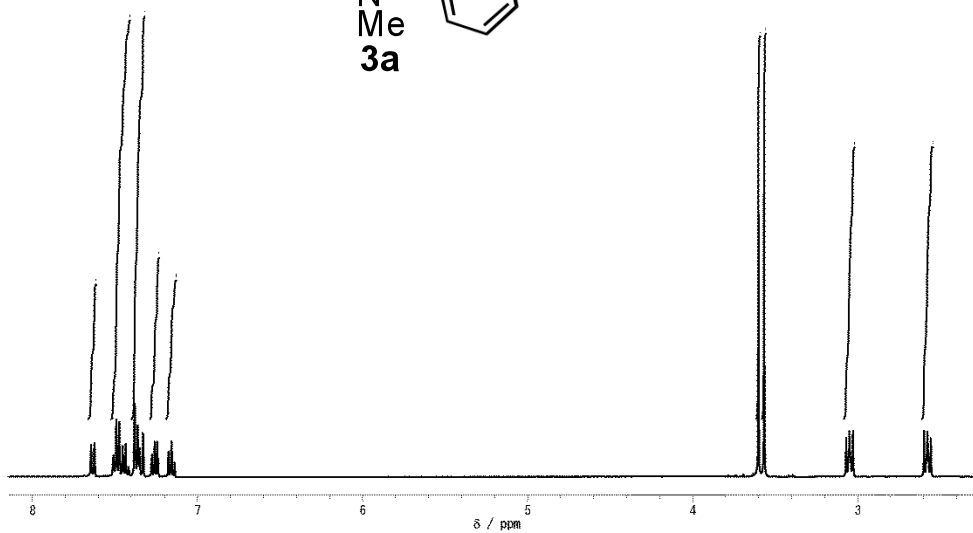
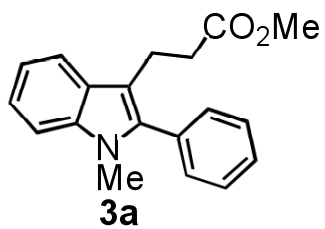
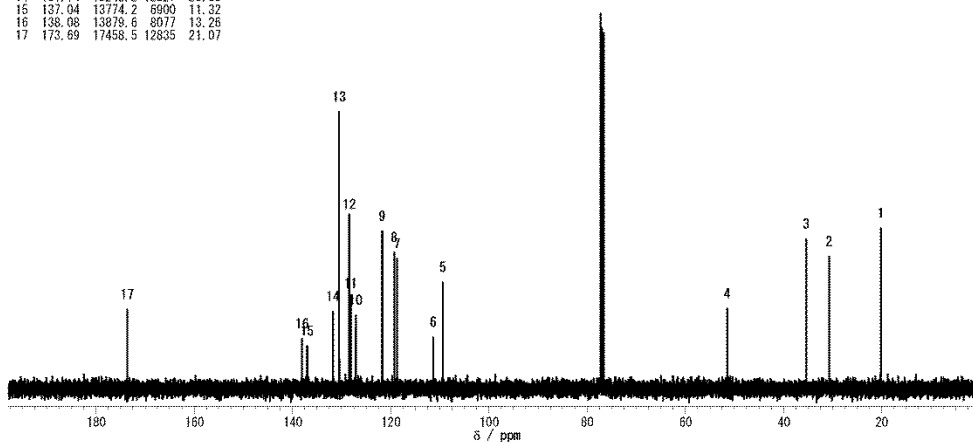
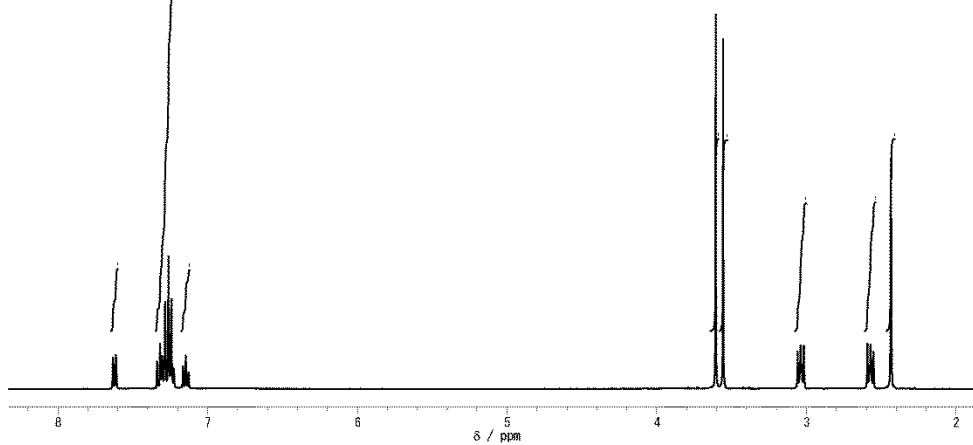
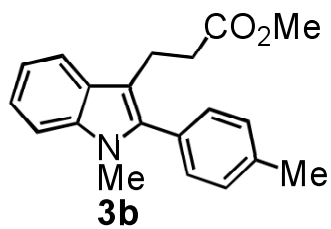


# <sup>1</sup>H- and <sup>13</sup>C-NMR spectra for products.

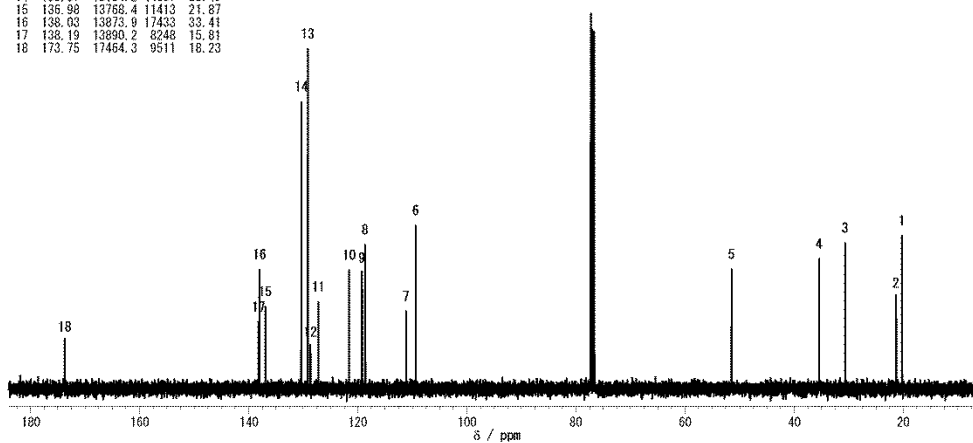


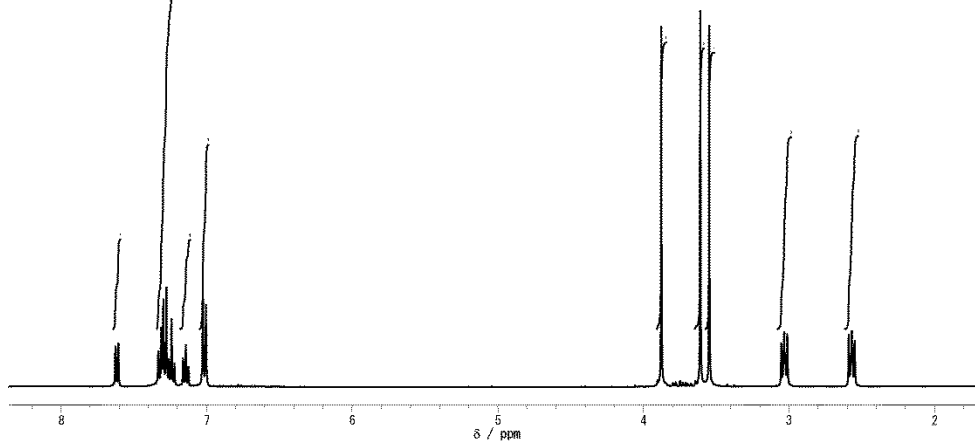
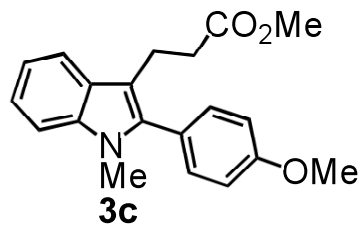
| No. | ppm    | Hz      | Amp.  | Height |
|-----|--------|---------|-------|--------|
| 1   | 20.21  | 2031.0  | 25060 | 42.77  |
| 2   | 30.73  | 3089.2  | 21482 | 35.26  |
| 3   | 35.42  | 3559.8  | 24308 | 39.90  |
| 4   | 51.49  | 5175.8  | 12988 | 21.32  |
| 5   | 109.41 | 10997.5 | 17251 | 28.32  |
| 6   | 111.35 | 11192.1 | 8351  | 13.71  |
| 7   | 118.74 | 11934.9 | 21103 | 34.64  |
| 8   | 119.31 | 11992.4 | 22115 | 36.30  |
| 9   | 121.75 | 12237.8 | 25568 | 41.95  |
| 10  | 127.17 | 12782.2 | 11911 | 19.55  |
| 11  | 128.17 | 12882.8 | 14638 | 24.03  |
| 12  | 129.47 | 12913.5 | 27465 | 45.06  |
| 13  | 130.51 | 13118.6 | 44960 | 73.79  |
| 14  | 131.74 | 13242.2 | 12527 | 20.56  |
| 15  | 137.04 | 13774.2 | 6900  | 11.32  |
| 16  | 138.08 | 13879.6 | 8077  | 13.26  |
| 17  | 173.69 | 17458.5 | 12835 | 21.07  |



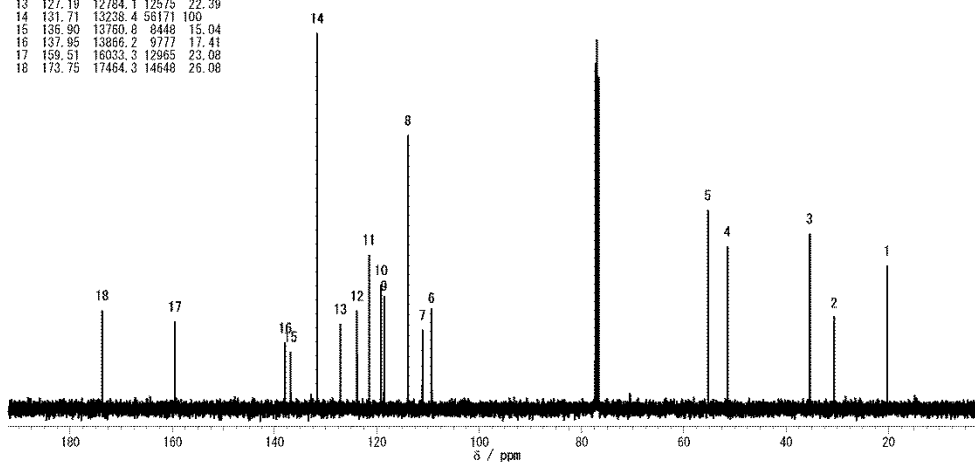


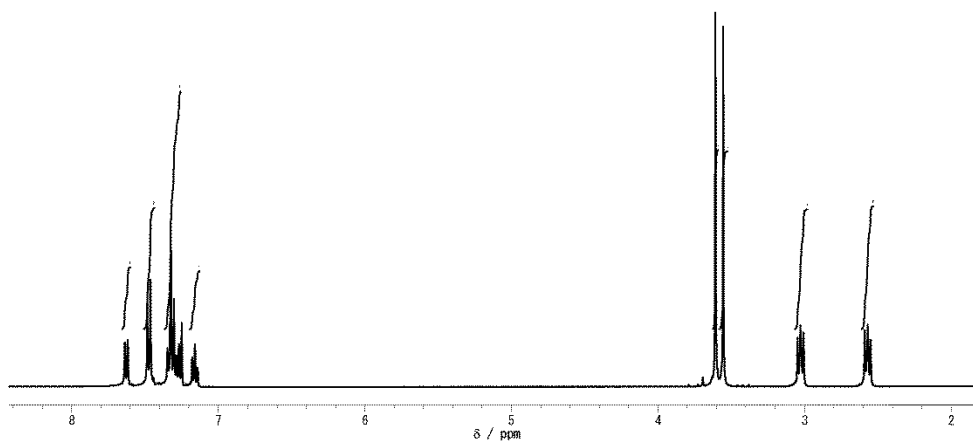
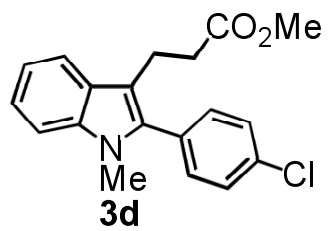
| No. | ppm    | Hz      | Amplitude | Height |
|-----|--------|---------|-----------|--------|
| 1   | 20.25  | 2035.8  | 20832     | 39.92  |
| 2   | 21.34  | 2145.1  | 13726     | 26.31  |
| 3   | 30.89  | 3084.4  | 20868     | 39.61  |
| 4   | 35.45  | 3563.6  | 18535     | 35.52  |
| 5   | 51.48  | 5174.8  | 16624     | 31.86  |
| 6   | 109.37 | 10993.7 | 23502     | 45.04  |
| 7   | 111.17 | 11173.9 | 9609      | 18.41  |
| 8   | 118.86 | 11927.2 | 18990     | 34.67  |
| 9   | 119.24 | 11985.7 | 14023     | 26.88  |
| 10  | 121.61 | 12223.4 | 18411     | 35.28  |
| 11  | 127.20 | 12786.0 | 12624     | 24.19  |
| 12  | 129.71 | 12937.4 | 7345      | 14.08  |
| 13  | 129.21 | 12987.3 | 50800     | 97.36  |
| 14  | 130.37 | 13104.2 | 44607     | 85.49  |
| 15  | 135.98 | 13768.4 | 11413     | 21.87  |
| 16  | 138.03 | 13873.9 | 17433     | 33.41  |
| 17  | 138.19 | 13890.2 | 8248      | 15.81  |
| 18  | 173.75 | 17464.3 | 9511      | 18.23  |



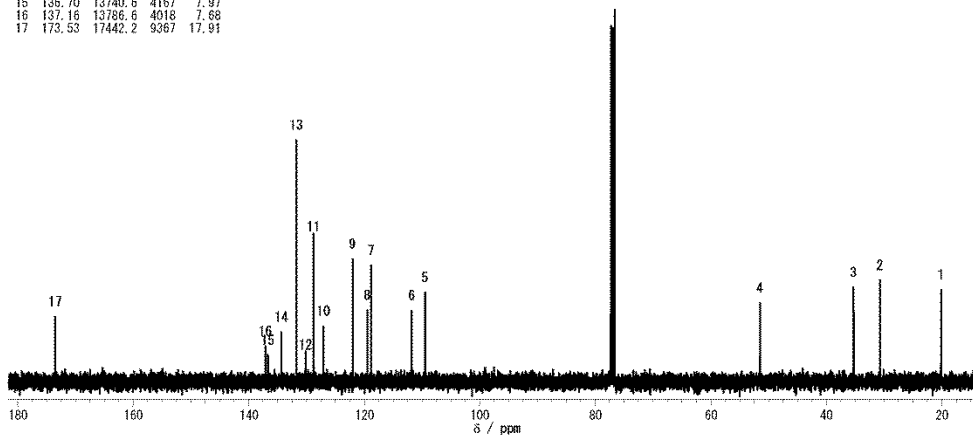


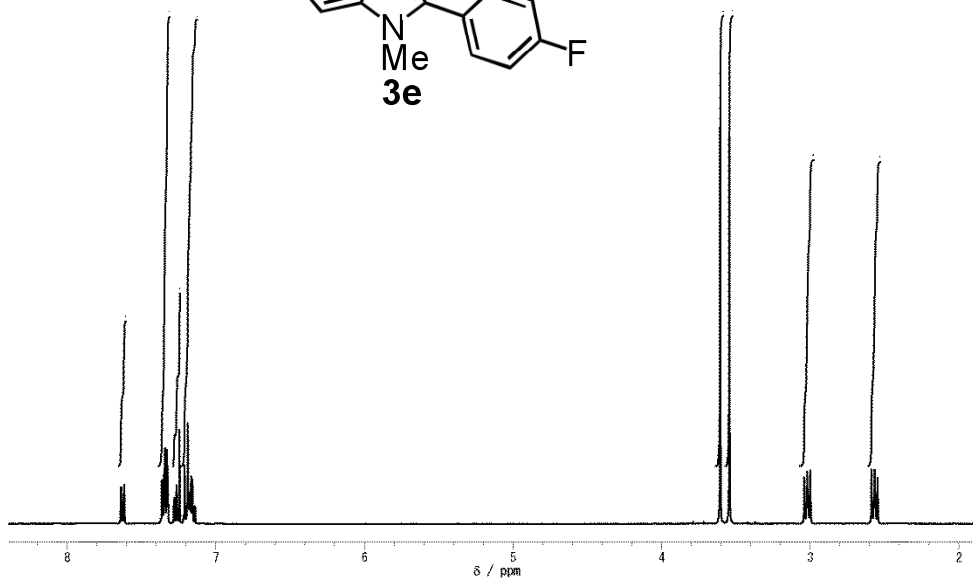
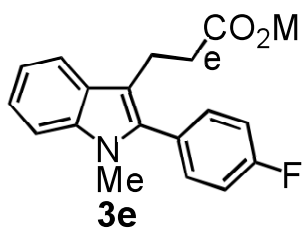
| No. | ppm    | Hz      | Amp.  | Height |
|-----|--------|---------|-------|--------|
| 1   | 20.27  | 2037.8  | 21315 | 37.95  |
| 2   | 30.63  | 3078.7  | 13567 | 24.15  |
| 3   | 35.43  | 3560.8  | 28125 | 46.51  |
| 4   | 51.48  | 5174.8  | 24193 | 43.07  |
| 5   | 55.31  | 5559.2  | 29683 | 52.84  |
| 6   | 109.34 | 10990.8 | 14275 | 25.41  |
| 7   | 111.12 | 11169.1 | 11691 | 20.81  |
| 8   | 113.95 | 11455.7 | 40863 | 72.75  |
| 9   | 118.61 | 11922.4 | 16980 | 28.63  |
| 10  | 119.22 | 11983.8 | 18399 | 32.76  |
| 11  | 121.56 | 12218.6 | 22975 | 40.90  |
| 12  | 123.92 | 12456.3 | 14571 | 25.94  |
| 13  | 127.19 | 12784.1 | 12575 | 22.39  |
| 14  | 131.71 | 13238.4 | 56171 | 100    |
| 15  | 135.90 | 13760.8 | 8448  | 15.04  |
| 16  | 137.95 | 13866.2 | 9777  | 17.41  |
| 17  | 159.51 | 16033.3 | 12965 | 23.08  |
| 18  | 173.75 | 17464.3 | 14648 | 26.08  |



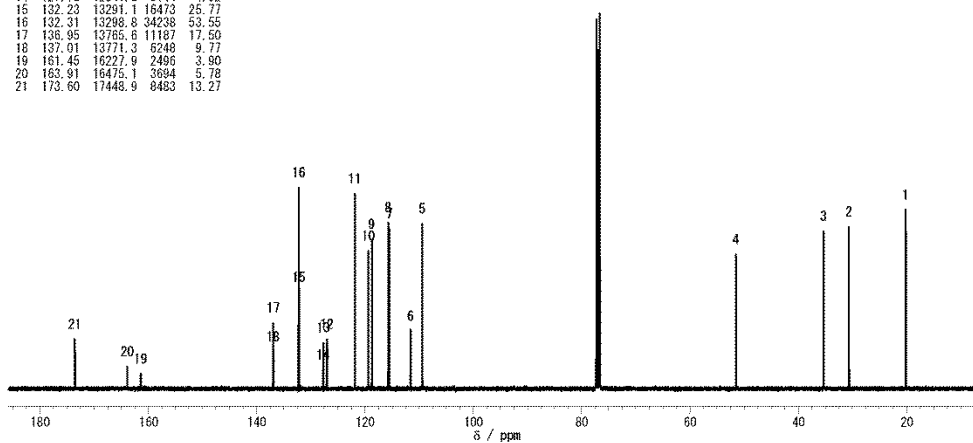


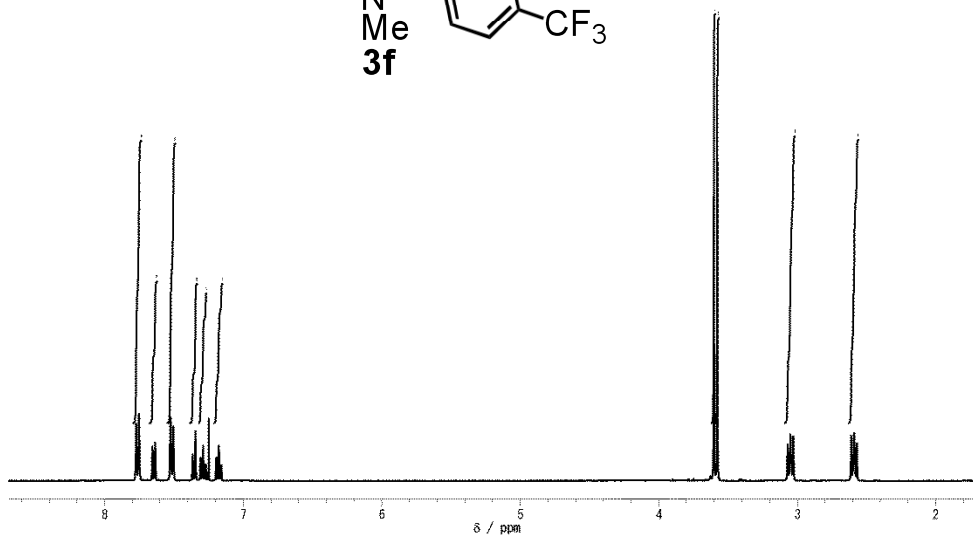
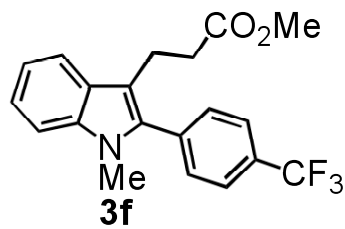
| No. | ppm    | Hz      | Amplitude | Height |
|-----|--------|---------|-----------|--------|
| 1   | 20.17  | 2027.2  | 13421     | 25.66  |
| 2   | 30.74  | 3090.2  | 13721     | 26.23  |
| 3   | 35.31  | 3549.3  | 12537     | 23.97  |
| 4   | 51.52  | 5178.7  | 12089     | 23.11  |
| 5   | 109.47 | 11003.3 | 13650     | 26.10  |
| 6   | 111.80 | 11237.1 | 10298     | 19.69  |
| 7   | 118.83 | 11944.5 | 16478     | 31.50  |
| 8   | 119.48 | 12008.6 | 8235      | 15.75  |
| 9   | 122.05 | 12267.5 | 16905     | 32.32  |
| 10  | 127.08 | 12773.5 | 7365      | 14.08  |
| 11  | 128.81 | 12947.0 | 22807     | 43.60  |
| 12  | 130.20 | 13087.0 | 3841      | 7.34   |
| 13  | 131.78 | 13246.1 | 33845     | 64.71  |
| 14  | 134.25 | 13503.9 | 6988      | 13.36  |
| 15  | 135.70 | 13740.6 | 4167      | 7.97   |
| 16  | 137.16 | 13786.6 | 4018      | 7.68   |
| 17  | 173.53 | 17442.2 | 9367      | 17.91  |



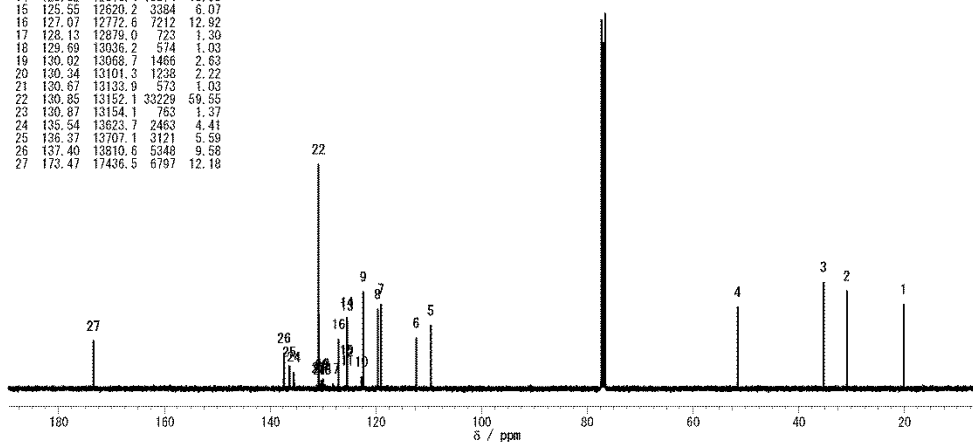


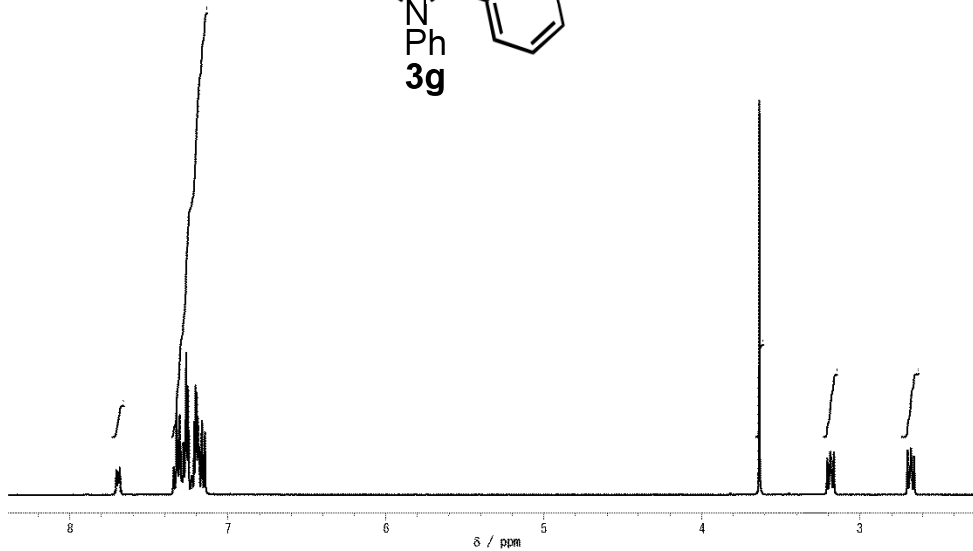
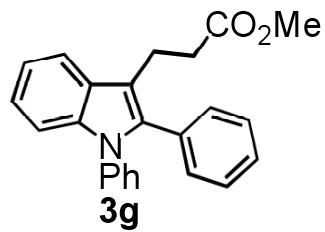
| No. | ppm    | Hz      | Amplitude | Height |
|-----|--------|---------|-----------|--------|
| 1   | 20.19  | 2029.1  | 30439     | 47.61  |
| 2   | 30.67  | 3082.5  | 27553     | 43.10  |
| 3   | 35.32  | 3550.2  | 26860     | 42.01  |
| 4   | 51.51  | 5177.7  | 22970     | 35.77  |
| 5   | 109.44 | 11000.4 | 28130     | 44.00  |
| 6   | 111.60 | 11218.0 | 9751      | 15.25  |
| 7   | 115.51 | 11610.9 | 27208     | 42.56  |
| 8   | 115.73 | 11633.0 | 28325     | 44.30  |
| 9   | 118.78 | 11938.7 | 25489     | 39.87  |
| 10  | 119.41 | 12002.9 | 23430     | 36.65  |
| 11  | 121.91 | 12254.1 | 33198     | 51.92  |
| 12  | 127.06 | 12771.6 | 8374      | 13.10  |
| 13  | 127.79 | 12838.7 | 7925      | 12.24  |
| 14  | 127.76 | 12841.6 | 3144      | 4.92   |
| 15  | 132.23 | 13291.1 | 16473     | 25.77  |
| 16  | 132.31 | 13298.8 | 34238     | 53.55  |
| 17  | 136.95 | 13785.6 | 11187     | 17.50  |
| 18  | 137.91 | 13771.3 | 6749      | 9.77   |
| 19  | 161.45 | 16227.9 | 2486      | 3.90   |
| 20  | 163.91 | 16475.1 | 3694      | 5.78   |
| 21  | 173.60 | 17448.9 | 8483      | 13.27  |



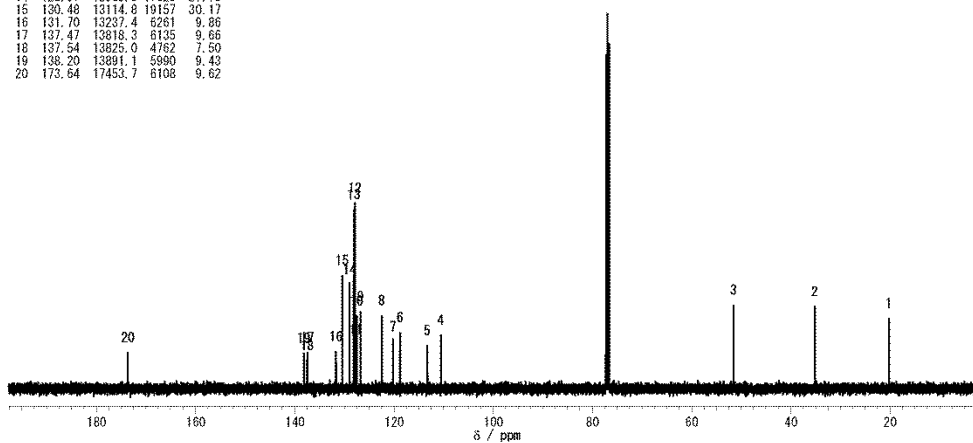


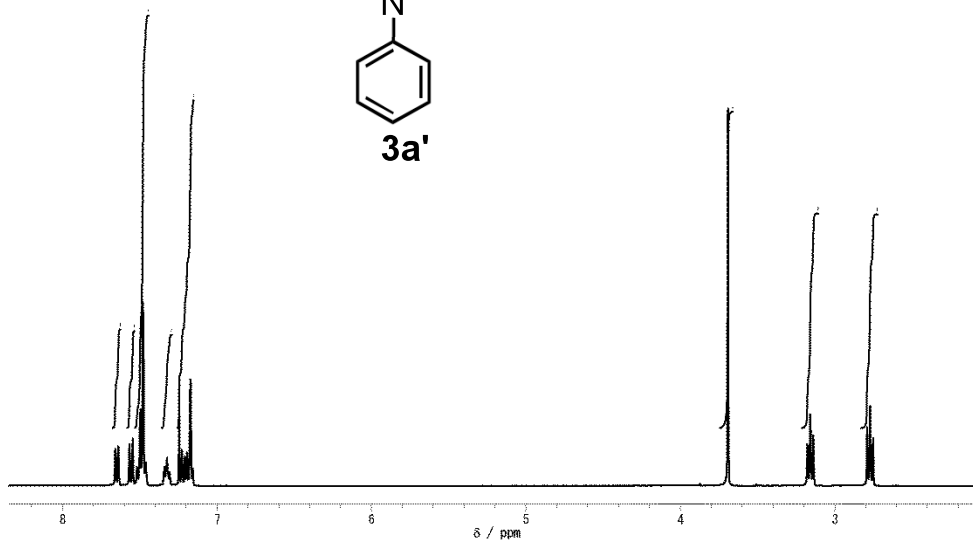
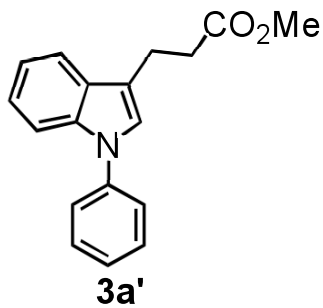
| No. | ppm    | Hz      | Amplitude | Height |
|-----|--------|---------|-----------|--------|
| 1   | 20.16  | 2026.3  | 12589     | 22.56  |
| 2   | 30.91  | 3106.4  | 14461     | 25.91  |
| 3   | 35.29  | 3547.3  | 15800     | 28.31  |
| 4   | 51.56  | 5182.5  | 12062     | 21.62  |
| 5   | 109.59 | 11015.7 | 9161      | 16.42  |
| 6   | 112.37 | 11294.6 | 7513      | 13.46  |
| 7   | 119.01 | 11962.7 | 12713     | 22.78  |
| 8   | 119.65 | 12026.9 | 11919     | 21.36  |
| 9   | 122.39 | 12302.0 | 14471     | 25.93  |
| 10  | 122.71 | 12334.6 | 1709      | 3.06   |
| 11  | 125.42 | 12606.8 | 1955      | 3.50   |
| 12  | 125.44 | 12608.7 | 3329      | 5.97   |
| 13  | 125.48 | 12612.5 | 10160     | 18.21  |
| 14  | 125.52 | 12616.4 | 10574     | 18.95  |
| 15  | 125.55 | 12620.2 | 3384      | 6.07   |
| 16  | 127.07 | 12772.6 | 7212      | 12.92  |
| 17  | 128.13 | 12879.0 | 723       | 1.36   |
| 18  | 129.69 | 13036.2 | 574       | 1.03   |
| 19  | 130.02 | 13068.7 | 1466      | 2.63   |
| 20  | 130.34 | 13101.3 | 1238      | 2.22   |
| 21  | 130.67 | 13133.9 | 573       | 1.03   |
| 22  | 130.85 | 13152.1 | 33229     | 59.55  |
| 23  | 130.87 | 13154.1 | 763       | 1.37   |
| 24  | 135.54 | 13623.7 | 2463      | 4.41   |
| 25  | 136.37 | 13707.1 | 3121      | 5.59   |
| 26  | 137.40 | 13810.6 | 5348      | 9.58   |
| 27  | 173.47 | 17436.5 | 6797      | 12.18  |



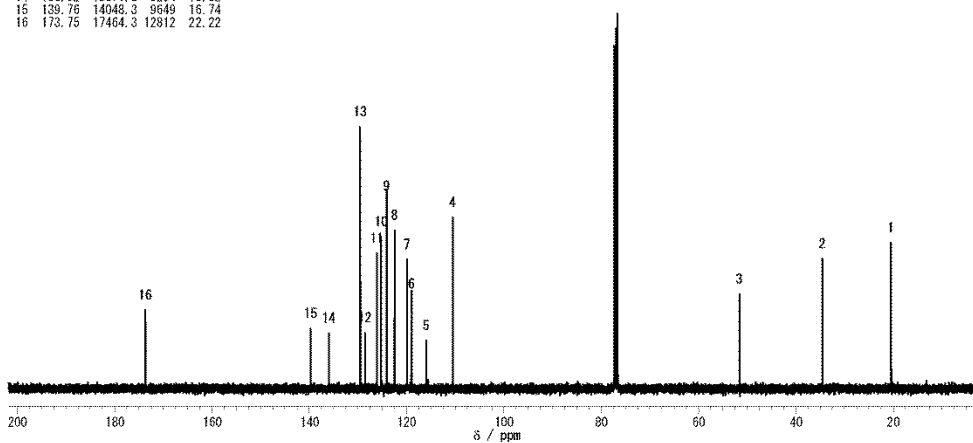


| No. | ppm    | Hz      | Amplitude | Height |
|-----|--------|---------|-----------|--------|
| 1   | 20.25  | 2035.8  | 11871     | 18.69  |
| 2   | 35.20  | 3537.8  | 13873     | 21.85  |
| 3   | 51.56  | 5182.5  | 14121     | 22.24  |
| 4   | 110.58 | 11115.4 | 9060      | 14.27  |
| 5   | 113.27 | 11385.7 | 7255      | 11.43  |
| 6   | 118.80 | 11941.6 | 9494      | 14.95  |
| 7   | 120.22 | 12084.4 | 7949      | 12.52  |
| 8   | 122.47 | 12306.6 | 12345     | 19.44  |
| 9   | 126.75 | 12740.0 | 13936     | 20.53  |
| 10  | 127.54 | 12819.5 | 12296     | 19.36  |
| 11  | 127.71 | 12836.8 | 7428      | 11.70  |
| 12  | 127.87 | 12852.1 | 31430     | 49.50  |
| 13  | 128.11 | 12877.1 | 30297     | 47.71  |
| 14  | 128.97 | 12962.3 | 17629     | 27.76  |
| 15  | 130.48 | 13114.8 | 19157     | 30.17  |
| 16  | 131.70 | 13237.4 | 6261      | 9.86   |
| 17  | 137.47 | 13818.3 | 6135      | 9.66   |
| 18  | 137.54 | 13825.0 | 4762      | 7.50   |
| 19  | 138.20 | 13891.1 | 5980      | 9.43   |
| 20  | 173.64 | 17453.7 | 6108      | 9.62   |

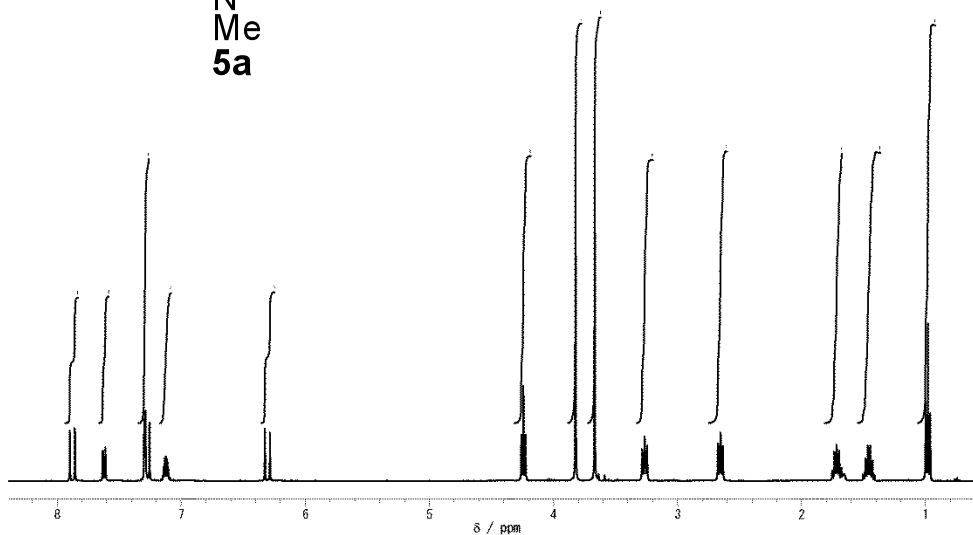
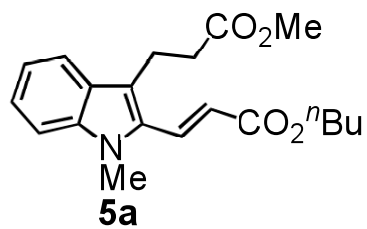




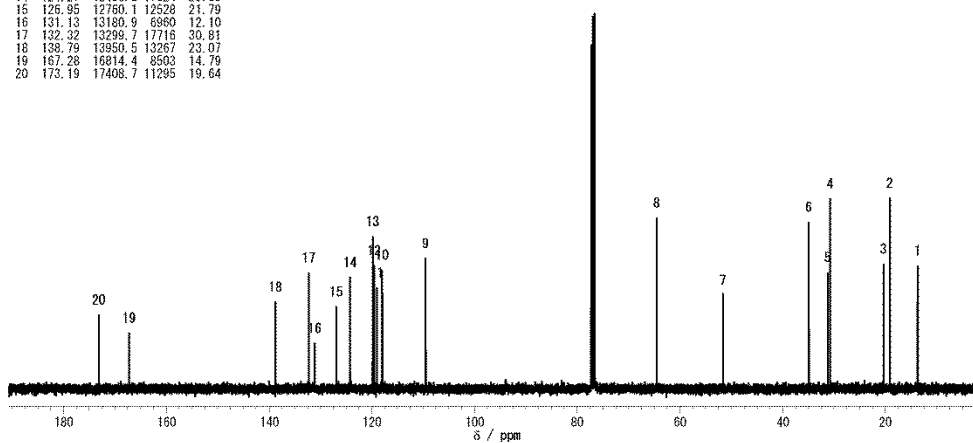
| No. | ppm    | Hz      | Amplitude | Height |
|-----|--------|---------|-----------|--------|
| 1   | 20.49  | 2059.8  | 20655     | 35.83  |
| 2   | 34.61  | 3479.3  | 18372     | 31.87  |
| 3   | 51.65  | 5192.1  | 13715     | 23.79  |
| 4   | 110.57 | 11112.5 | 26115     | 45.30  |
| 5   | 115.98 | 11657.9 | 6580      | 11.41  |
| 6   | 119.03 | 11964.6 | 15189     | 26.35  |
| 7   | 119.97 | 12058.5 | 21091     | 36.58  |
| 8   | 122.52 | 12315.4 | 23372     | 40.54  |
| 9   | 124.11 | 12474.5 | 32530     | 56.43  |
| 10  | 125.25 | 12589.5 | 23056     | 39.99  |
| 11  | 126.16 | 12680.6 | 22102     | 38.34  |
| 12  | 128.60 | 12925.9 | 7840      | 13.60  |
| 13  | 129.58 | 13024.7 | 43940     | 76.22  |
| 14  | 136.02 | 13671.6 | 9234      | 16.02  |
| 15  | 139.76 | 14048.3 | 9649      | 16.74  |
| 16  | 173.75 | 17464.3 | 12812     | 22.22  |

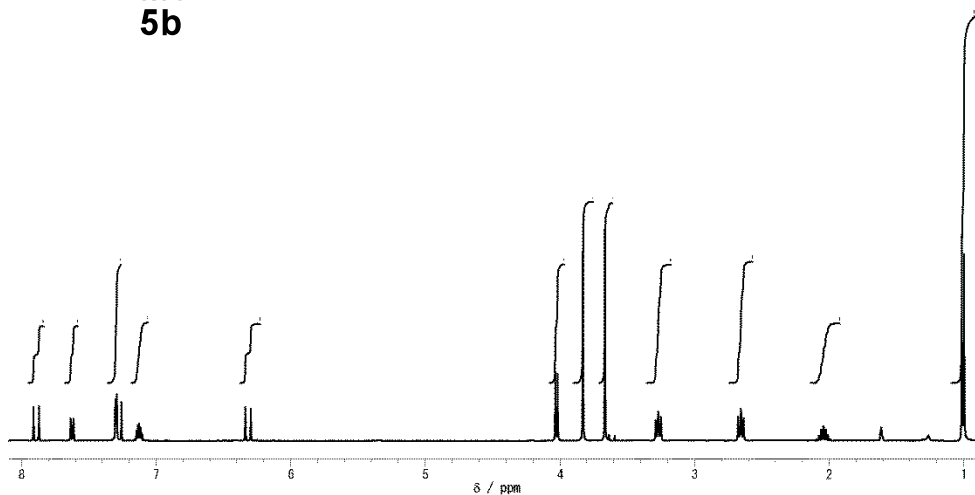
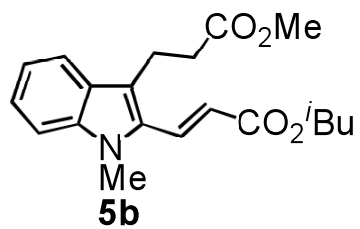




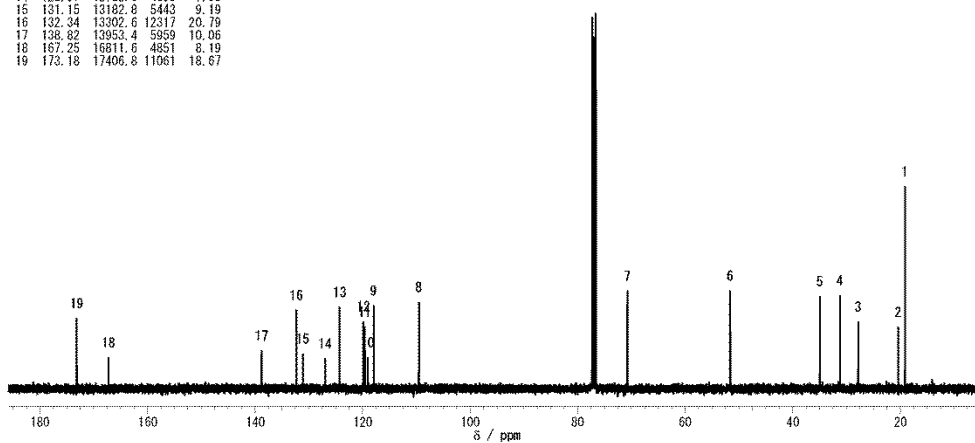


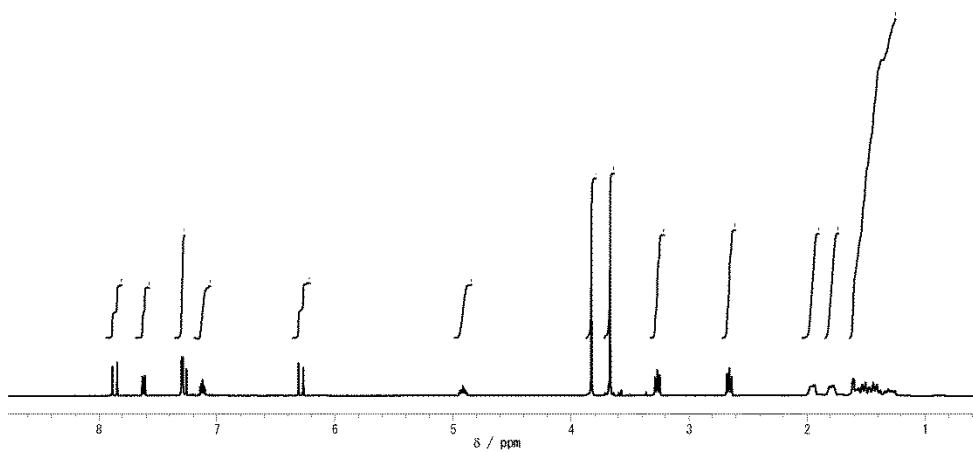
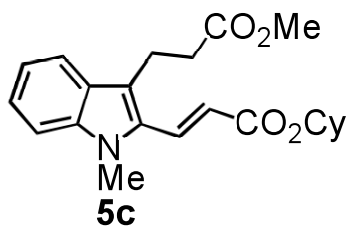
| No. | ppm    | Hz      | Amplitude | Height |
|-----|--------|---------|-----------|--------|
| 1   | 13.75  | 1382.2  | 18808     | 32.71  |
| 2   | 19.19  | 1928.5  | 29170     | 50.73  |
| 3   | 20.38  | 2046.3  | 19093     | 33.20  |
| 4   | 30.77  | 3093.0  | 29106     | 50.62  |
| 5   | 31.24  | 3140.0  | 17788     | 30.93  |
| 6   | 34.96  | 3513.8  | 25492     | 44.33  |
| 7   | 51.65  | 5192.1  | 14289     | 24.85  |
| 8   | 64.57  | 6489.8  | 26159     | 45.49  |
| 9   | 109.55 | 11011.9 | 19916     | 34.63  |
| 10  | 118.00 | 11861.1 | 18185     | 31.62  |
| 11  | 119.02 | 11963.6 | 15461     | 26.89  |
| 12  | 119.80 | 12021.1 | 18842     | 32.77  |
| 13  | 119.86 | 12046.0 | 23306     | 40.53  |
| 14  | 124.27 | 12490.8 | 17024     | 29.60  |
| 15  | 126.95 | 12769.1 | 12528     | 21.79  |
| 16  | 131.13 | 13180.9 | 6960      | 12.10  |
| 17  | 132.32 | 13299.7 | 17716     | 30.81  |
| 18  | 138.79 | 13956.5 | 13267     | 23.01  |
| 19  | 167.28 | 16814.4 | 8503      | 14.79  |
| 20  | 173.19 | 17408.7 | 11295     | 19.64  |



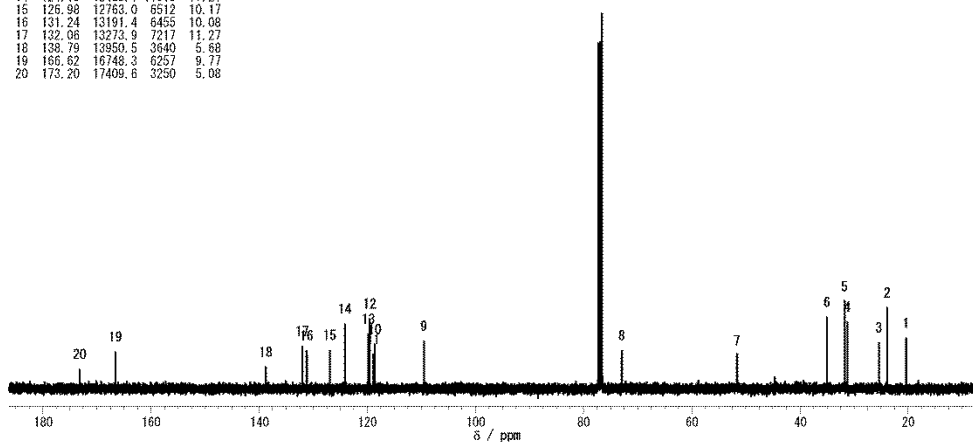


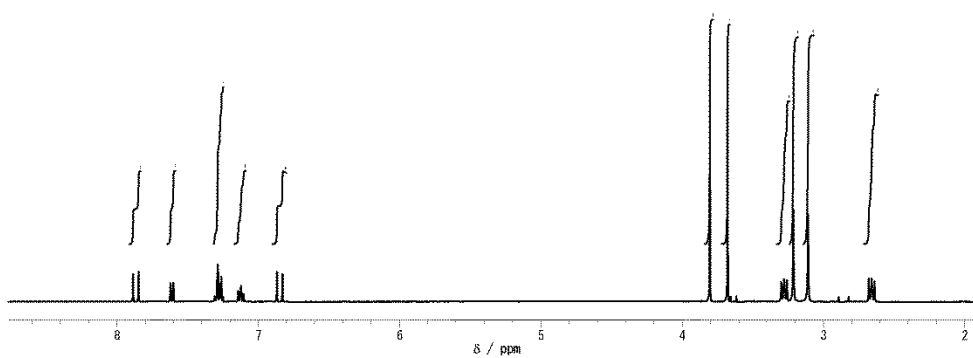
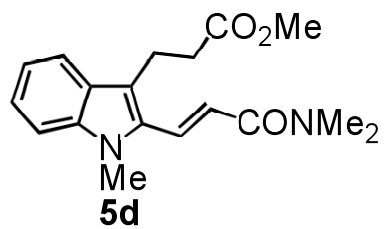
| No. | ppm    | Hz      | Amp.  | Height |
|-----|--------|---------|-------|--------|
| 1   | 19.17  | 1926.6  | 31856 | 53.78  |
| 2   | 20.41  | 2061.2  | 9658  | 16.30  |
| 3   | 27.84  | 2798.8  | 10493 | 17.72  |
| 4   | 31.25  | 3141.0  | 14640 | 24.71  |
| 5   | 34.98  | 3515.7  | 14632 | 24.53  |
| 6   | 51.65  | 5192.1  | 15426 | 26.04  |
| 7   | 70.78  | 7114.8  | 15373 | 25.95  |
| 8   | 109.55 | 11011.9 | 13617 | 22.99  |
| 9   | 117.96 | 11857.2 | 13068 | 22.04  |
| 10  | 119.07 | 11968.4 | 4867  | 8.22   |
| 11  | 119.61 | 12023.1 | 9644  | 16.28  |
| 12  | 119.87 | 12046.9 | 10560 | 17.83  |
| 13  | 124.28 | 12491.8 | 12825 | 21.65  |
| 14  | 126.97 | 12782.0 | 4699  | 7.93   |
| 15  | 131.15 | 13182.8 | 5443  | 9.19   |
| 16  | 132.34 | 13302.6 | 12317 | 20.79  |
| 17  | 138.82 | 13953.4 | 5959  | 10.06  |
| 18  | 167.25 | 16811.6 | 4851  | 8.19   |
| 19  | 173.18 | 17406.8 | 11061 | 18.67  |





| No. | ppm    | Hz      | Amp.  | Height |
|-----|--------|---------|-------|--------|
| 1   | 20.39  | 2049.3  | 8579  | 13.40  |
| 2   | 23.86  | 2398.1  | 13784 | 21.52  |
| 3   | 25.40  | 2553.4  | 7823  | 12.22  |
| 4   | 31.26  | 3141.9  | 11343 | 17.71  |
| 5   | 31.77  | 3193.7  | 14832 | 23.18  |
| 6   | 35.02  | 3519.5  | 12150 | 18.97  |
| 7   | 51.65  | 5192.1  | 5628  | 8.78   |
| 8   | 72.97  | 7334.2  | 6488  | 10.13  |
| 9   | 109.54 | 11010.0 | 8076  | 12.61  |
| 10  | 118.64 | 11925.3 | 7540  | 11.77  |
| 11  | 118.89 | 11950.2 | 5822  | 9.09   |
| 12  | 119.59 | 12020.2 | 11862 | 18.55  |
| 13  | 119.83 | 12045.1 | 9293  | 14.51  |
| 14  | 124.19 | 12482.1 | 11019 | 17.21  |
| 15  | 126.98 | 12763.0 | 6512  | 10.17  |
| 16  | 131.24 | 13191.4 | 6455  | 10.06  |
| 17  | 132.06 | 13273.9 | 7217  | 11.27  |
| 18  | 138.79 | 13950.5 | 3640  | 5.68   |
| 19  | 166.62 | 16748.3 | 6257  | 9.77   |
| 20  | 173.20 | 17409.6 | 3250  | 5.08   |





| No. | ppm    | Hz      | Amplitude | Height |
|-----|--------|---------|-----------|--------|
| 1   | 20.95  | 2105.8  | 12224     | 19.99  |
| 2   | 30.86  | 3081.5  | 13892     | 22.72  |
| 3   | 34.81  | 3499.4  | 8624      | 14.10  |
| 4   | 35.05  | 3624.0  | 5147      | 8.42   |
| 5   | 37.29  | 3748.6  | 5455      | 8.92   |
| 6   | 51.67  | 5194.0  | 13474     | 22.04  |
| 7   | 109.47 | 11003.3 | 14673     | 24.00  |
| 8   | 116.40 | 11700.1 | 5992      | 9.30   |
| 9   | 118.64 | 11925.3 | 11174     | 18.28  |
| 10  | 119.18 | 11979.0 | 13930     | 22.78  |
| 11  | 119.72 | 12033.6 | 11416     | 18.67  |
| 12  | 123.55 | 12418.9 | 11111     | 18.17  |
| 13  | 127.22 | 12787.9 | 8560      | 14.00  |
| 14  | 130.36 | 13103.3 | 11910     | 19.48  |
| 15  | 132.16 | 13284.4 | 3830      | 6.26   |
| 16  | 138.04 | 13874.8 | 6662      | 10.90  |
| 17  | 166.54 | 16739.7 | 7081      | 11.58  |
| 18  | 173.42 | 17431.7 | 9354      | 15.30  |

