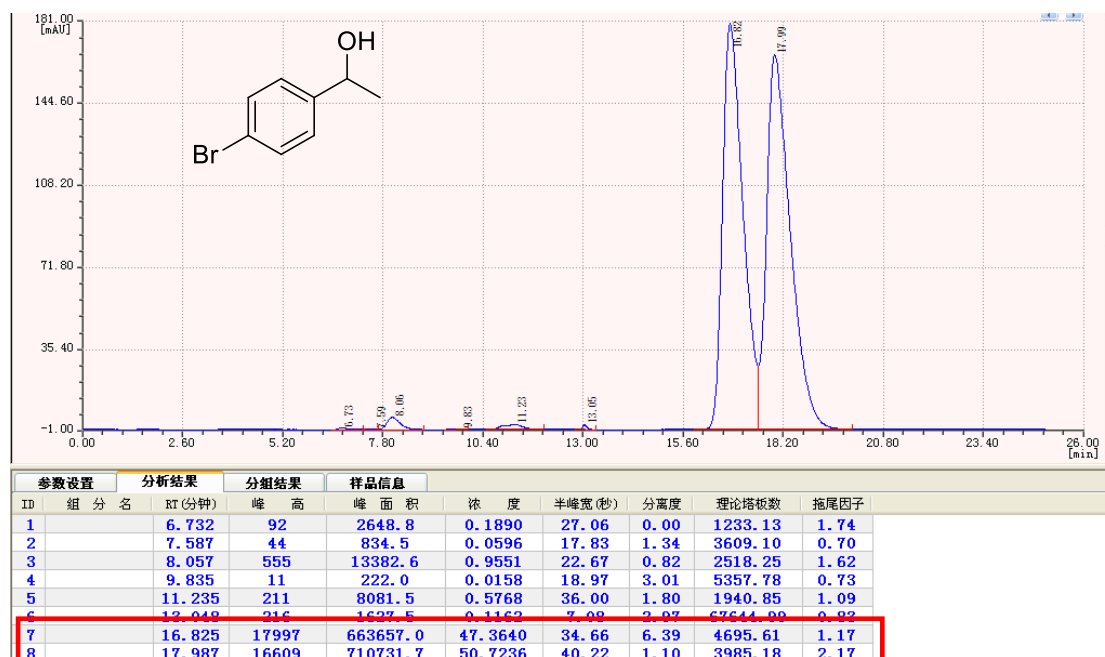
| 参数设置 | | 分析结果 | | 分組结果 | | 样品信息 | | | | |
|------|-----|---------|----------------|-------------------|-------------------|--------|-------|----------|------|--|
| ID | 组分名 | RT (分钟) | 峰高 | 峰面积 | 浓度 | 半峰宽(秒) | 分离度 | 理论塔板数 | 拖尾因子 | |
| 1 | | 0.510 | 16 | 474.6 | 0.0541 | 27.88 | 0.00 | 6.67 | 0.77 | |
| 2 | | 6.758 | 389 | 6538.6 | 0.7447 | 15.80 | 10.10 | 3646.48 | 1.88 | |
| 3 | | 8.032 | 1022 | 21648.1 | 2.4657 | 19.91 | 2.52 | 3243.04 | 0.98 | |
| 4 | | 10.642 | 124 | 3220.1 | 0.3725 | 22.04 | 4.30 | 4290.64 | 0.20 | |
| 5 | | 12.197 | 29 | 1002.8 | 0.1142 | 32.50 | 1.98 | 2806.30 | 0.80 | |
| 6 | | 12.733 | 229 | 1668.3 | 0.1900 | 6.85 | 0.96 | 68908.52 | 0.99 | |
| 7 | | 16.387 | 13906 | 407099.5 | 46.3681 | 27.52 | 7.50 | 7067.34 | 1.04 | |
| 8 | | 17.263 | 12306 | 436271.4 | 49.6907 | 33.32 | 1.02 | 5348.54 | 2.32 | |
| 总计: | | | $\Sigma=28031$ | $\Sigma=877973.4$ | $\Sigma=100.0000$ | | | | | |

(S)-2b

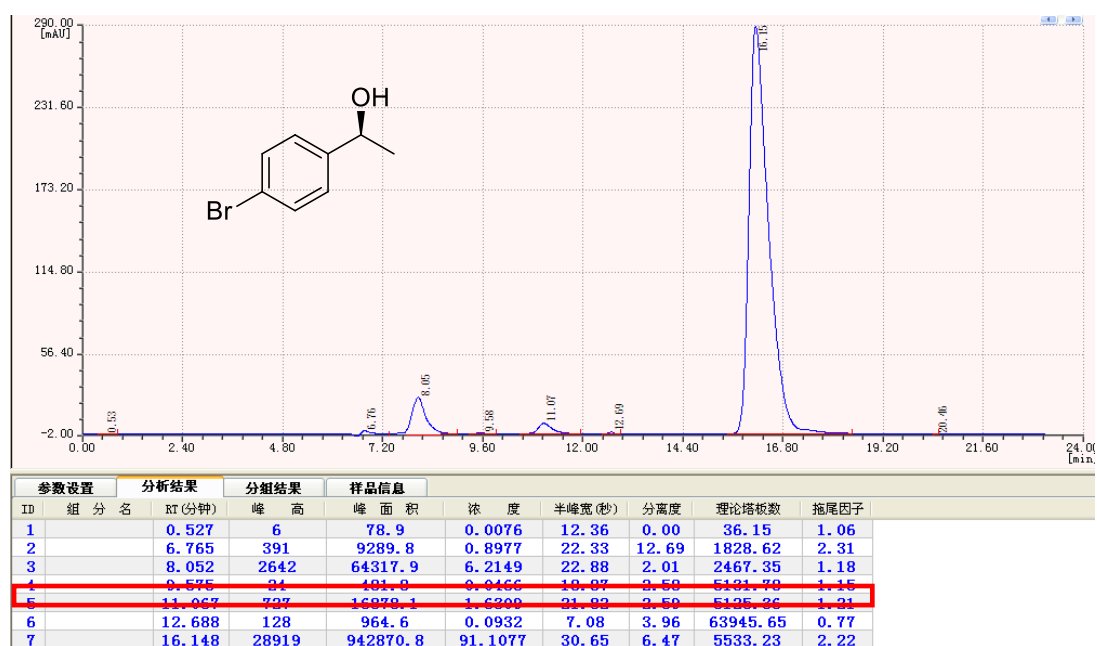


| 参数设置 | | 分析结果 | | 分組结果 | | 样品信息 | | | | |
|------|-----|---------|-------|----------|---------|--------|------|----------|------|--|
| ID | 组分名 | RT (分钟) | 峰高 | 峰面积 | 浓度 | 半峰宽(秒) | 分离度 | 理论塔板数 | 拖尾因子 | |
| 1 | | 6.799 | 326 | 8364.4 | 0.9418 | 24.12 | 0.00 | 1583.76 | 1.65 | |
| 2 | | 8.044 | 1211 | 32940.1 | 3.7089 | 25.57 | 1.77 | 1972.54 | 1.20 | |
| 3 | | 9.592 | 17 | 813.3 | 0.0086 | 13.83 | 2.15 | 5103.10 | 1.06 | |
| 4 | | 10.642 | 125 | 2930.4 | 0.3299 | 22.04 | 1.81 | 4648.18 | 1.41 | |
| 5 | | 12.557 | 123 | 3033.9 | 0.3203 | 6.53 | 1.76 | 73705.04 | 0.93 | |
| 6 | | 15.007 | 25 | 1826.8 | 0.2057 | 68.69 | 2.29 | 951.40 | 0.56 | |
| 7 | | 16.340 | 20939 | 835415.5 | 94.0641 | 37.50 | 0.89 | 3783.55 | 1.88 | |

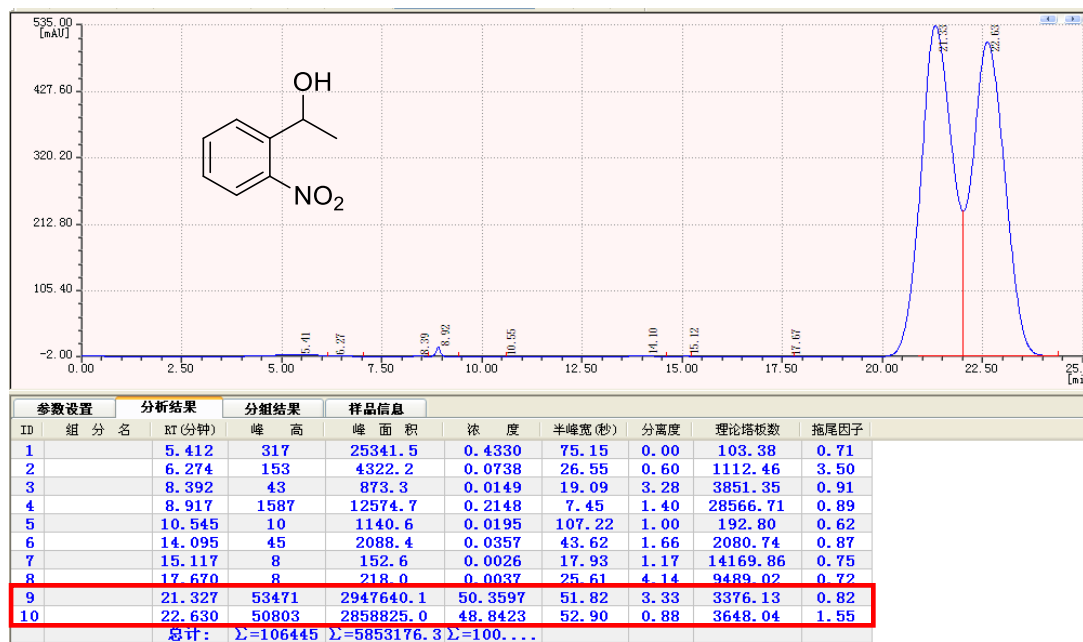
Rac-2c



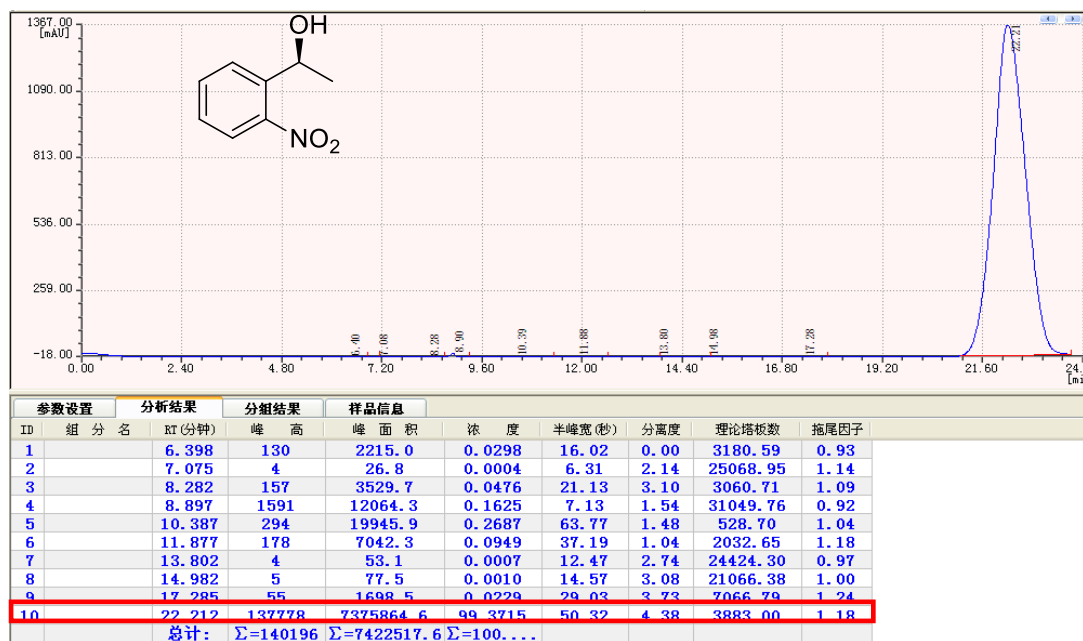
(S)-2c



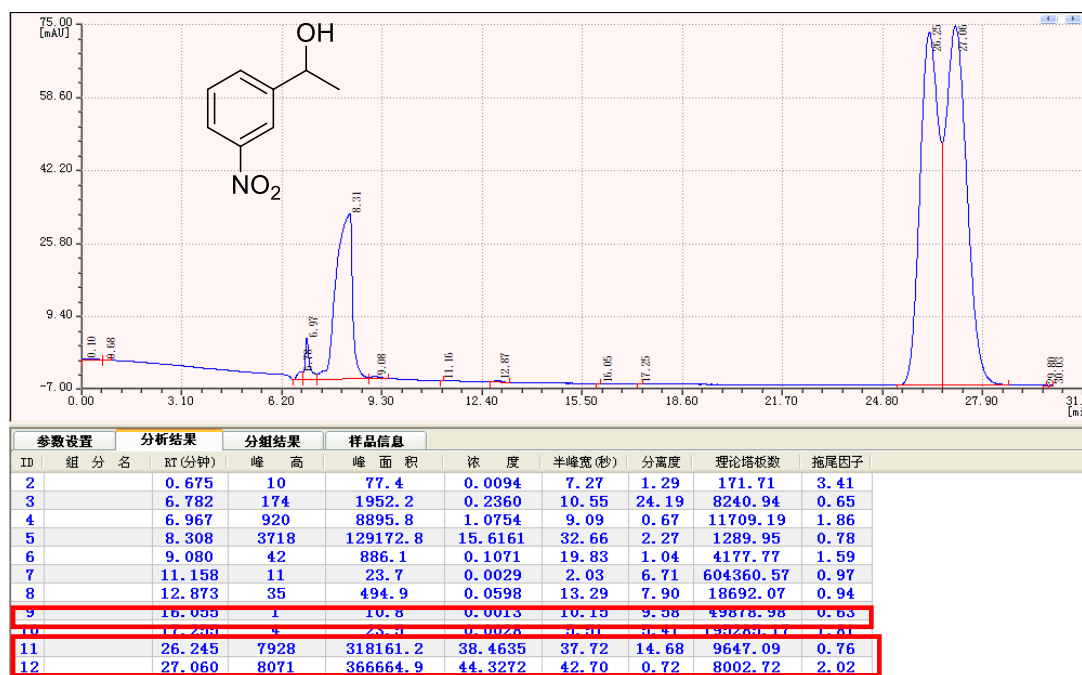
Rac-2d



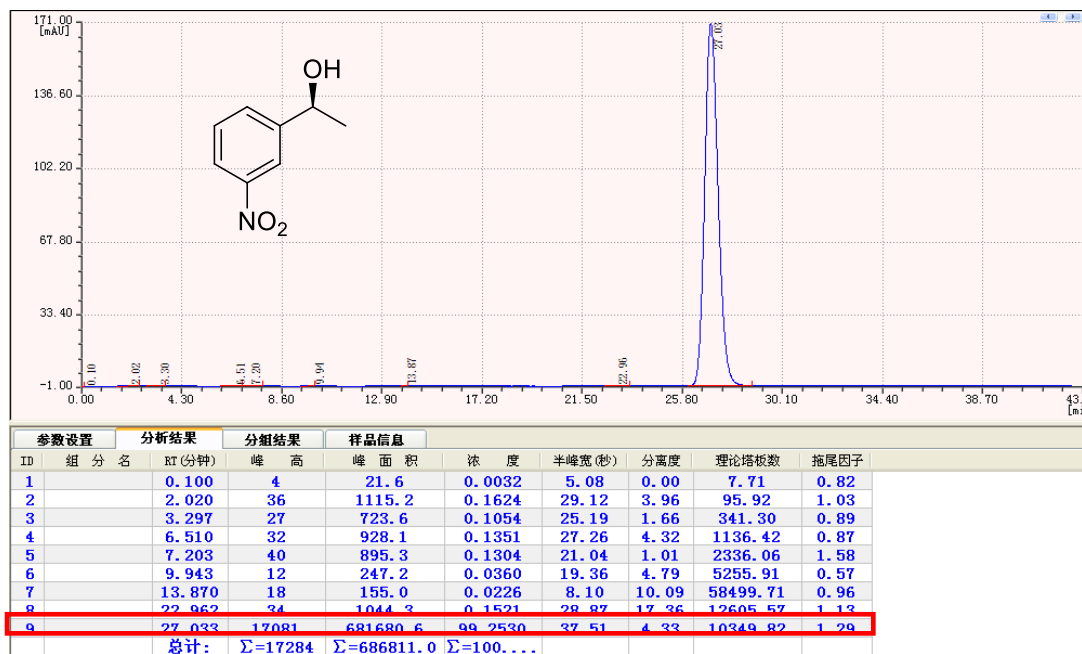
(S)-2d



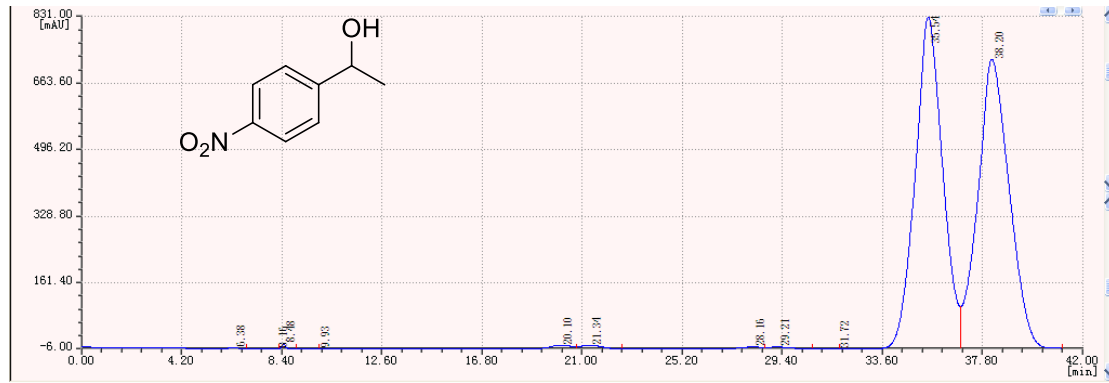
Rac-2e



(S)-2e

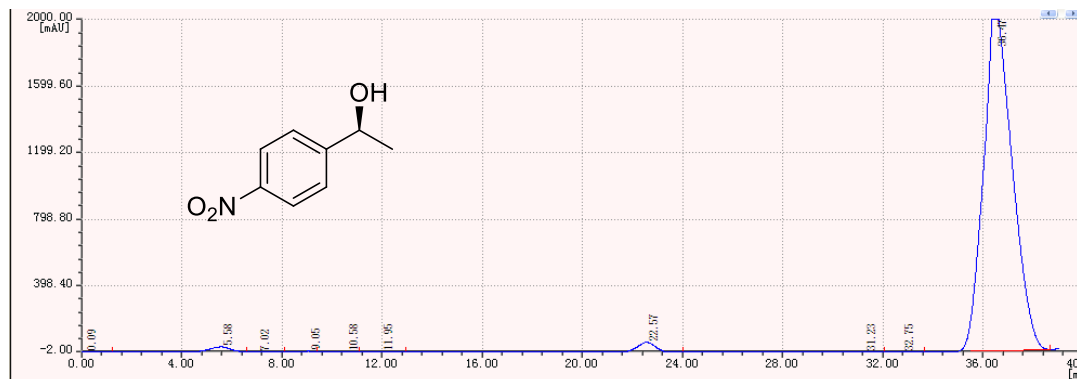


Rac-2f



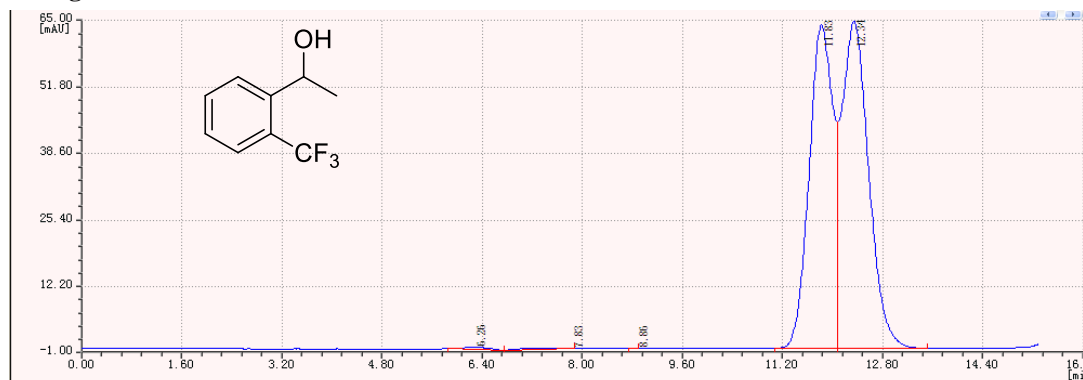
| 参数设置 | | 分析结果 | | 分组结果 | | 样品信息 | | | |
|------|-----|--------|-----------------|--------------------|-------------------|--------|------|----------|------|
| ID | 组分名 | RT(分钟) | 峰高 | 峰面积 | 浓度 | 半峰宽(秒) | 分离度 | 理论塔板数 | 拖尾因子 |
| 1 | | 6.379 | 82 | 2257.8 | 0.0167 | 25.88 | 0.00 | 1210.52 | 1.01 |
| 2 | | 8.162 | 52 | 779.6 | 0.0058 | 14.09 | 3.15 | 6685.10 | 0.65 |
| 3 | | 8.484 | 1464 | 12506.1 | 0.0928 | 8.03 | 1.03 | 22246.61 | 1.05 |
| 4 | | 9.930 | 7 | 565.2 | 0.0042 | 75.90 | 1.22 | 341.20 | 0.70 |
| 5 | | 20.099 | 910 | 54043.2 | 0.4008 | 55.82 | 5.45 | 2583.49 | 0.79 |
| 6 | | 21.337 | 893 | 52920.8 | 0.3925 | 55.71 | 0.78 | 2924.05 | 1.61 |
| 7 | | 28.164 | 443 | 26515.8 | 0.1967 | 56.26 | 4.30 | 4994.01 | 0.73 |
| 8 | | 29.210 | 427 | 25307.0 | 0.1877 | 55.71 | 0.66 | 5479.24 | 1.94 |
| 9 | | 31.719 | 7 | 264.9 | 0.0020 | 35.57 | 1.94 | 15844.99 | 0.70 |
| 10 | | 35.537 | 83496 | 6667124.9 | 49.4505 | 75.06 | 2.44 | 4467.70 | 0.90 |
| 11 | | 38.199 | 72831 | 6640124.0 | 49.2503 | 85.70 | 1.17 | 3959.55 | 1.34 |
| 总计: | | | $\Sigma=160612$ | $\Sigma=134824...$ | $\Sigma=100.0000$ | | | | |

(S)-2f



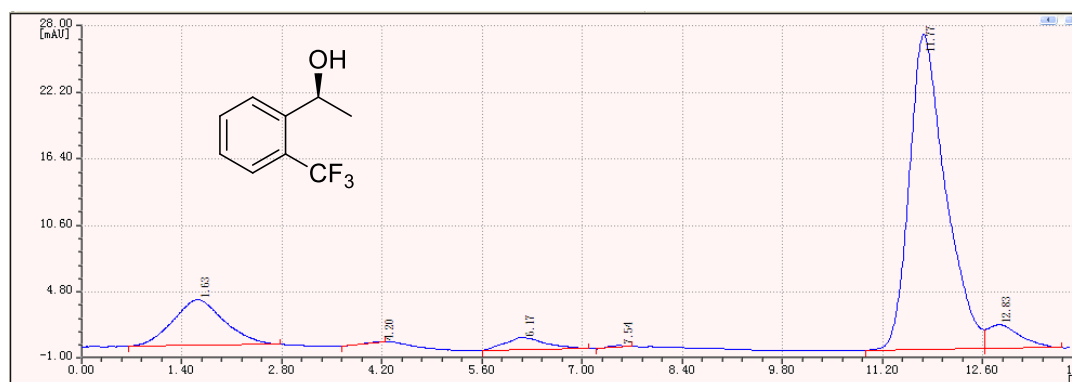
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| ID | 组分名 | RT(分钟) | 峰高 | 峰面积 | 浓度 | 半峰宽(秒) | 分离度 | 理论塔板数 | 拖尾因子 |
| 1 | | 0.088 | 19 | 301.2 | 0.0018 | 14.90 | 0.00 | 0.70 | 1.43 |
| 2 | | 5.575 | 3200 | 197082.5 | 1.1572 | 57.89 | 5.32 | 184.83 | 0.85 |
| 3 | | 7.018 | 374 | 18797.1 | 0.1104 | 47.24 | 0.97 | 439.83 | 1.70 |
| 4 | | 9.053 | 863 | 7407.7 | 0.0435 | 8.07 | 2.60 | 25092.41 | 0.77 |
| 5 | | 10.582 | 287 | 16847.8 | 0.0989 | 55.18 | 1.71 | 732.93 | 0.79 |
| 6 | | 11.955 | 478 | 26474.9 | 0.1554 | 52.06 | 0.90 | 1050.88 | 1.07 |
| 7 | | 22.565 | 5991 | 296427.4 | 1.7405 | 46.51 | 7.60 | 4691.43 | 0.95 |
| 8 | | 31.227 | 373 | 23116.6 | 0.1357 | 58.26 | 5.84 | 5726.46 | 0.82 |
| 9 | | 32.755 | 106 | 5646.1 | 0.0332 | 50.07 | 1.00 | 8529.72 | 1.19 |
| 10 | | 36.470 | 214305 | 16439496.6 | 96.5235 | 72.11 | 2.15 | 5098.35 | 1.30 |
| 总计: | | | $\Sigma=225996$ | $\Sigma=170315...$ | $\Sigma=100.0000$ | | | | |

Rac-2g



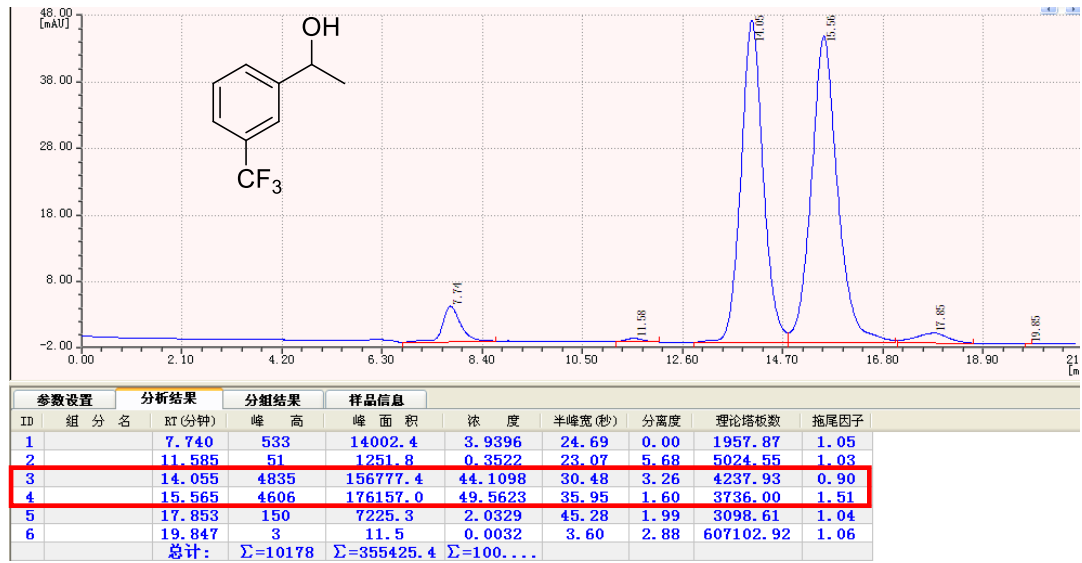
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| ID | 组分名 | RT(分钟) | 峰高 | 峰面积 | 浓度 | 半峰宽(秒) | 分离度 | 理论塔板数 | 拖尾因子 |
| 1 | | 6.264 | 38 | 1178.4 | 0.3223 | 29.15 | 0.00 | 920.30 | 0.93 |
| 2 | | 7.834 | 9 | 863.6 | 0.2362 | 90.19 | 0.93 | 150.34 | 0.53 |
| 3 | | 8.864 | 2 | 10.5 | 0.0029 | 4.94 | 0.76 | 64216.46 | 0.86 |
| 4 | | 11.827 | 6426 | 171410.2 | 46.8827 | 25.07 | 6.97 | 4434.37 | 0.72 |
| 5 | | 12.344 | 6497 | 192152.7 | 52.5560 | 27.80 | 0.69 | 3929.13 | 2.18 |
| 总计: | | | $\Sigma=12972$ | $\Sigma=365615.4$ | $\Sigma=100.0000$ | | | | |

(S)-2g

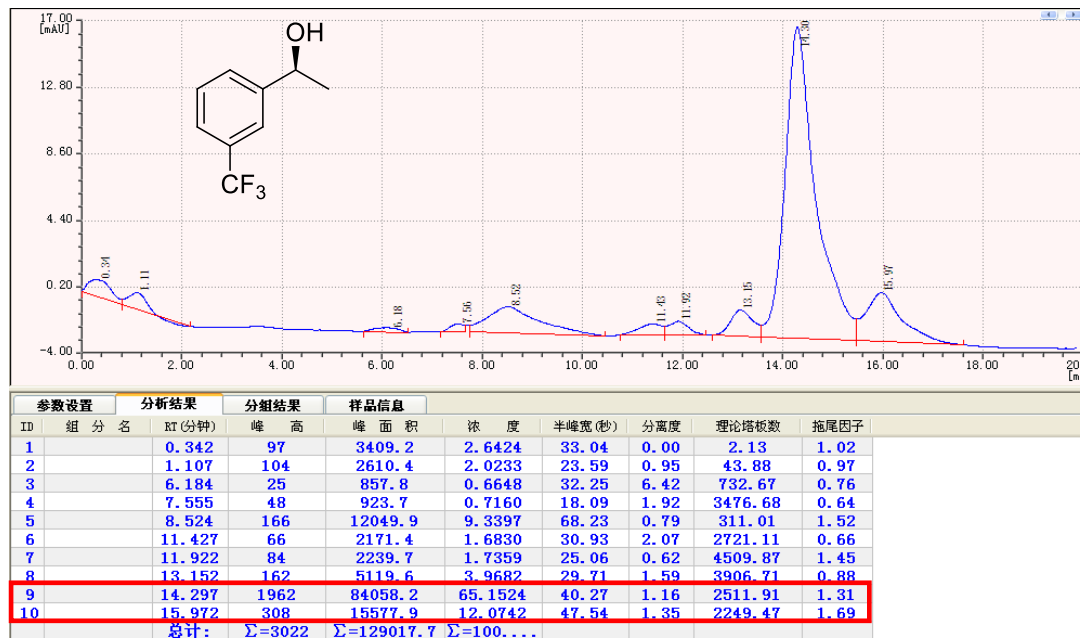


| 参数设置 | | 分析结果 | | 分组结果 | | 样品信息 | | | |
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| ID | 组分名 | RT(分钟) | 峰高 | 峰面积 | 浓度 | 半峰宽(秒) | 分离度 | 理论塔板数 | 拖尾因子 |
| 1 | | 1.625 | 398 | 19834.8 | 15.5001 | 46.85 | 0.00 | 23.99 | 1.18 |
| 2 | | 4.204 | 5 | 91.1 | 0.0712 | 17.13 | 2.84 | 1200.43 | 0.74 |
| 3 | | 6.170 | 107 | 4189.9 | 3.2743 | 36.81 | 2.57 | 560.06 | 1.40 |
| 4 | | 7.544 | 16 | 256.0 | 0.2001 | 15.04 | 1.87 | 5013.48 | 0.86 |
| 5 | | 11.774 | 2751 | 97082.5 | 75.8663 | 33.17 | 6.19 | 2510.70 | 1.21 |
| 6 | | 12.834 | 208 | 6510.9 | 5.0880 | 28.42 | 1.20 | 3791.45 | 2.60 |
| 总计: | | | $\Sigma=3485$ | $\Sigma=127965.3$ | $\Sigma=100.0000$ | | | | |

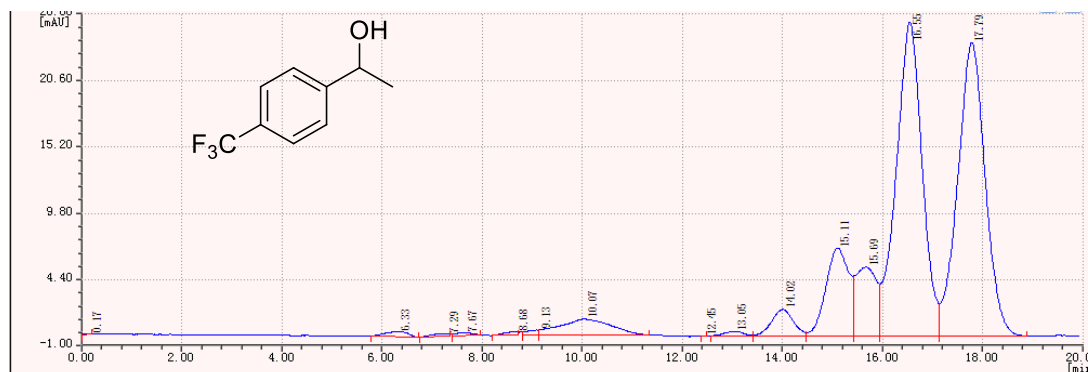
Rac-2h



(S)-2h

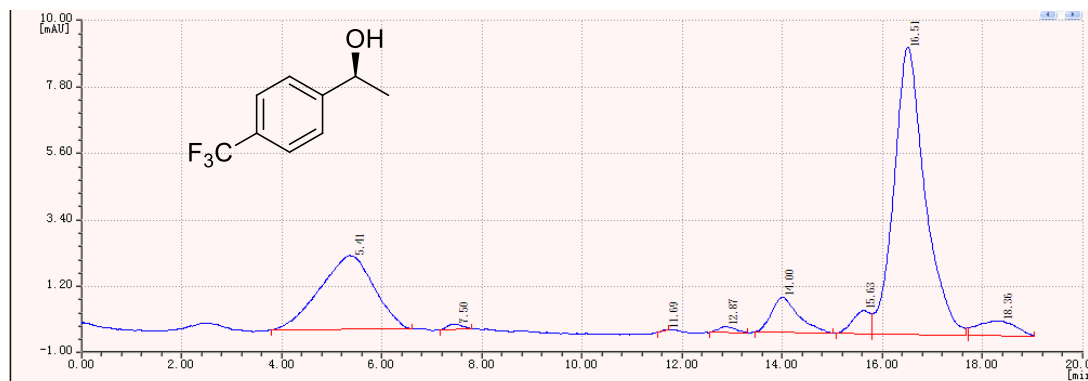


Rac-2i



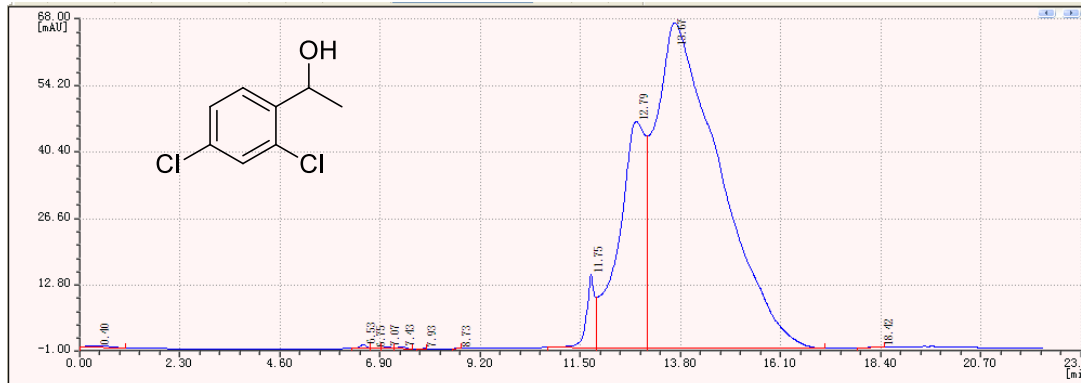
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|------|-----|--------|--------|------------|-----------|--------|-------|-----------|------|
| ID | 组分名 | RT(分钟) | 峰高 | 峰面积 | 浓度 | 半峰宽(秒) | 分离度 | 理论塔板数 | 拖尾因子 |
| 2 | | 6.332 | 40 | 1294.3 | 0.5331 | 30.42 | 11.65 | 863.59 | 0.80 |
| 3 | | 7.293 | 19 | 527.3 | 0.2172 | 26.09 | 1.20 | 1557.53 | 0.58 |
| 4 | | 7.670 | 26 | 604.2 | 0.2489 | 21.84 | 0.55 | 2457.18 | 1.06 |
| 5 | | 8.675 | 27 | 537.7 | 0.2215 | 18.72 | 1.75 | 4280.36 | 0.56 |
| 6 | | 9.130 | 43 | 715.1 | 0.2946 | 15.63 | 0.93 | 6797.53 | 0.52 |
| 7 | | 10.070 | 130 | 9494.2 | 3.9106 | 68.65 | 0.79 | 428.82 | 1.18 |
| 8 | | 12.447 | 3 | 17.6 | 0.0072 | 5.51 | 2.26 | 101795.89 | 0.85 |
| 9 | | 13.055 | 41 | 1166.5 | 0.4805 | 26.74 | 1.33 | 4748.91 | 0.87 |
| 10 | | 14.018 | 220 | 6771.7 | 2.7892 | 28.93 | 1.22 | 4678.48 | 0.88 |
| 11 | | 15.111 | 717 | 22851.5 | 9.4124 | 29.96 | 1.31 | 5070.97 | 0.74 |
| 12 | | 15.686 | 561 | 16341.8 | 6.7311 | 27.38 | 0.71 | 6541.04 | 1.00 |
| 13 | | 16.547 | 2552 | 91737.4 | 37.7861 | 33.79 | 0.99 | 4779.21 | 1.00 |
| 14 | | 17.790 | 2385 | 90699.2 | 37.3585 | 35.75 | 1.26 | 4936.09 | 1.20 |
| 总计: | | | Σ=6767 | Σ=242780.8 | Σ=100.000 | | | | |

(S)-2i



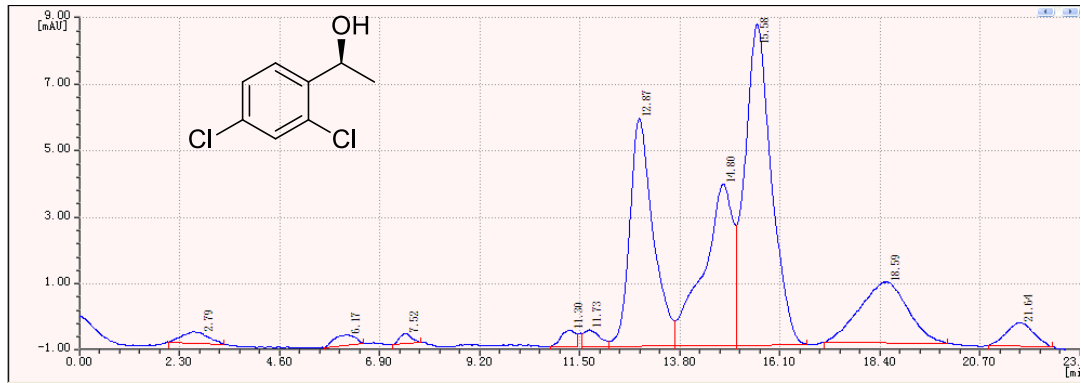
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|------|-----|--------|--------|-----------|-----------|--------|-------|----------|------|
| ID | 组分名 | RT(分钟) | 峰高 | 峰面积 | 浓度 | 半峰宽(秒) | 分离度 | 理论塔板数 | 拖尾因子 |
| 1 | | 5.412 | 245 | 18474.6 | 26.7592 | 70.88 | 0.00 | 116.18 | 0.89 |
| 2 | | 7.502 | 18 | 373.6 | 0.5411 | 19.51 | 1.63 | 2946.57 | 1.03 |
| 3 | | 11.687 | 3 | 21.8 | 0.0316 | 6.83 | 11.21 | 58320.97 | 0.83 |
| 4 | | 12.867 | 20 | 464.3 | 0.6725 | 21.82 | 2.91 | 6928.21 | 1.18 |
| 5 | | 14.003 | 115 | 4339.5 | 6.2854 | 35.47 | 1.40 | 3106.42 | 1.34 |
| 6 | | 15.630 | 76 | 1865.6 | 2.7022 | 23.07 | 1.96 | 9144.47 | 0.65 |
| 7 | | 16.512 | 950 | 40864.1 | 59.1888 | 40.43 | 0.98 | 3323.67 | 1.31 |
| 8 | | 18.362 | 49 | 2636.7 | 3.8190 | 50.58 | 1.43 | 2626.51 | 1.01 |
| 总计: | | | Σ=1476 | Σ=69040.2 | Σ=100.000 | | | | |

Rac-2m



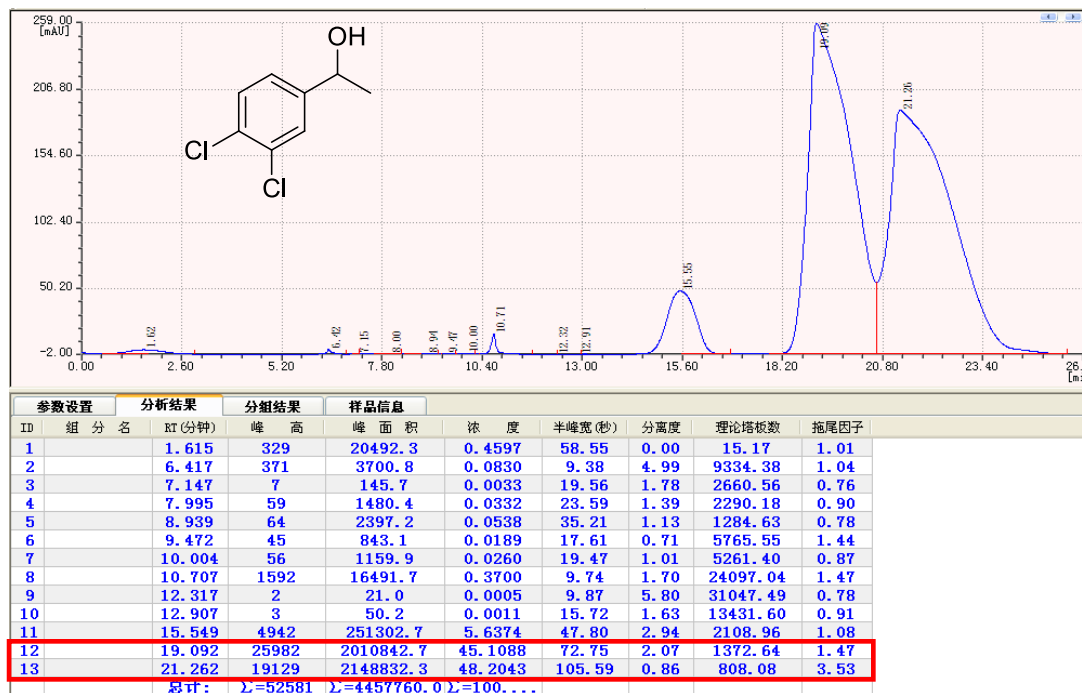
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|------|-----|--------|----------------|-------------------|------------------|--------|-------|----------|------|
| ID | 组分名 | RT(分钟) | 峰高 | 峰面积 | 浓度 | 半峰宽(秒) | 分离度 | 理论塔板数 | 拖尾因子 |
| 1 | | 0.398 | 41 | 1421.6 | 0.1555 | 32.59 | 0.00 | 2.97 | 1.10 |
| 2 | | 6.525 | 81 | 805.8 | 0.0881 | 9.35 | 10.31 | 9702.93 | 0.76 |
| 3 | | 6.750 | 17 | 188.3 | 0.0206 | 10.41 | 0.80 | 8379.29 | 1.60 |
| 4 | | 7.072 | 35 | 362.2 | 0.0396 | 9.73 | 1.13 | 10532.52 | 0.99 |
| 5 | | 7.427 | 42 | 526.6 | 0.0576 | 11.79 | 1.16 | 7914.46 | 0.81 |
| 6 | | 7.927 | 5 | 53.1 | 0.0058 | 9.97 | 1.62 | 12585.61 | 0.77 |
| 7 | | 8.727 | 3 | 16.6 | 0.0018 | 5.21 | 3.72 | 55875.70 | 0.88 |
| 8 | | 11.750 | 1523 | 19472.0 | 2.1294 | 12.02 | 12.39 | 19051.33 | 0.56 |
| 9 | | 12.793 | 4685 | 198189.7 | 21.6736 | 39.76 | 1.42 | 2062.94 | 0.63 |
| 10 | | 13.672 | 6745 | 693223.5 | 75.8095 | 96.61 | 0.45 | 399.14 | 2.92 |
| 11 | | 18.418 | 5 | 168.6 | 0.0184 | 31.71 | 2.61 | 6725.78 | 0.64 |
| 总计: | | | $\Sigma=13182$ | $\Sigma=914428.1$ | $\Sigma=100.000$ | | | | |

(S)-2m



| 参数设置 | | 分析结果 | | 分组结果 | | 样品信息 | | | |
|------|-----|--------|-----|---------|---------|--------|------|---------|------|
| ID | 组分名 | RT(分钟) | 峰高 | 峰面积 | 浓度 | 半峰宽(秒) | 分离度 | 理论塔板数 | 拖尾因子 |
| 1 | | 2.792 | 33 | 1391.9 | 1.2472 | 39.65 | 0.00 | 98.81 | 0.81 |
| 2 | | 6.170 | 30 | 1014.8 | 0.9094 | 31.80 | 3.34 | 750.41 | 0.90 |
| 3 | | 7.520 | 29 | 582.1 | 0.5216 | 18.87 | 1.88 | 3166.47 | 1.12 |
| 4 | | 11.300 | 48 | 1154.9 | 1.0349 | 22.62 | 6.43 | 4975.21 | 0.67 |
| 5 | | 11.727 | 49 | 1233.3 | 1.1052 | 23.66 | 0.65 | 4895.96 | 1.82 |
| 6 | | 12.865 | 683 | 25487.5 | 22.8388 | 35.08 | 1.37 | 2680.91 | 1.10 |
| 7 | | 14.798 | 485 | 22894.6 | 20.5154 | 44.37 | 1.72 | 2216.76 | 0.64 |
| 8 | | 15.580 | 965 | 40701.7 | 36.4720 | 39.65 | 0.66 | 3077.73 | 1.65 |
| 9 | | 18.587 | 182 | 14094.4 | 12.6297 | 72.80 | 1.89 | 1299.35 | 0.94 |
| 10 | | 21.637 | 71 | 3042.0 | 2.7259 | 40.27 | 1.90 | 5752.40 | 0.94 |

Rac-2n



(S)-2n

