

Supplementary information

Supplementary data: 1D and 2D NMR spectra, IR spectra and HRMS spectra for the compounds (2) and (3)

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1D and 2D NMR spectra for compound (2)

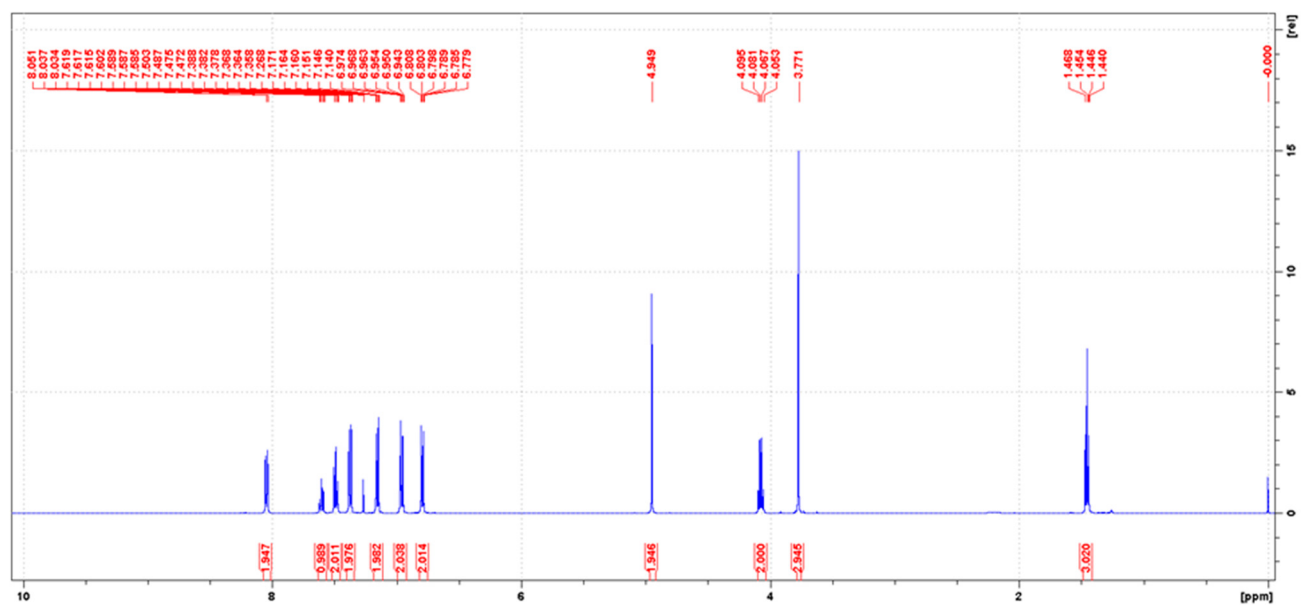


Figure S1 ¹H NMR spectrum of the compound (2)

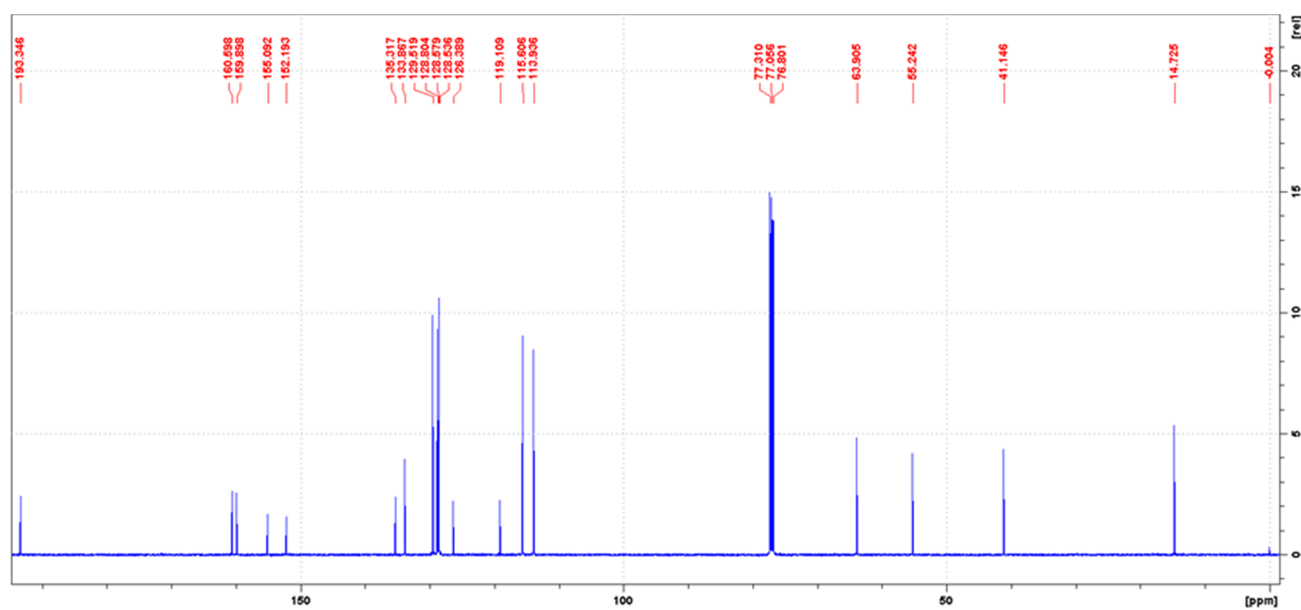


Figure S2 ¹³C NMR spectrum of the compound (2)

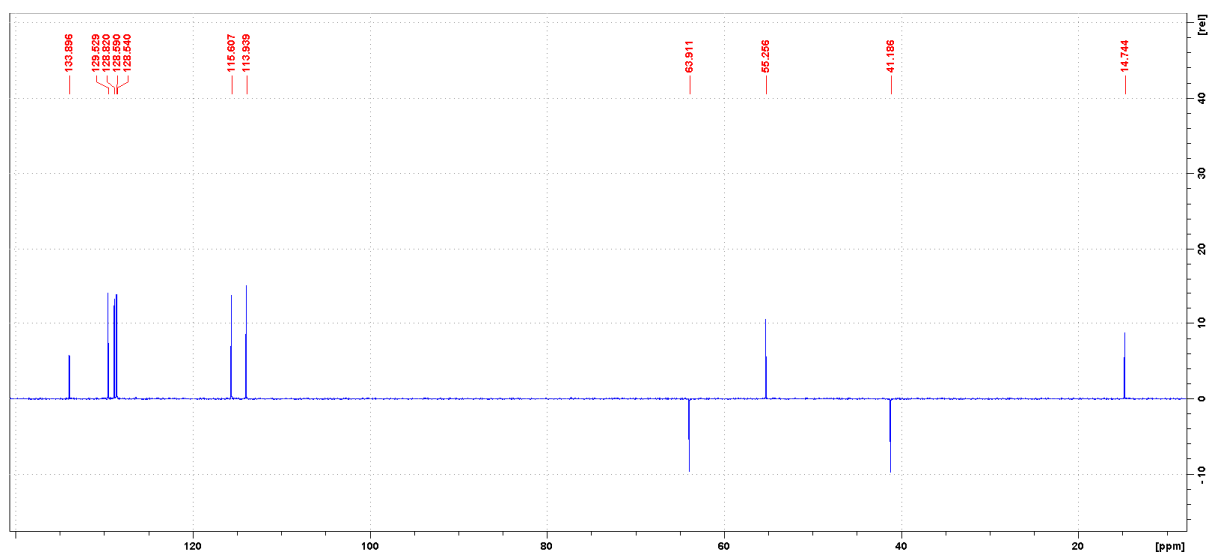


Figure S3 ^{13}C DEPT135 spectrum of the compound (2)

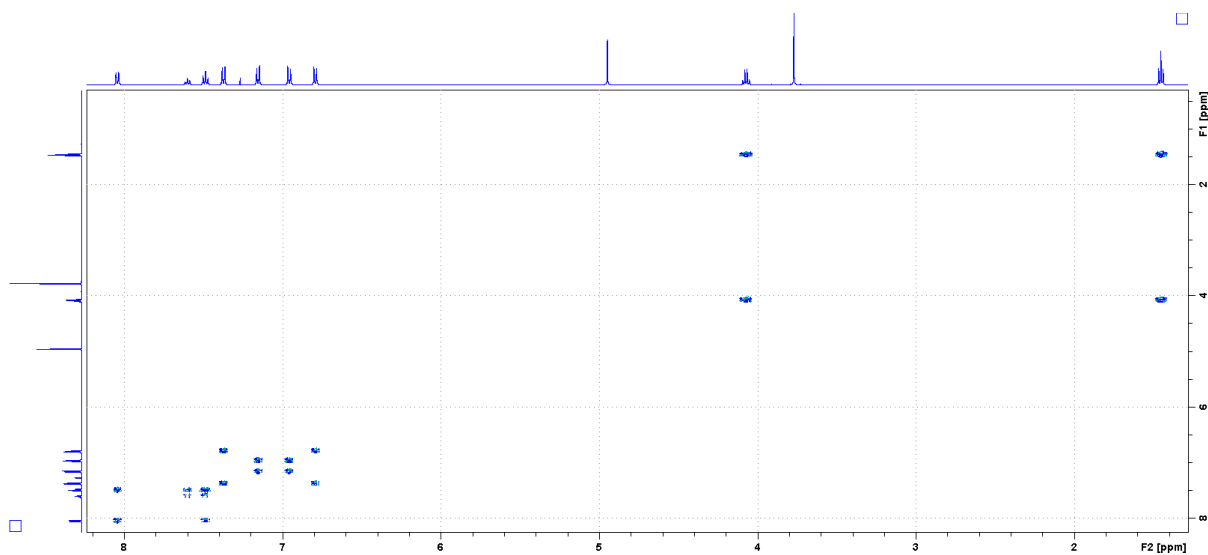


Figure S4 COSY ^1H - ^1H spectrum of the compound (2)

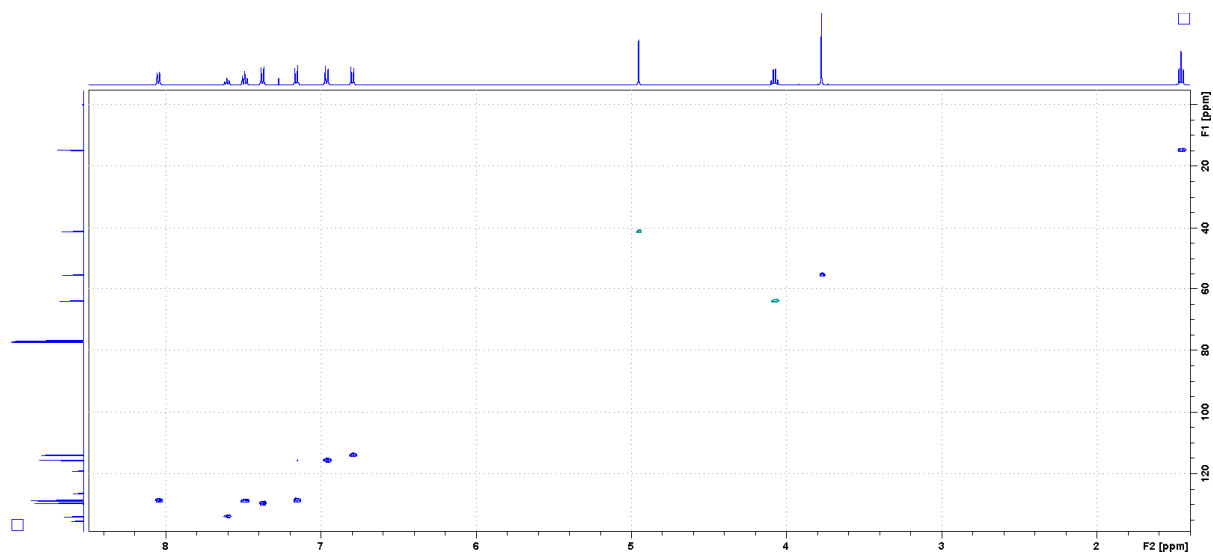


Figure S5 HSQC ^1H - ^{13}C spectrum of the compound (2)

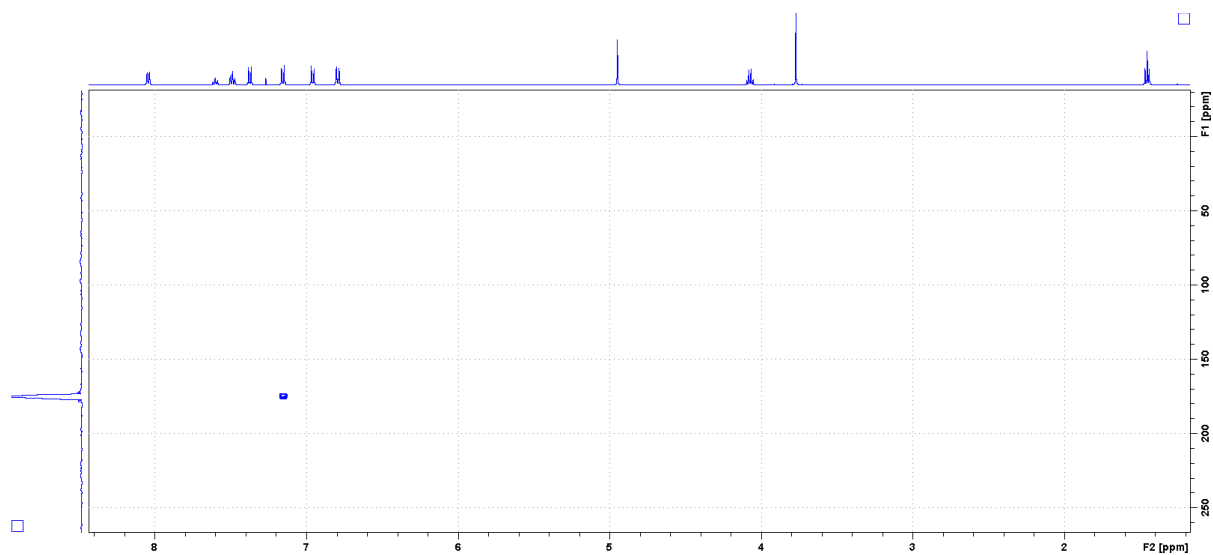


Figure S6 HMBC ^1H - ^{15}N spectrum of the compound (2)

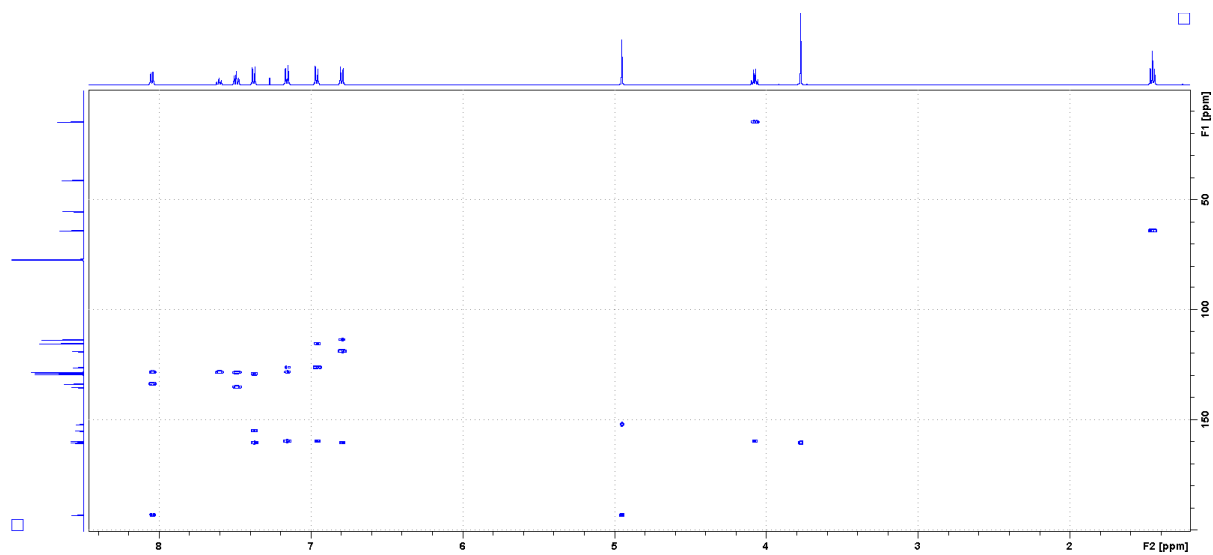


Figure S7 HMBC ^1H - ^{13}C spectrum of the compound (2)

1D and 2D NMR spectra for compound (3)

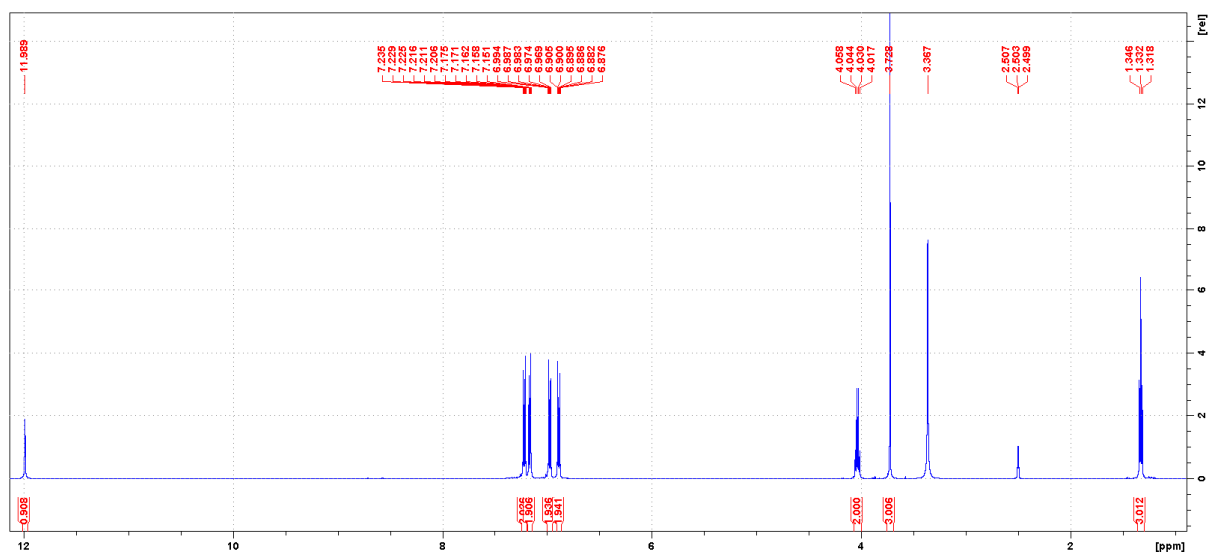


Figure S8 ¹H NMR spectrum of the compound (3)

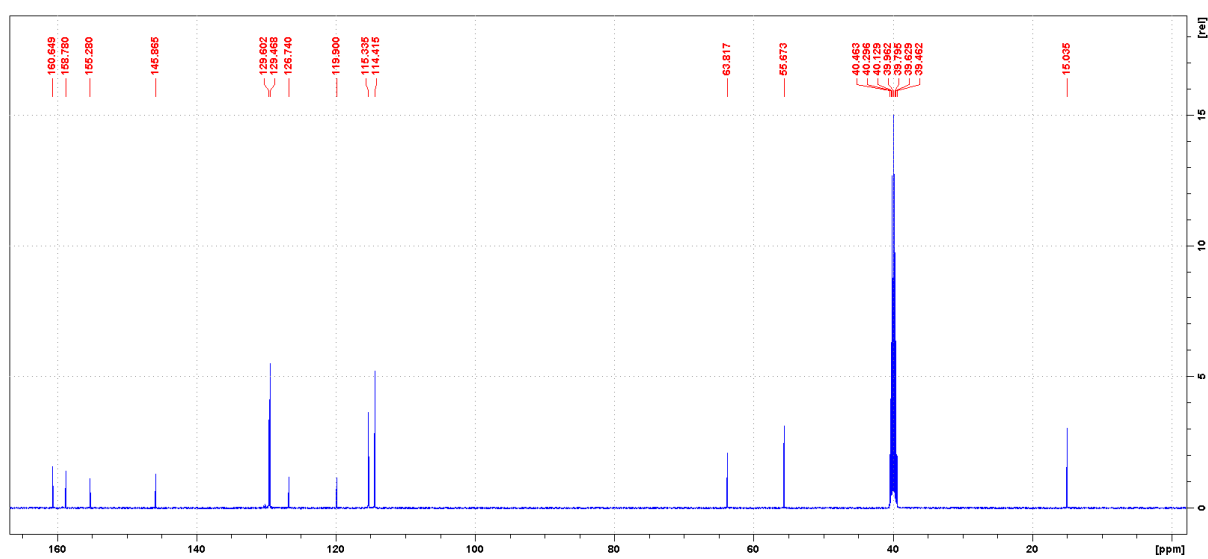


Figure S9 ¹³C NMR spectrum of the compound (3)

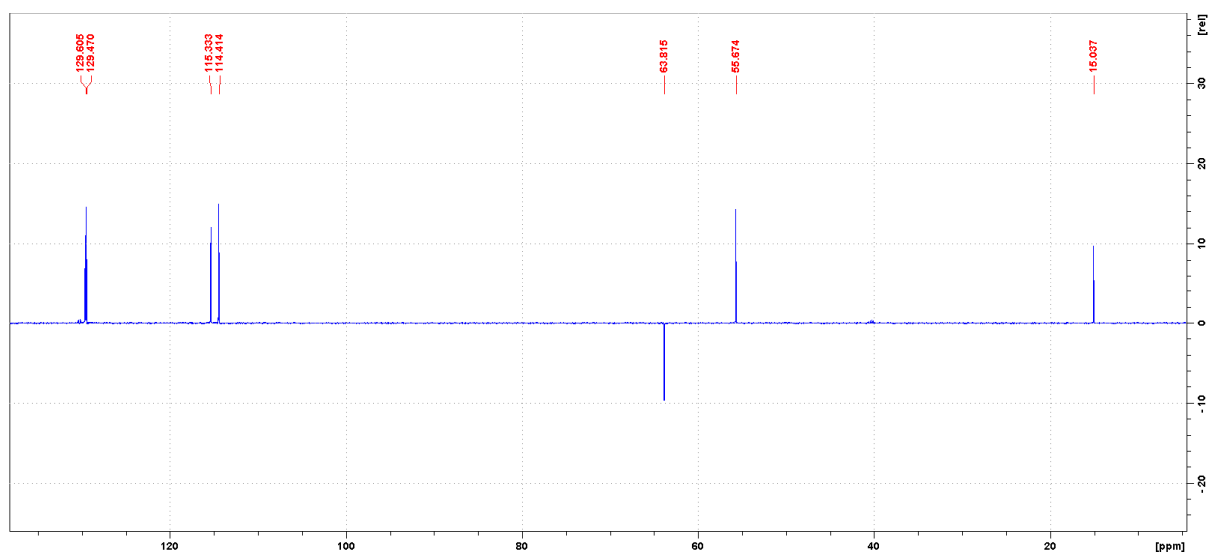


Figure S10 ¹³C DEPT135 spectrum of the compound (3)

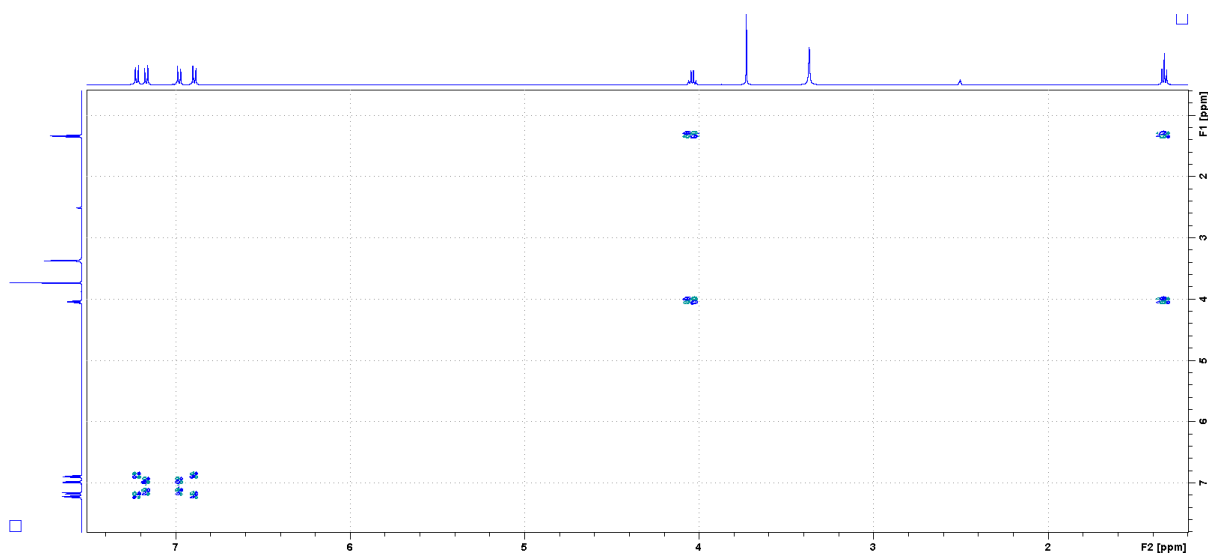


Figure S11 COSY ¹H-¹H spectrum of the compound (3)

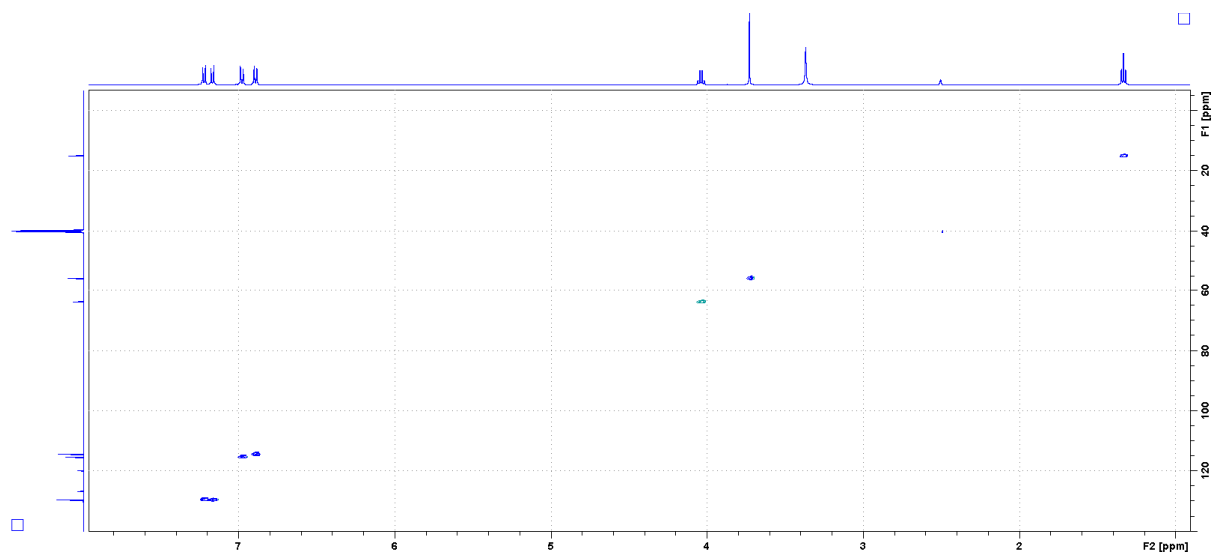


Figure S12 HSQC ^1H - ^{13}C spectrum of the compound (3)

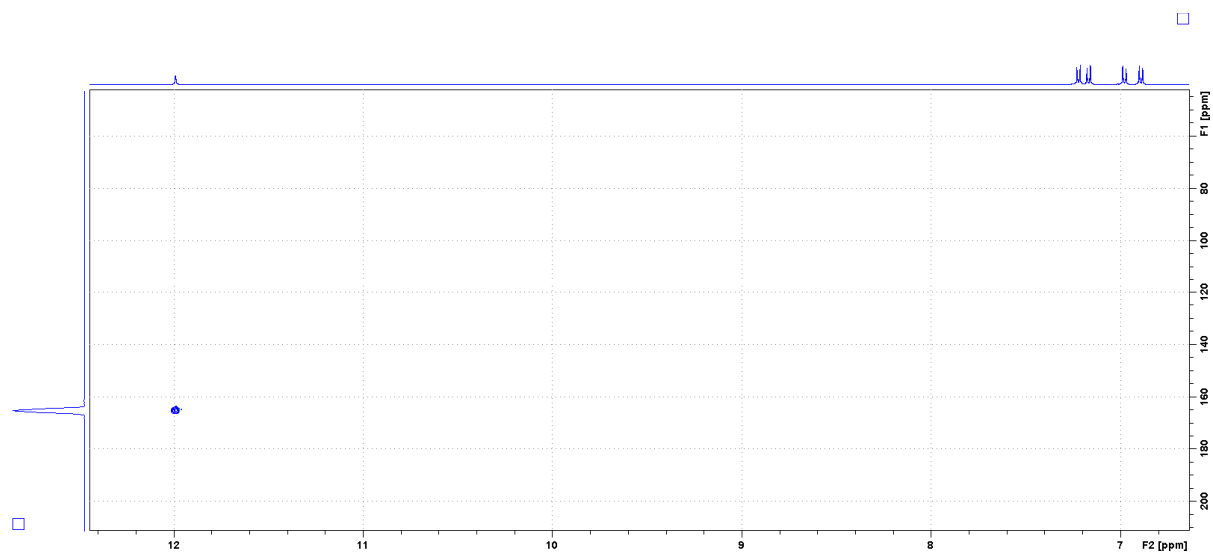


Figure S13 HSQC ^1H - ^{15}N spectrum of the compound (3)

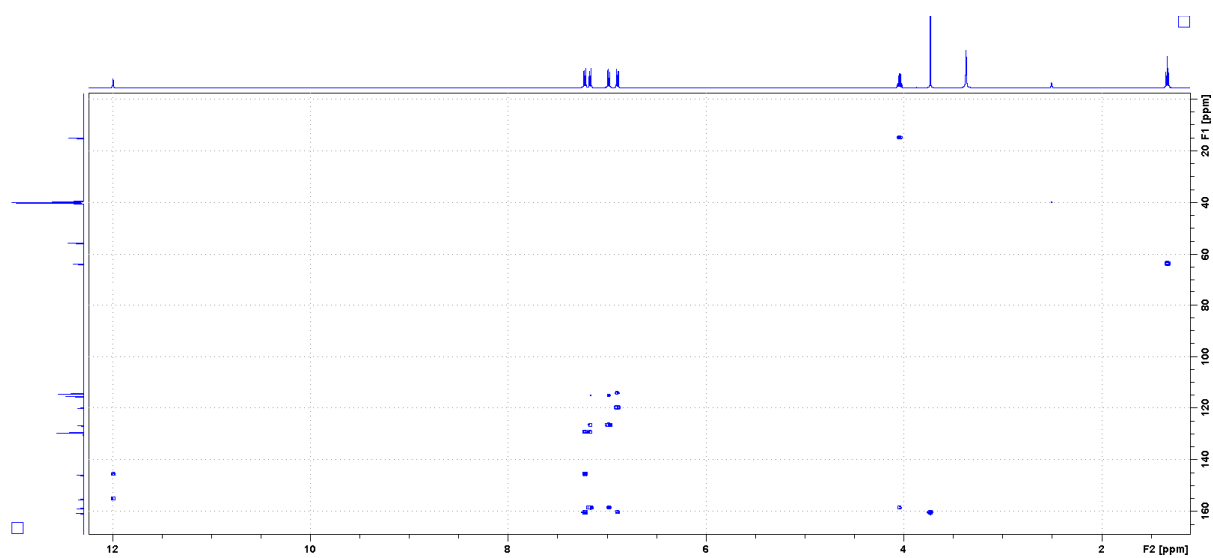


Figure S14 HMBC ^1H - ^{13}C spectrum of the compound (3)

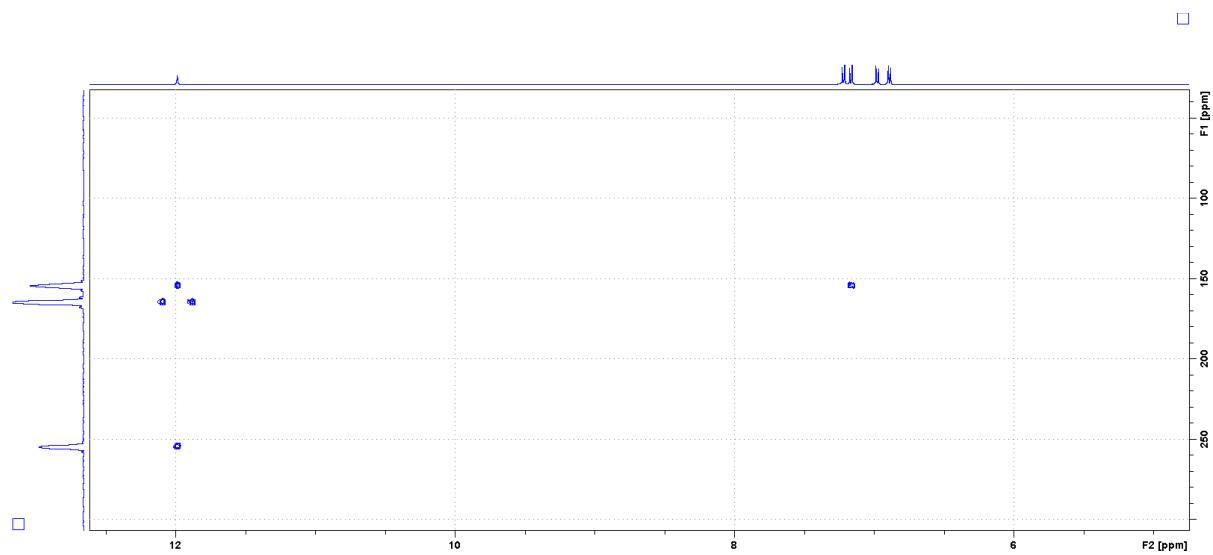
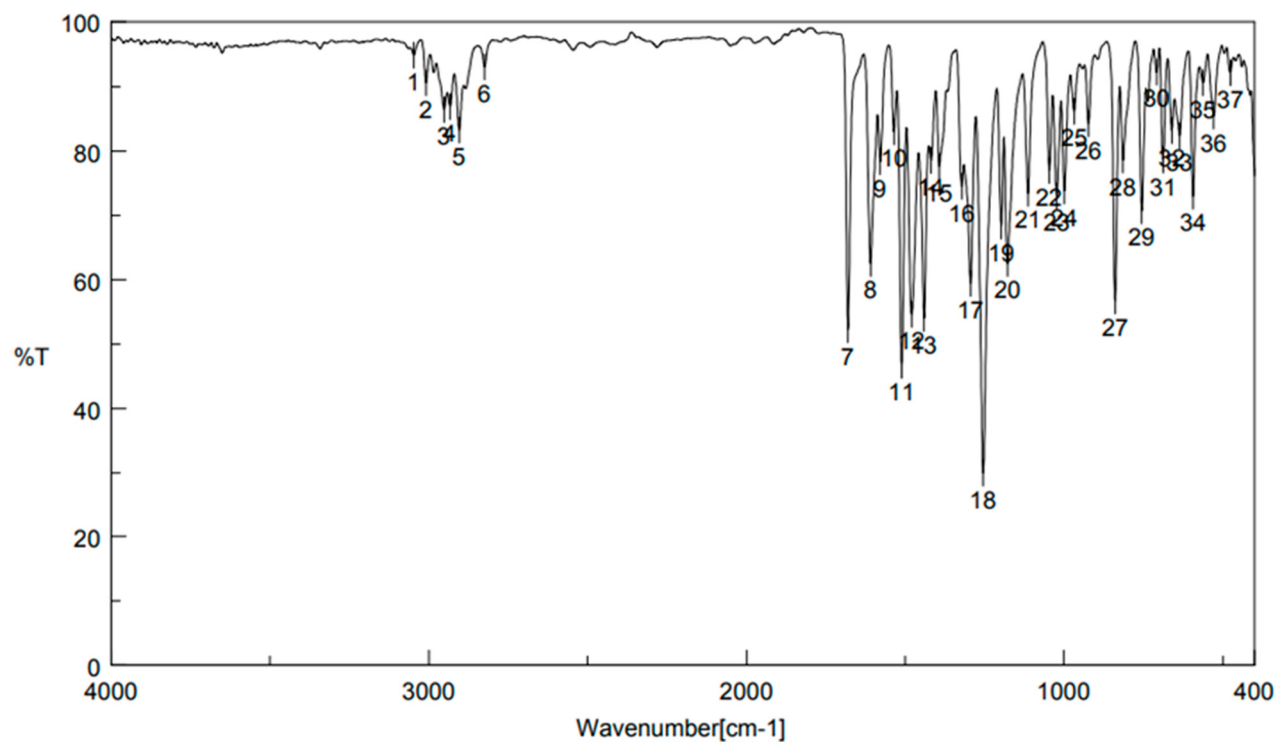


Figure S15 HMBC ^1H - ^{15}N spectrum of the compound (3)

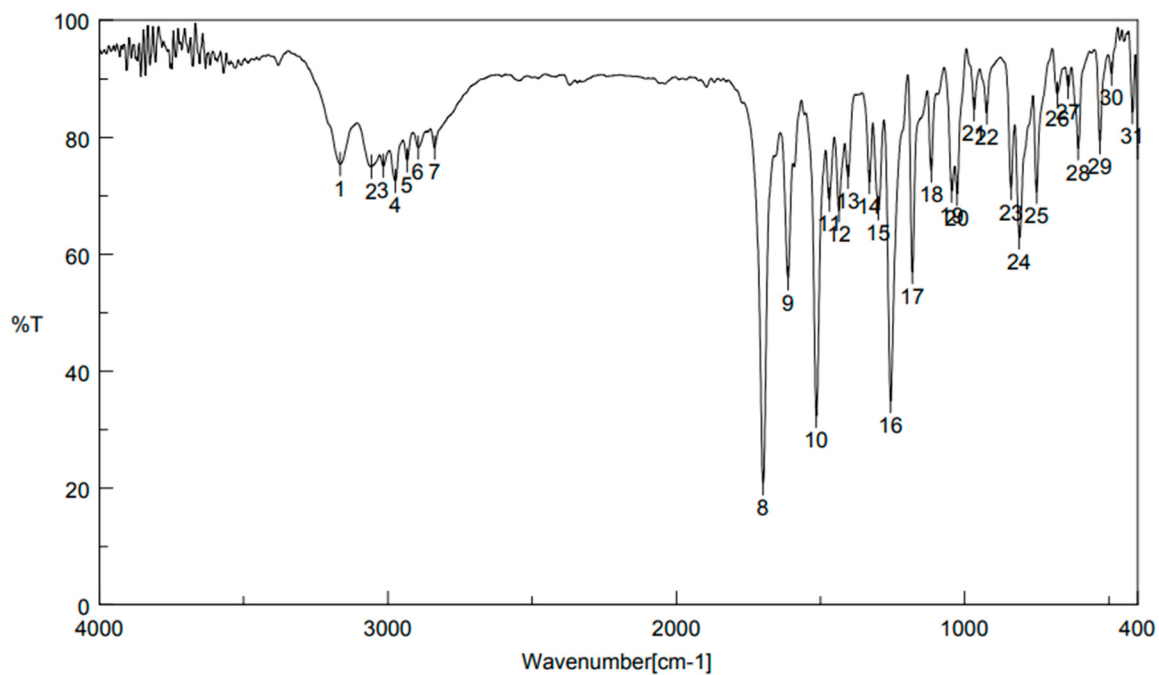
IR spectrum for compound (2)



1: 3046.98, 94.9149	2: 3008.41, 90.6402	3: 2951.52, 86.48
4: 2933.2, 86.9472	5: 2904.27, 83.2794	6: 2824.24, 93.1004
7: 1679.69, 52.2415	8: 1609.31, 62.5841	9: 1578.45, 78.3213
10: 1535.06, 82.9547	11: 1510.95, 46.7643	12: 1479.13, 54.6813
13: 1440.56, 53.993	14: 1418.39, 78.5704	15: 1392.35, 77.6782
16: 1321.96, 74.5555	17: 1294, 59.4155	18: 1254.47, 29.9603
19: 1197.58, 68.3962	20: 1178.29, 62.512	21: 1113.69, 73.4487
22: 1046.19, 77.0447	23: 1023.05, 73.0427	24: 997.982, 73.8089
25: 968.09, 86.1602	26: 922.771, 84.285	27: 838.883, 56.6825
28: 813.813, 78.5929	29: 754.995, 70.7037	30: 707.747, 92.2483
31: 687.498, 78.6268	32: 660.5, 83.1752	33: 636.394, 82.3638
34: 593.968, 73.0122	35: 562.148, 90.6707	36: 528.4, 85.4621
37: 476.331, 92.1398		

Figure S16 FT-IR spectrum of the compound (2)

IR spectrum for compound (3)



1: 3165.58, 75.4385	2: 3057.58, 75.0218	3: 3017.09, 75.1771
4: 2974.66, 72.5508	5: 2933.2, 76.0765	6: 2893.66, 78.2722
7: 2837.74, 78.2853	8: 1698.98, 20.8202	9: 1612.2, 55.8787
10: 1513.85, 32.4013	11: 1469.49, 69.3801	12: 1435.74, 67.5285
13: 1404.89, 73.2425	14: 1329.68, 72.3888	15: 1298.82, 67.8638
16: 1256.4, 34.9522	17: 1181.19, 57.0356	18: 1115.62, 74.3521
19: 1044.26, 70.9071	20: 1025.94, 70.3687	21: 967.126, 84.8568
22: 923.736, 84.2378	23: 838.883, 71.3239	24: 809.956, 62.9107
25: 750.174, 70.7389	26: 678.82, 87.4925	27: 641.215, 88.6366
28: 605.539, 78.1405	29: 531.293, 79.2154	30: 489.831, 90.9399
31: 417.513, 84.379		

Figure S17 FT-IR spectrum of the compound (3)

HRMS spectrum for compound (3)

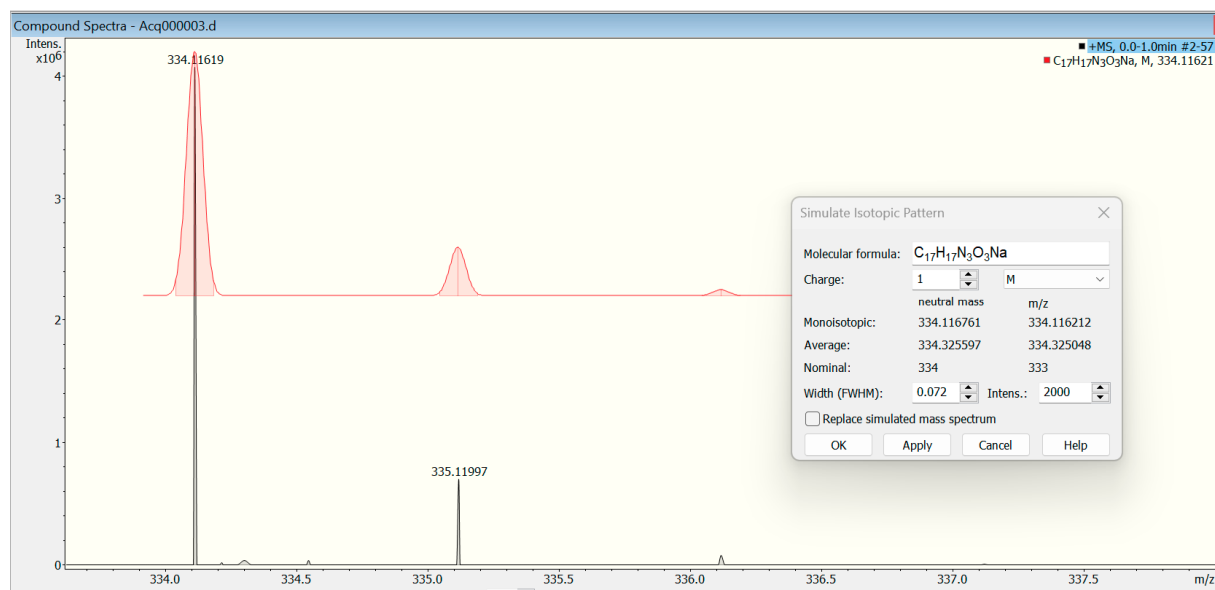


Figure S18 HRMS spectrum of the compound (3)