

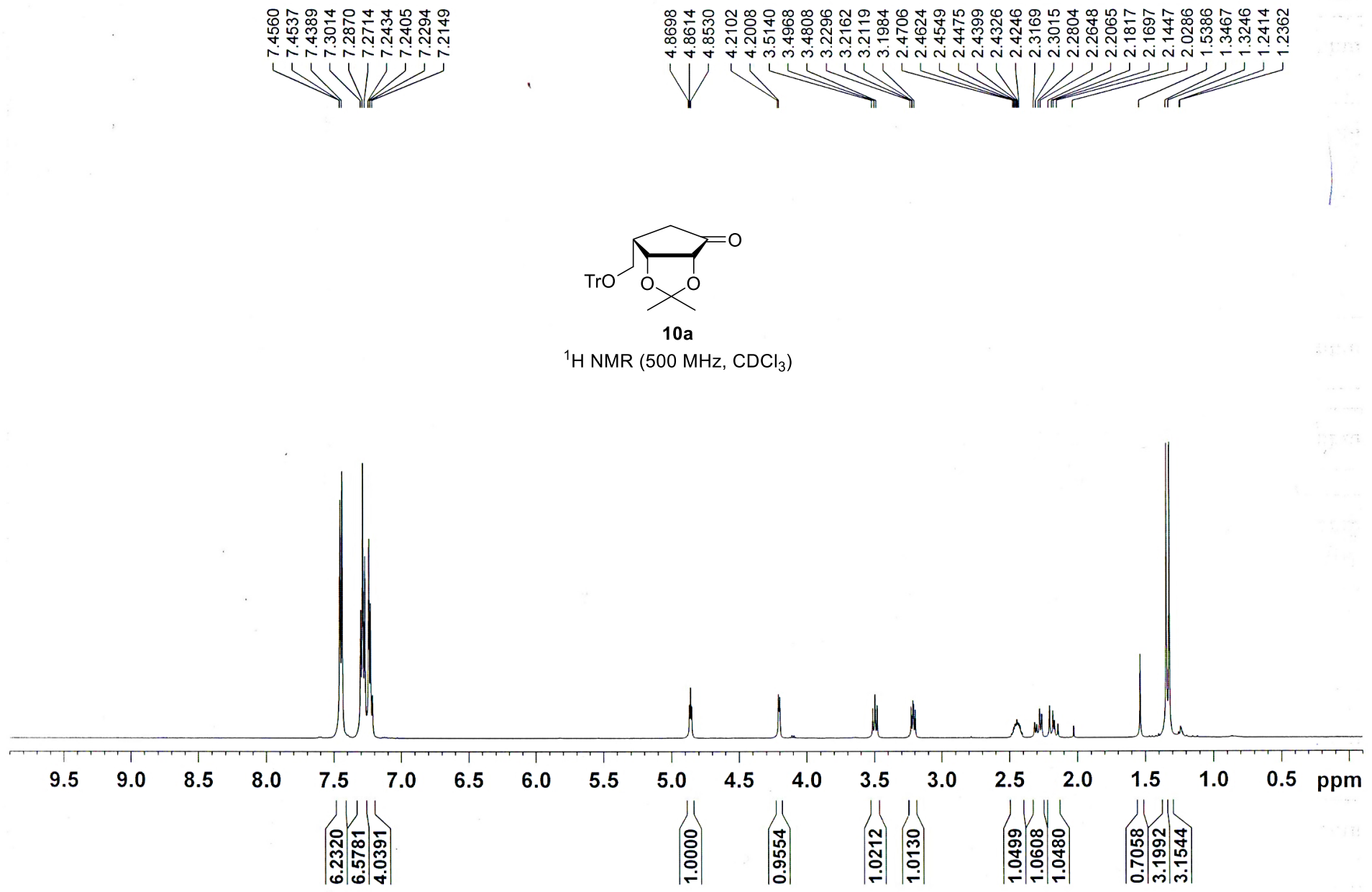
## Supporting Information

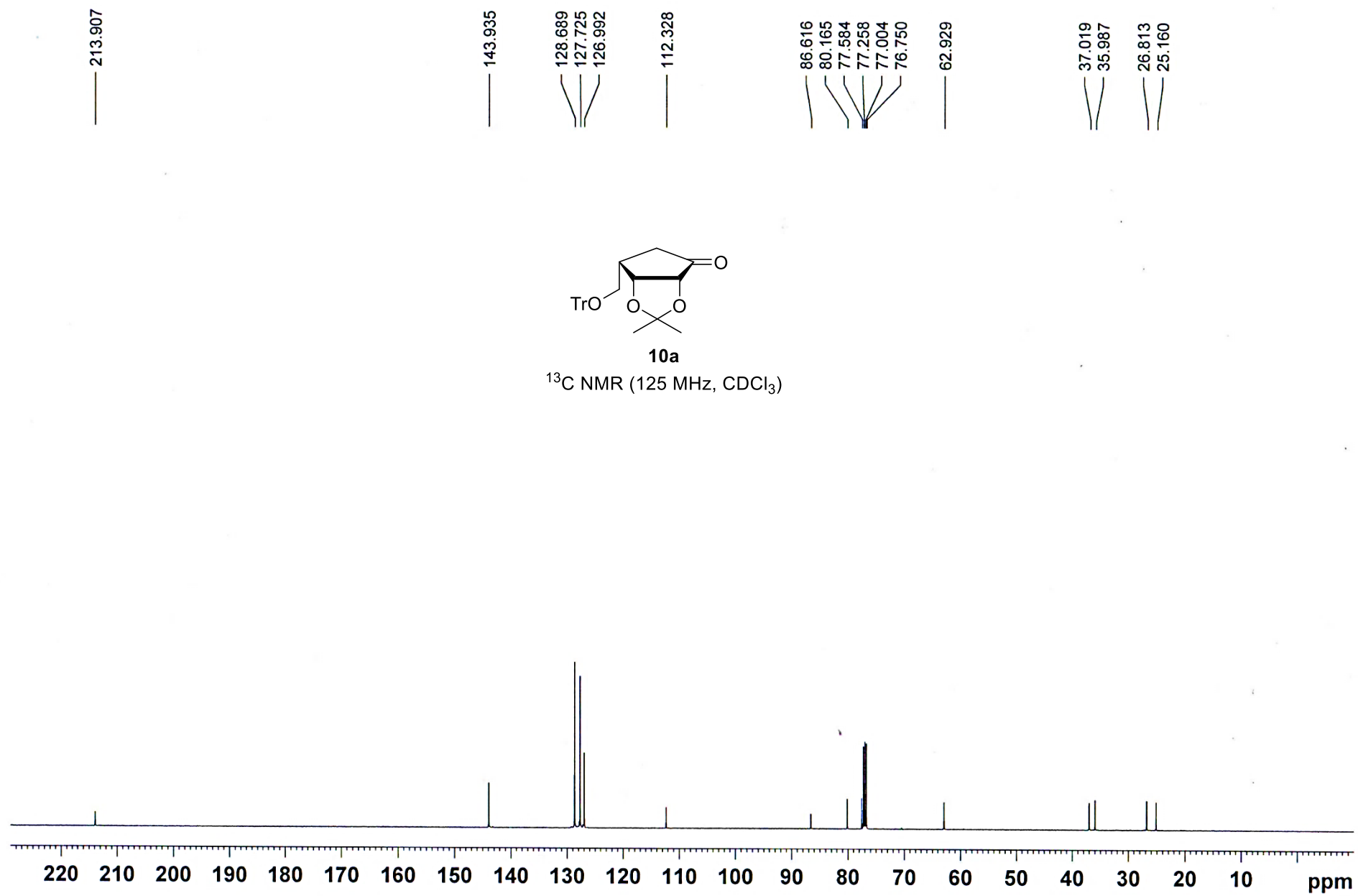
### **An Efficient Synthesis of Fluoro-neplanocin A Analogs Using Electrophilic Fluorination and Palladium-catalyzed Dehydrosilylation**

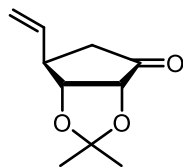
Dnyandeav B. Jarhad,<sup>a</sup> Min Hwan Jang,<sup>a</sup> Young Sup Shin,<sup>a</sup> Gyudong Kim,<sup>a,b</sup> Hong-Rae Kim,<sup>a</sup>  
Young Eum Hyun,<sup>a</sup> Ji-seong Yoon,<sup>a</sup> and Lak Shin Jeong\*,<sup>a</sup>

*<sup>a</sup>Research Institute of Pharmaceutical Sciences, College of Pharmacy, Seoul National University, Seoul 08826, Korea, Tel: +82-2-880-7850; <sup>b</sup>College of Pharmacy and Research Institute of Drug Development, Chonnam National University, Gwangju 500-757, Korea.*

E-mail: [lakjeong@snu.ac.kr](mailto:lakjeong@snu.ac.kr)

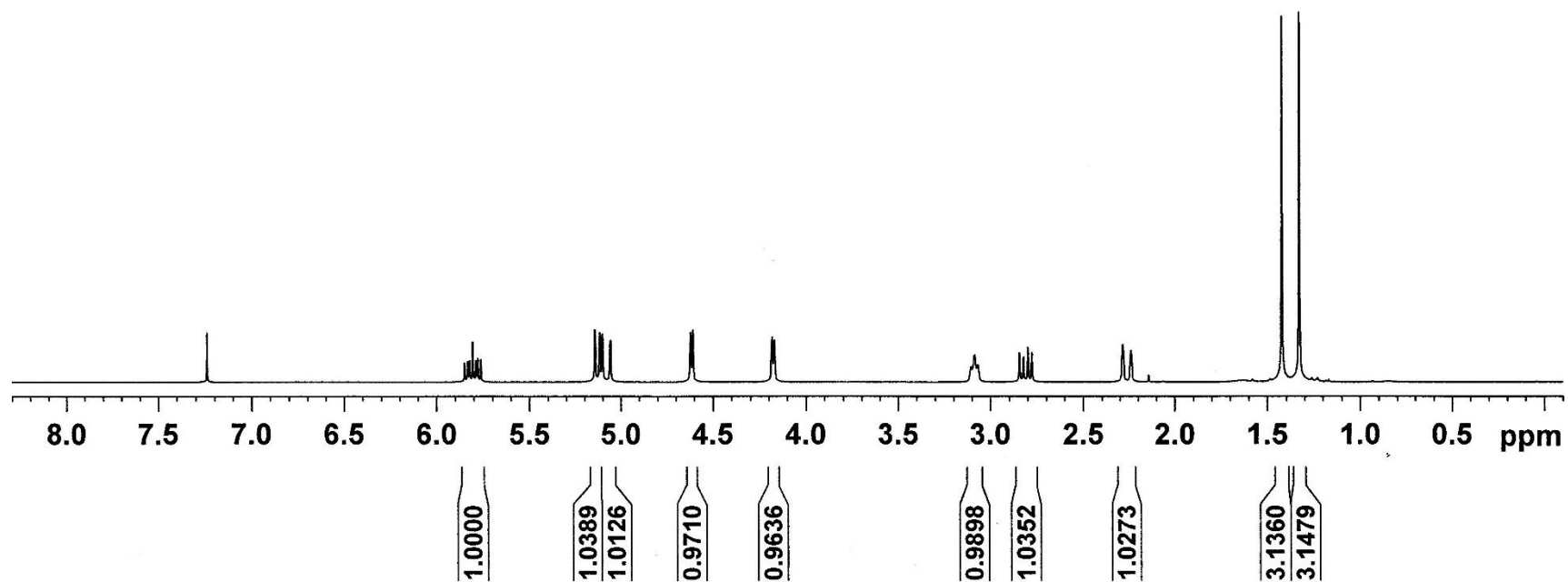




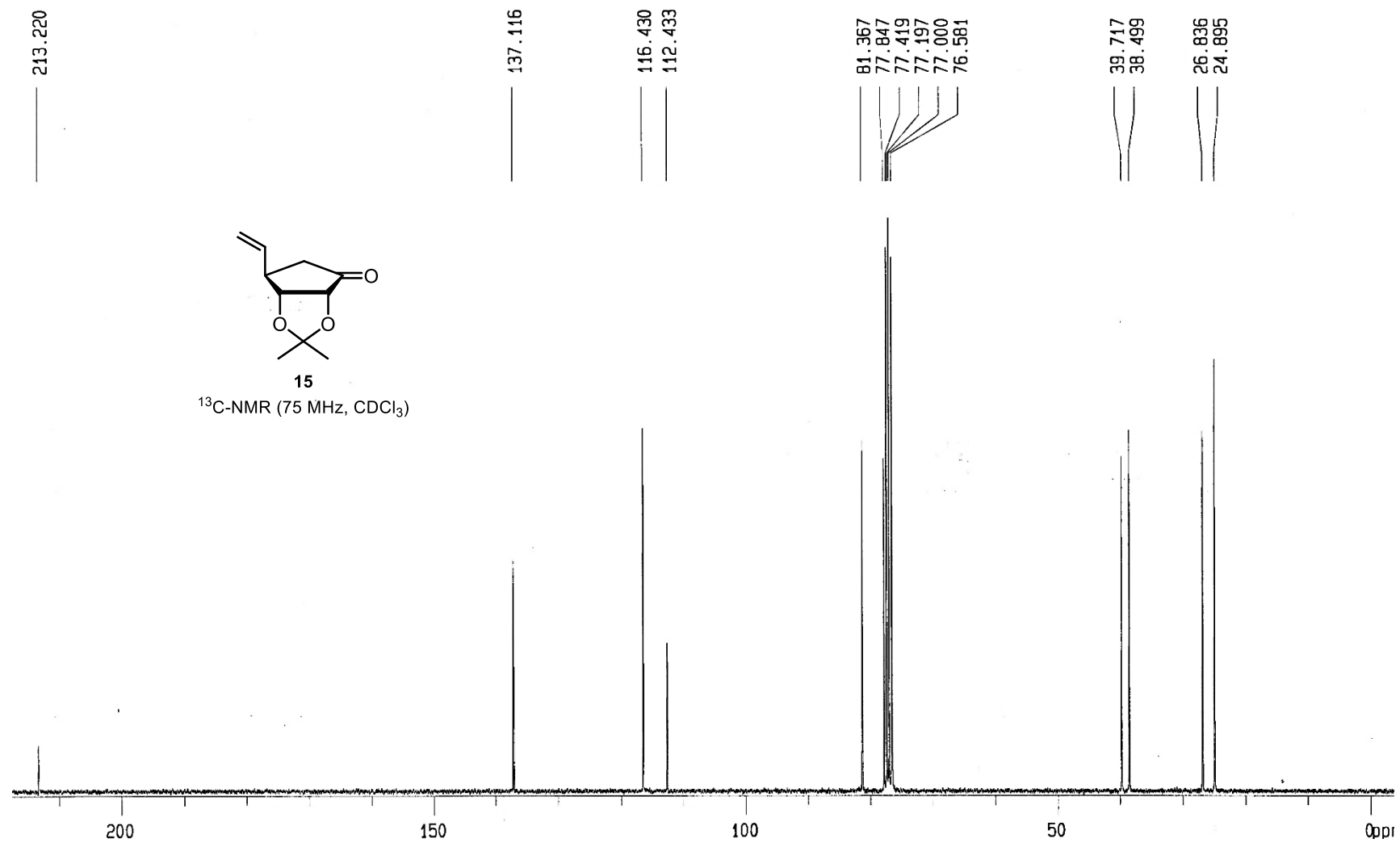


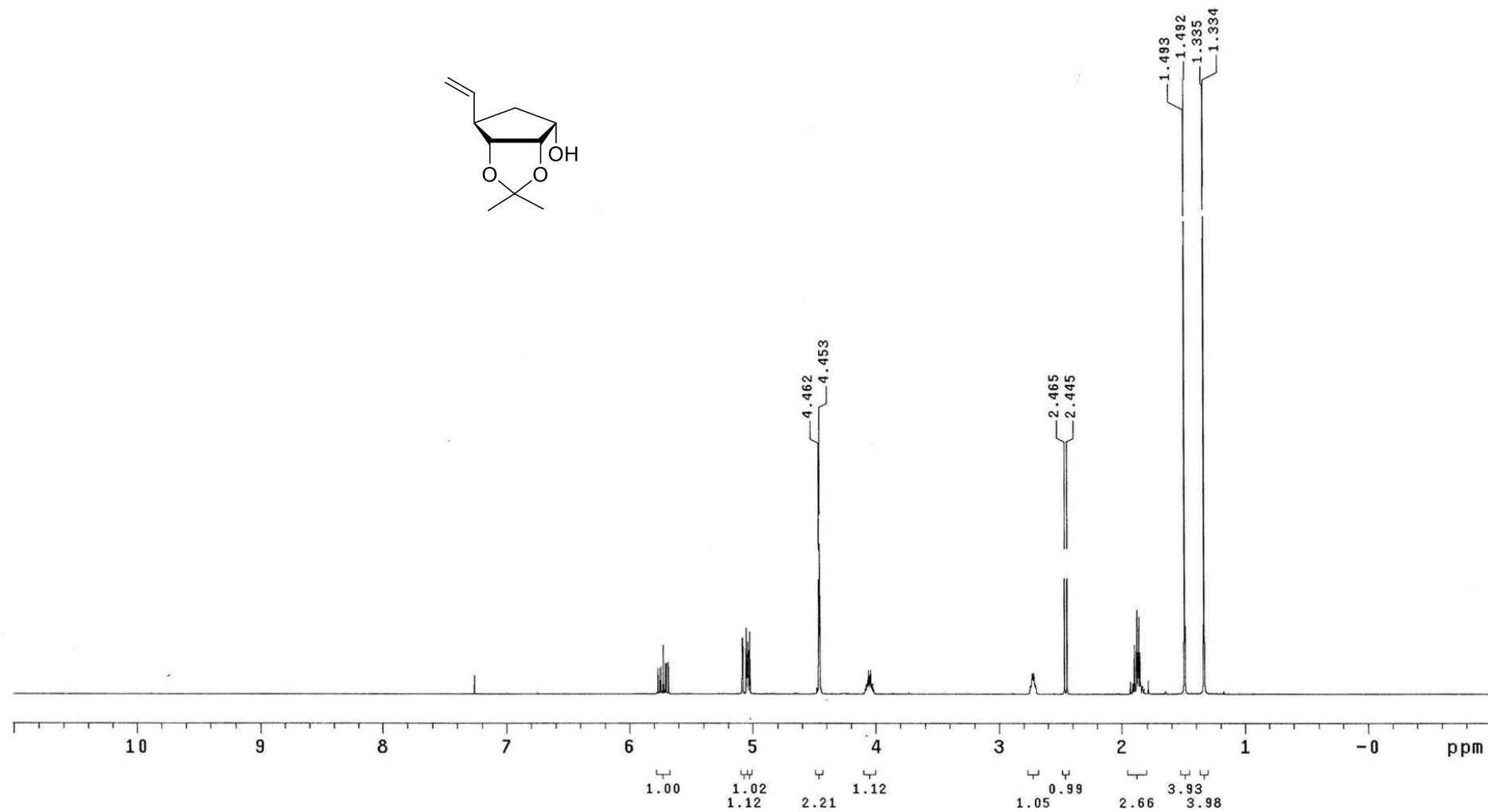
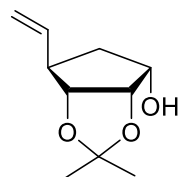
15

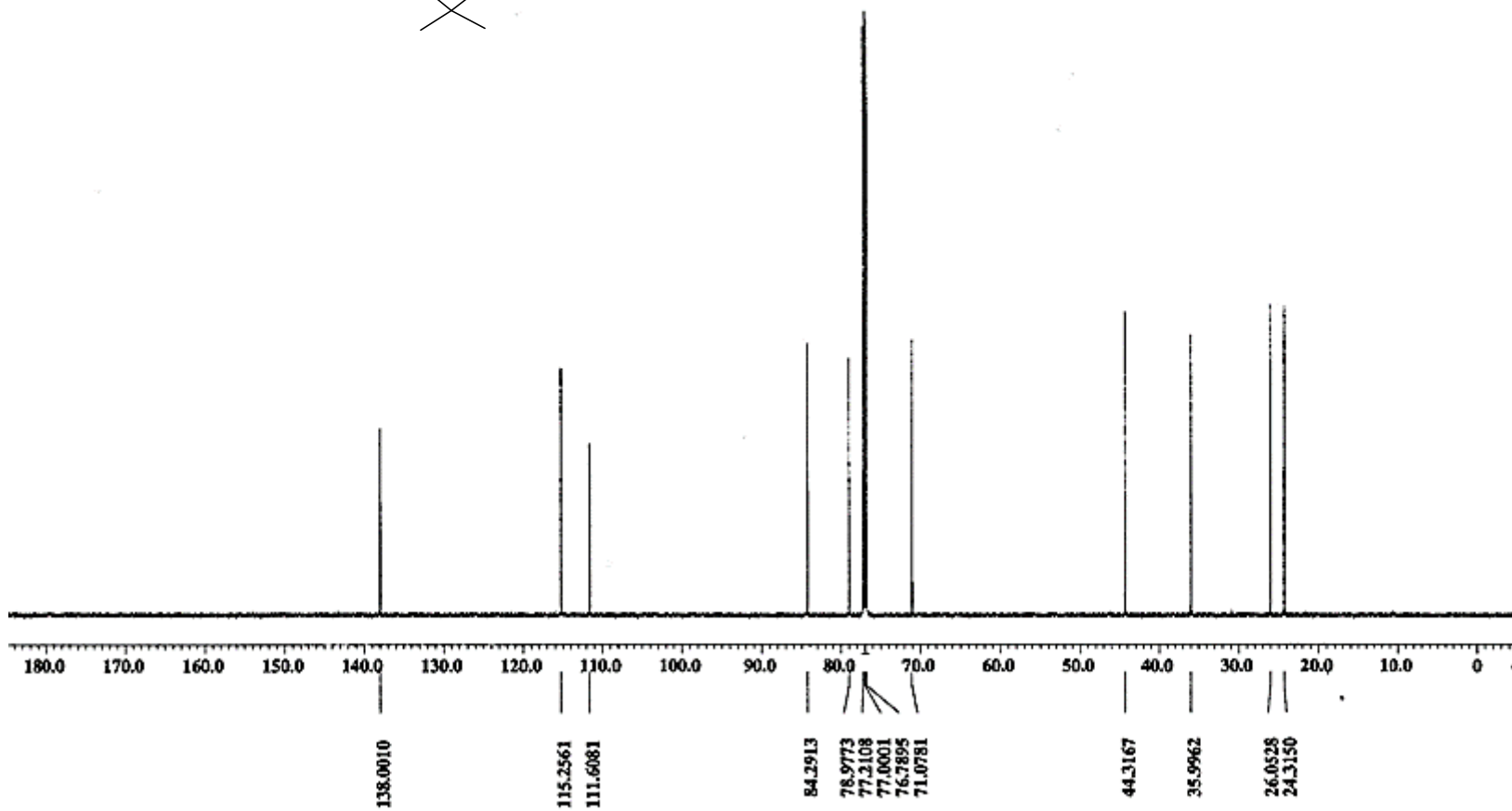
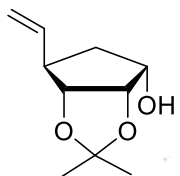
$^1\text{H-NMR}$  (400 MHz,  $\text{CDCl}_3$ )



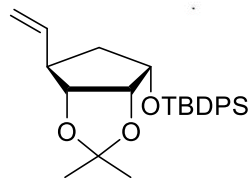






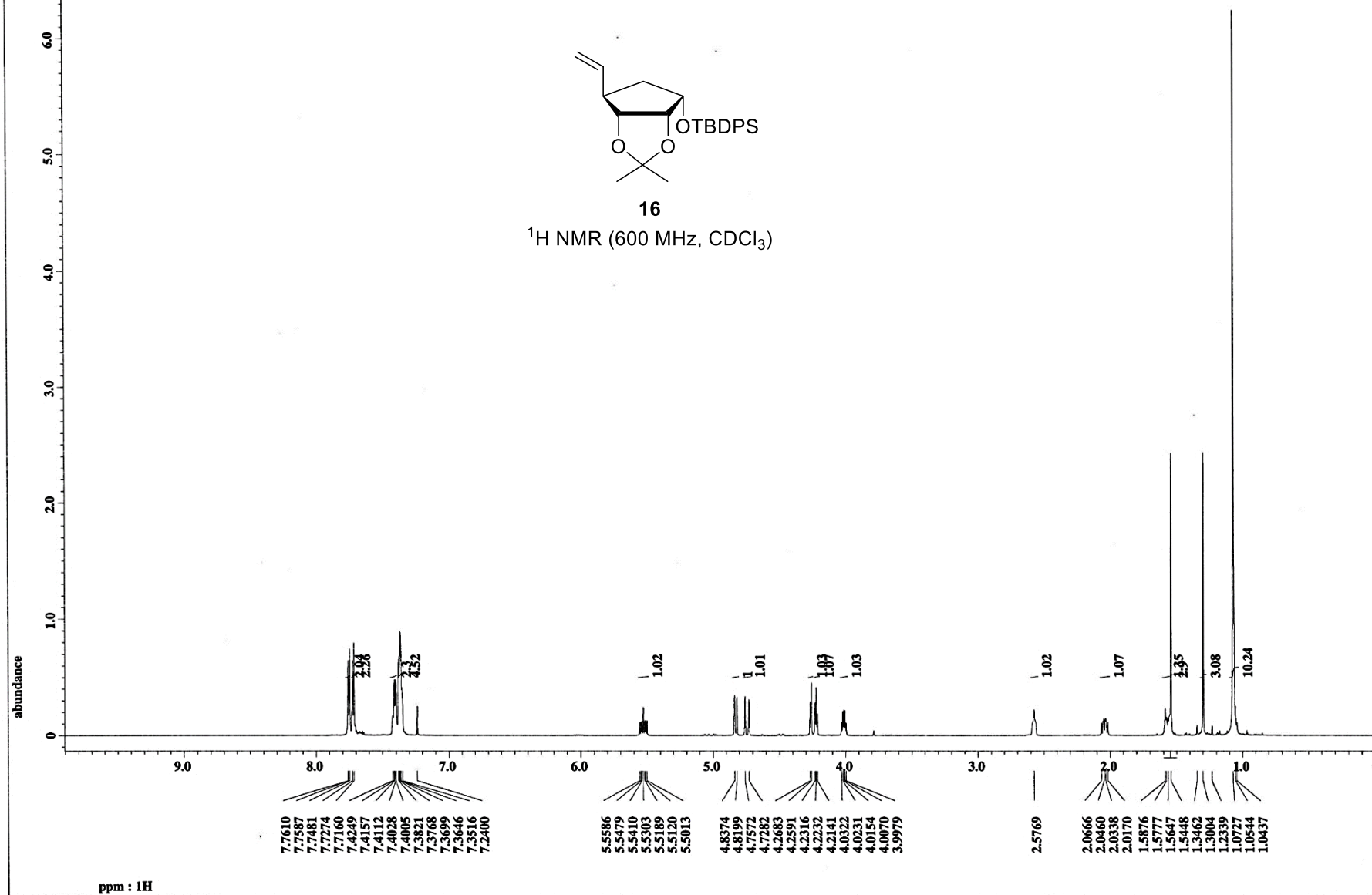


SYS-I-43 (600MHz)

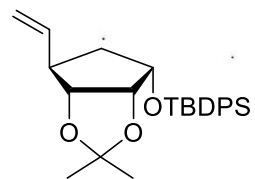


**16**

$^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ )



SYS-I-43 (600MHz)



**16**

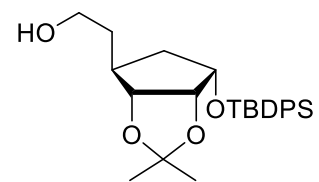
<sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>)

abundance

220.0 210.0 200.0 190.0 180.0 170.0 160.0 150.0 140.0 130.0 120.0 110.0 100.0 90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 0

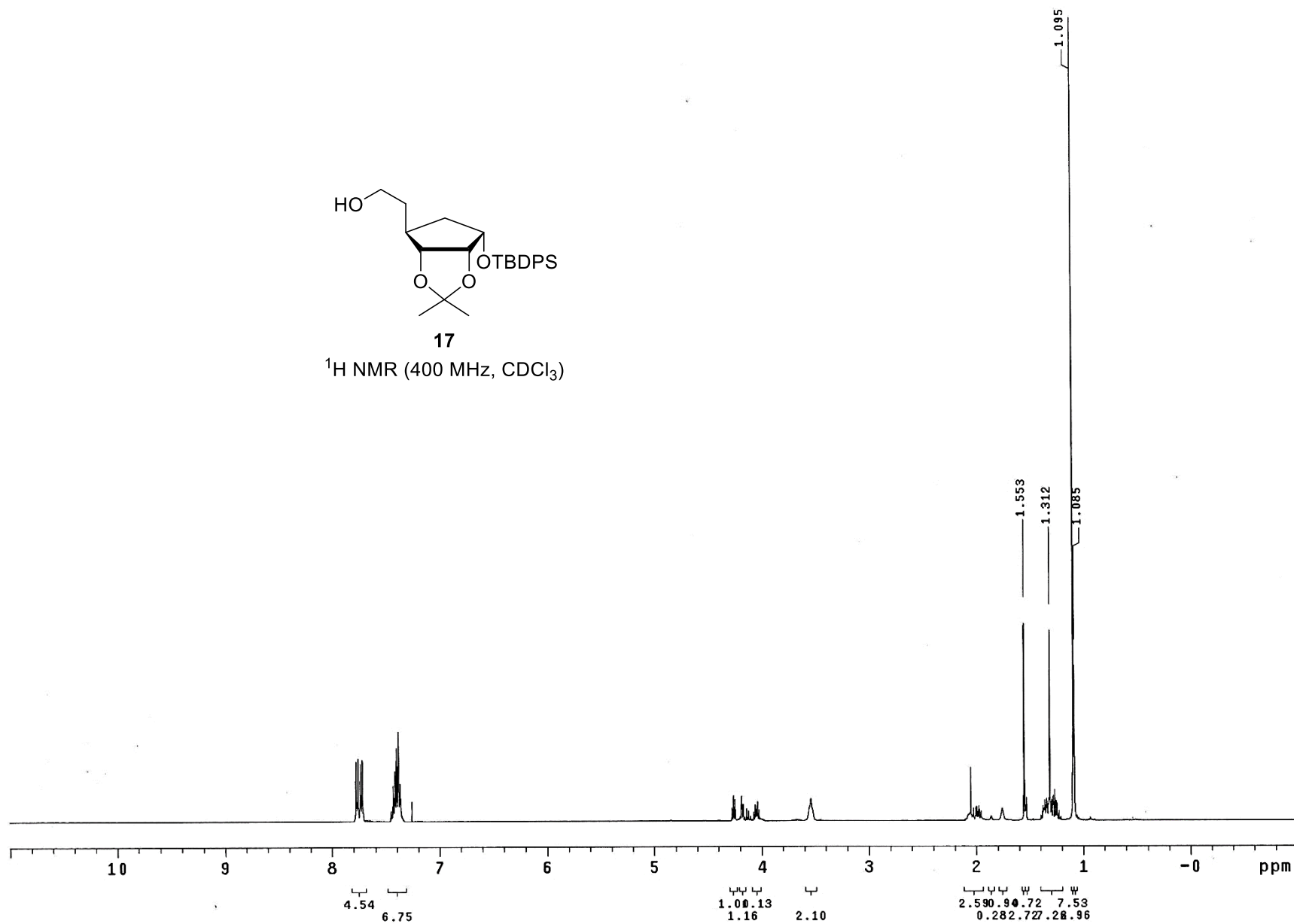
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135.7626  
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114.4779  
110.8538  
84.1402  
79.5826  
77.2129  
76.9974  
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26.3325  
24.6091  
19.2712

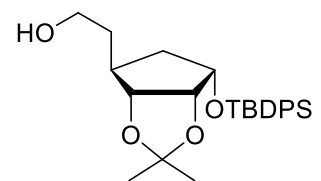
ppm : <sup>13</sup>C



**17**

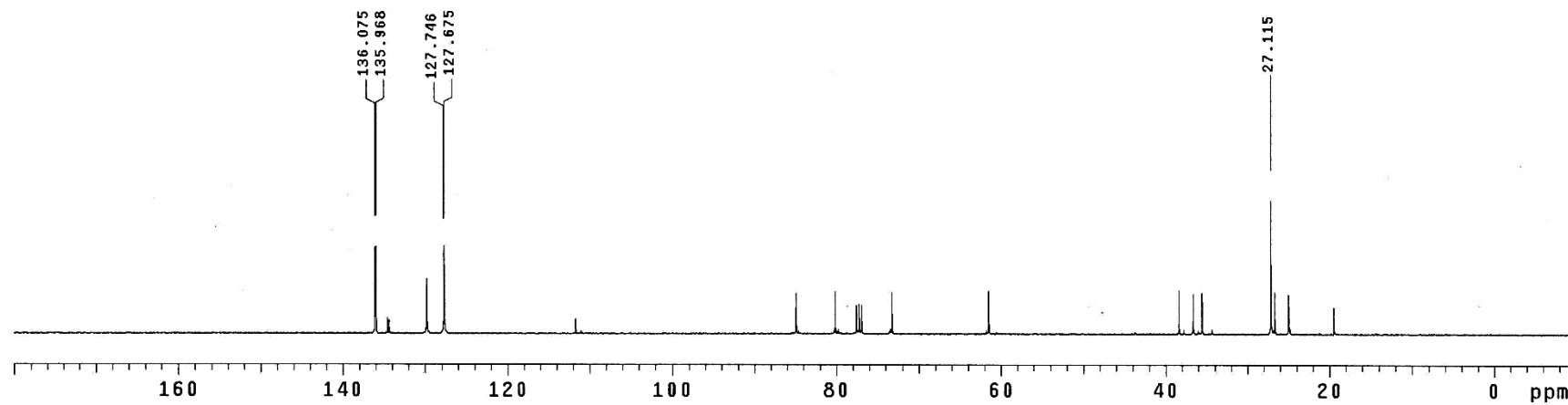
$^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )

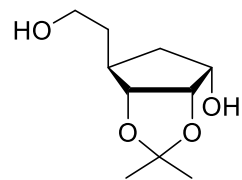




**17**

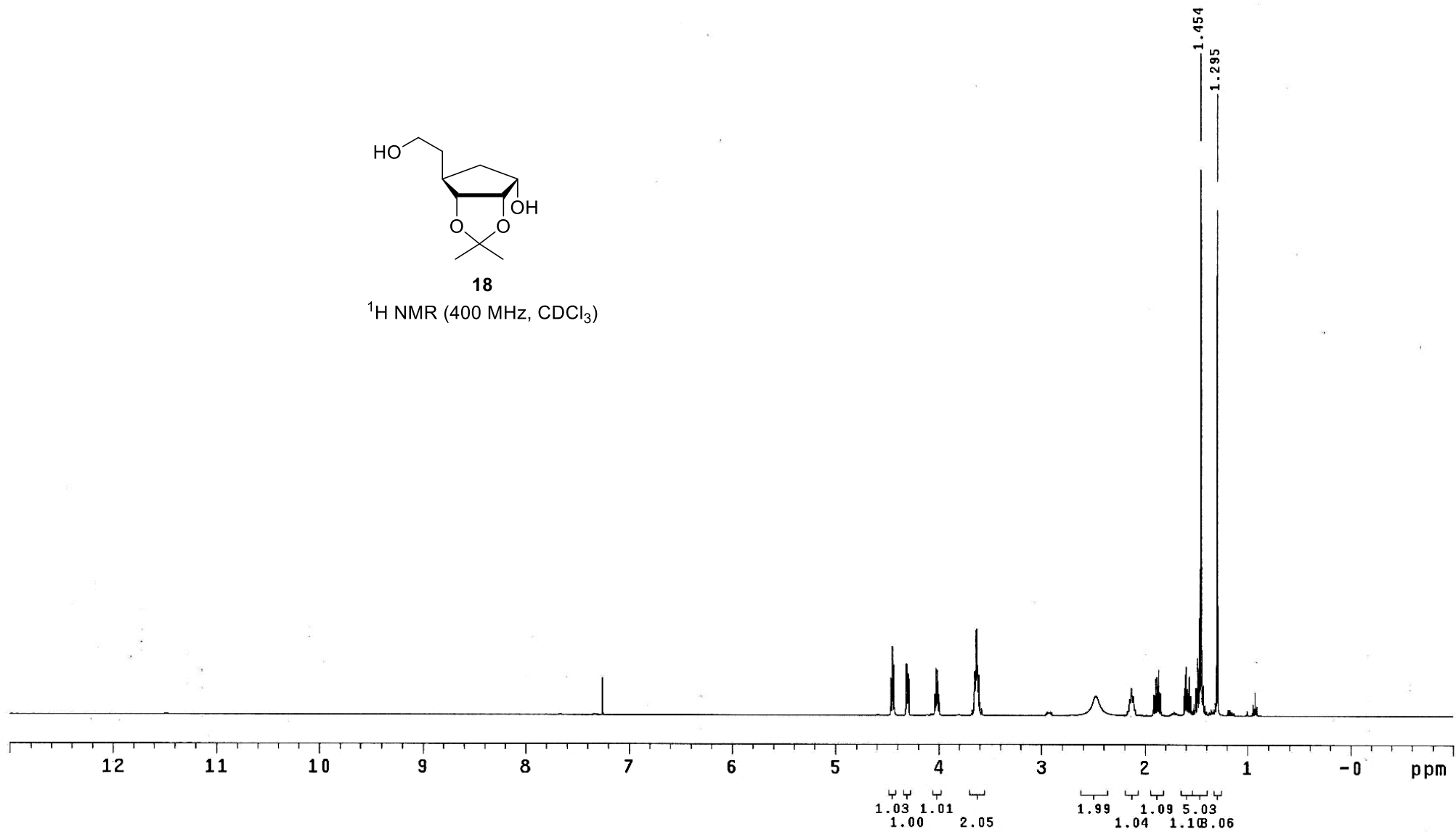
$^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )



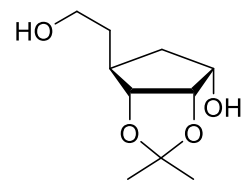


**18**

$^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ )

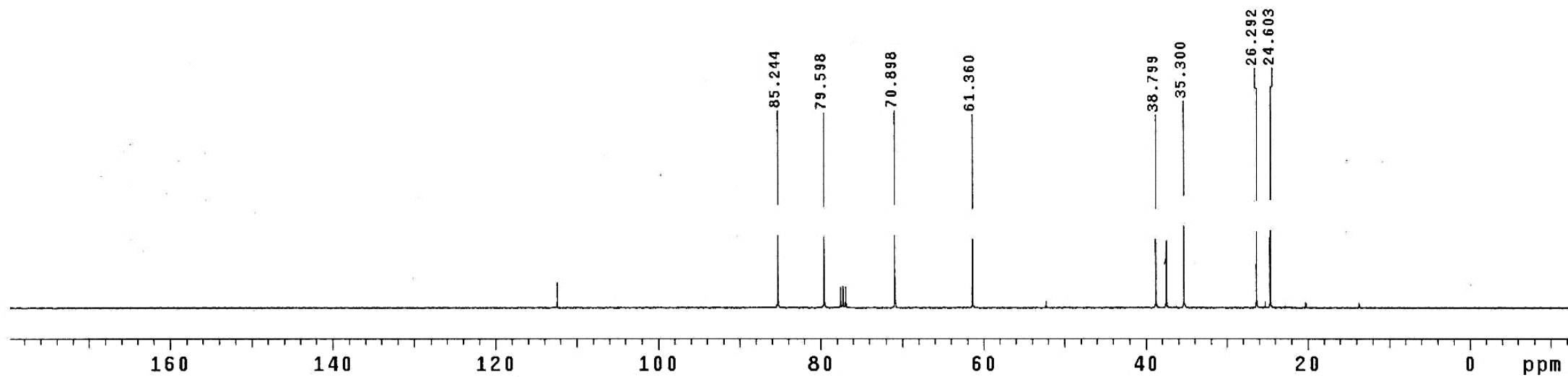




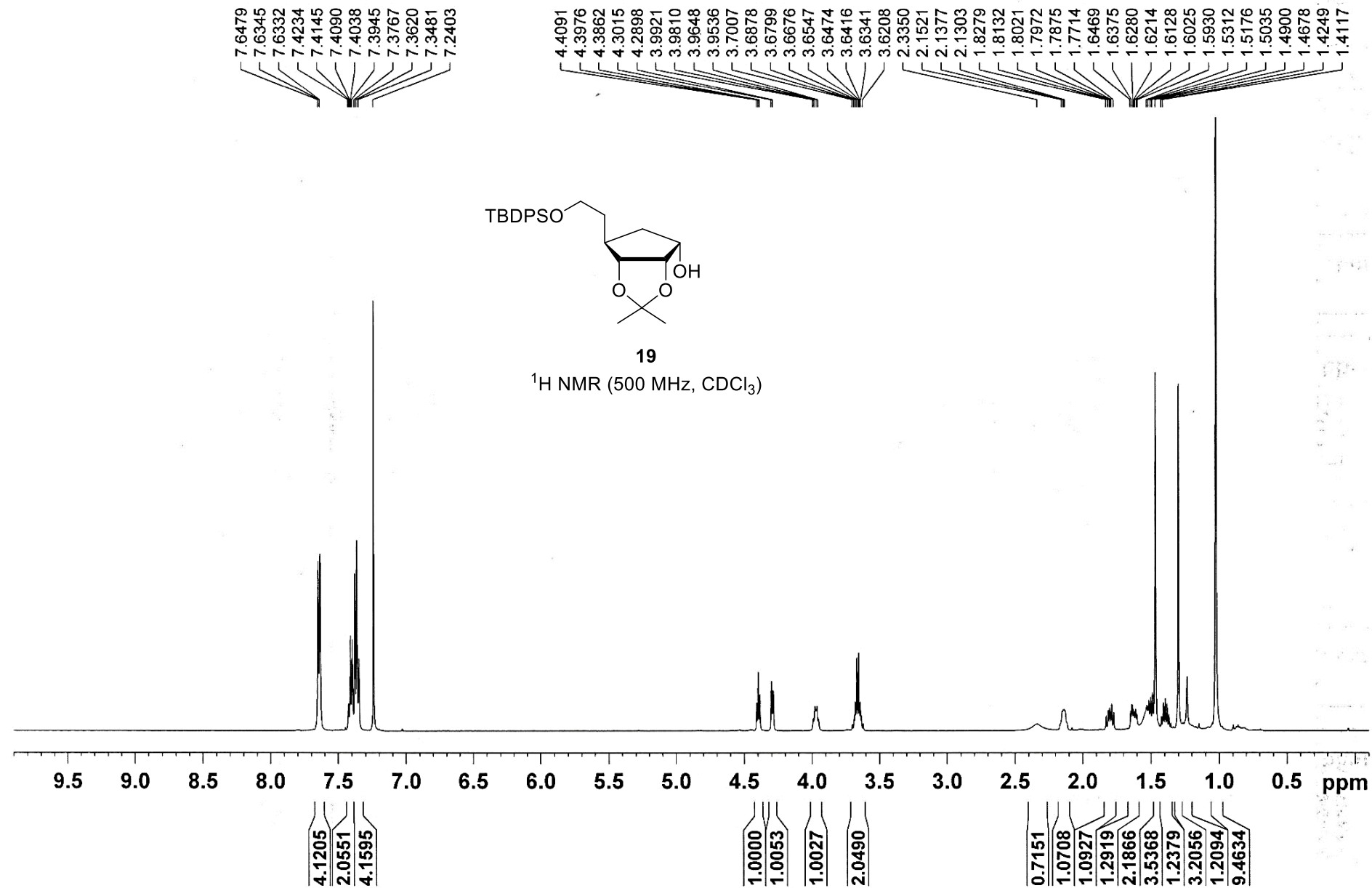


**18**

$^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )



SYS-1-26 (CDCl<sub>3</sub>, 500MHz)



1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

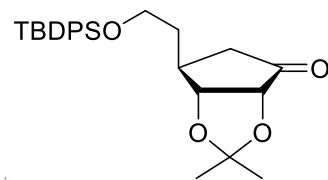


open

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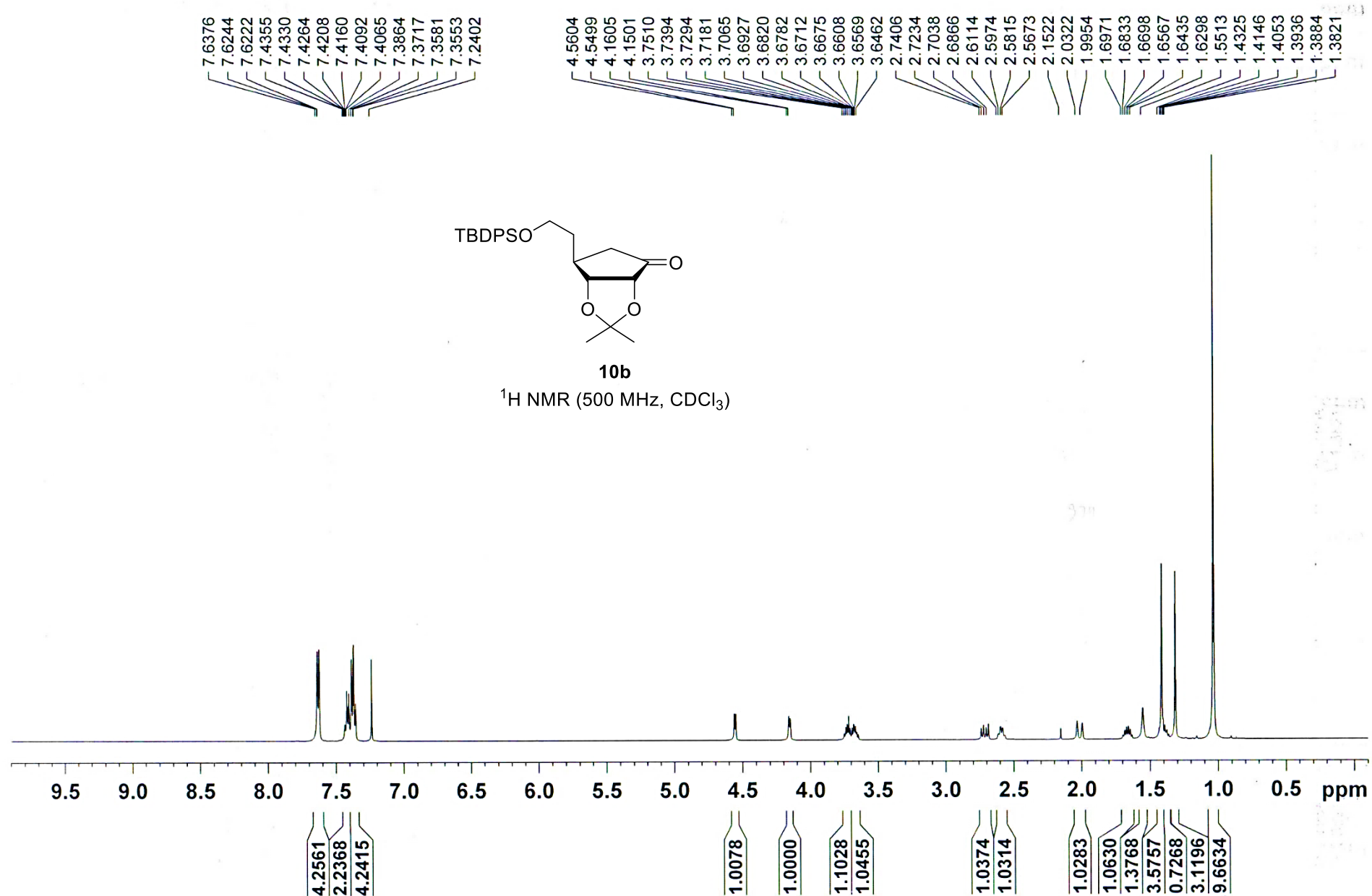
ppm

SYS-1-28 (CDCl<sub>3</sub>, 500MHz)



**10b**

<sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>)



Chemical structure of **10b** is shown above the spectrum:

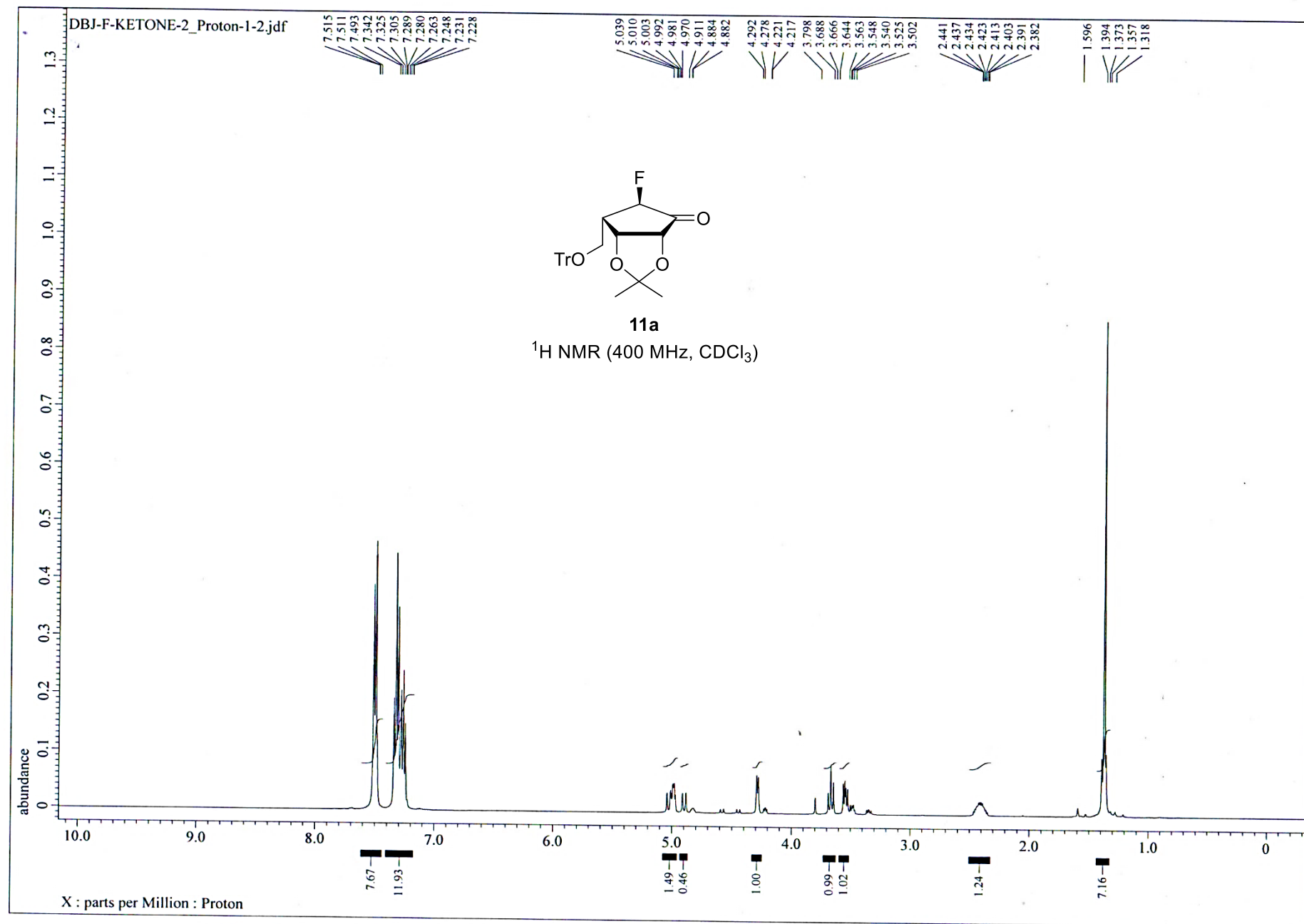
CC1(C)OC(=O)C(C1CC2(C)C(C(C2)OC(C)(C)C(C)(C)C)OC(C)(C)C(C)(C)C)OC(C)(C)C(C)(C)C

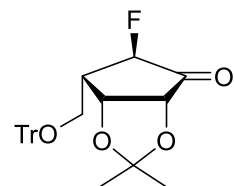
**10b**  
 $^{13}\text{C}$  NMR (125 MHz,  $\text{CDCl}_3$ )

The spectrum displays the following chemical shifts (ppm):

| Chemical Shift (ppm) |
|----------------------|
| 214.246              |
| 135.539              |
| 133.375              |
| 129.793              |
| 127.750              |
| 112.162              |
| 82.035               |
| 78.085               |
| 77.260               |
| 77.006               |
| 76.752               |
| 61.481               |
| 39.901               |
| 36.076               |
| 33.832               |
| 26.878               |
| 26.832               |
| 24.942               |
| 19.129               |

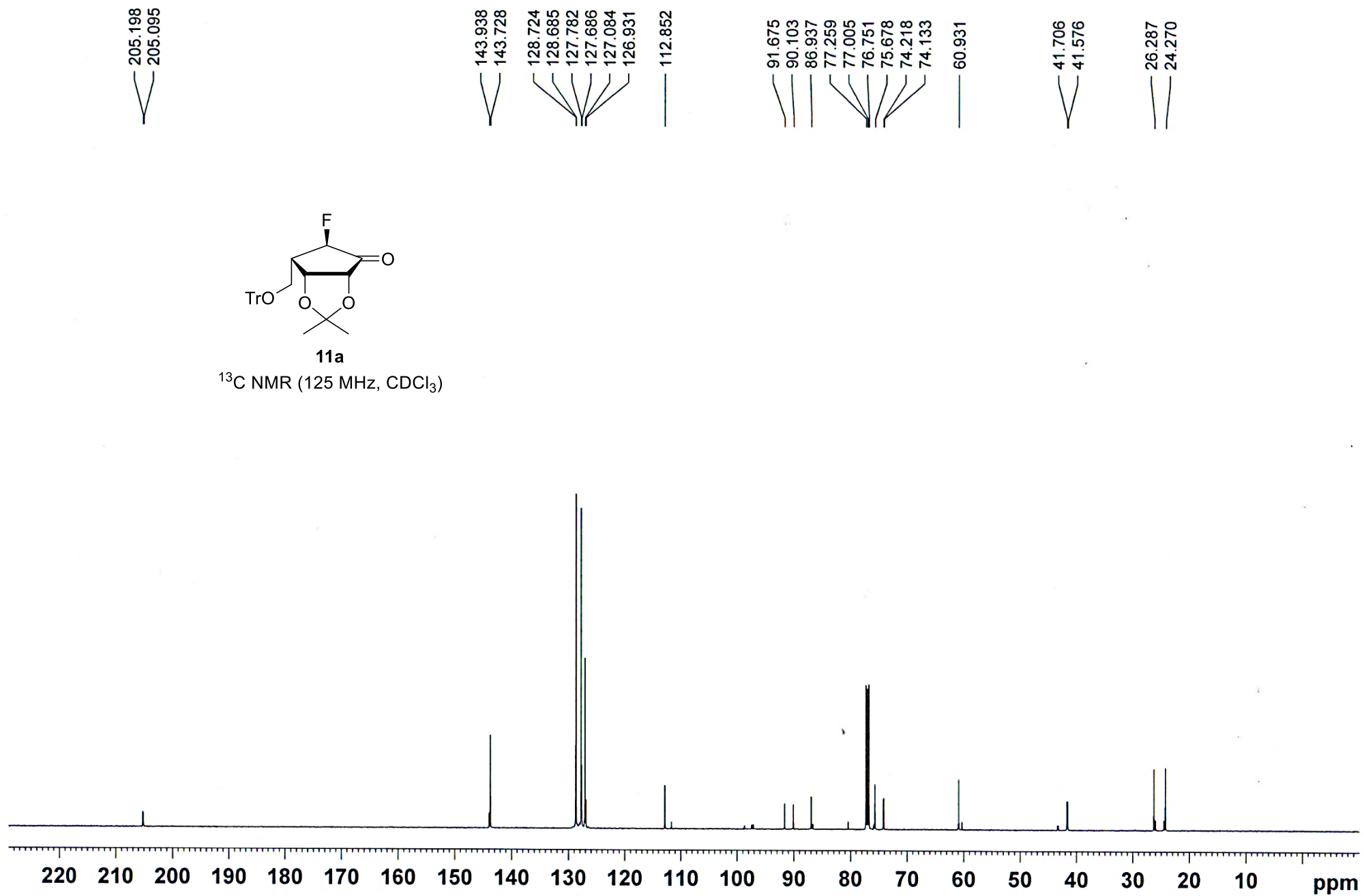
 $^{13}\text{C}$  NMR (125 MHz,  $\text{CDCl}_3$ )

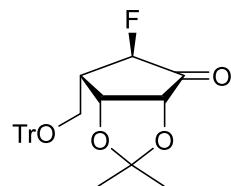




**11a**

$^{13}\text{C}$  NMR (125 MHz,  $\text{CDCl}_3$ )



**11a** $^{19}\text{F}$  NMR (376 MHz,  $\text{CDCl}_3$ )

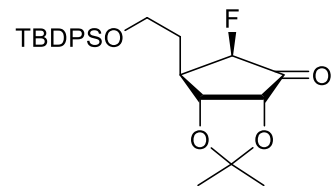
abundance

100.0 80.0 60.0 40.0 20.0 0 -20.0 -40.0 -60.0 -80.0 -100.0 -120.0 -140.0 -160.0 -180.0 -200.0 -220.0 -240.0 -260.0 -280.0

X : parts per Million : Fluorine19

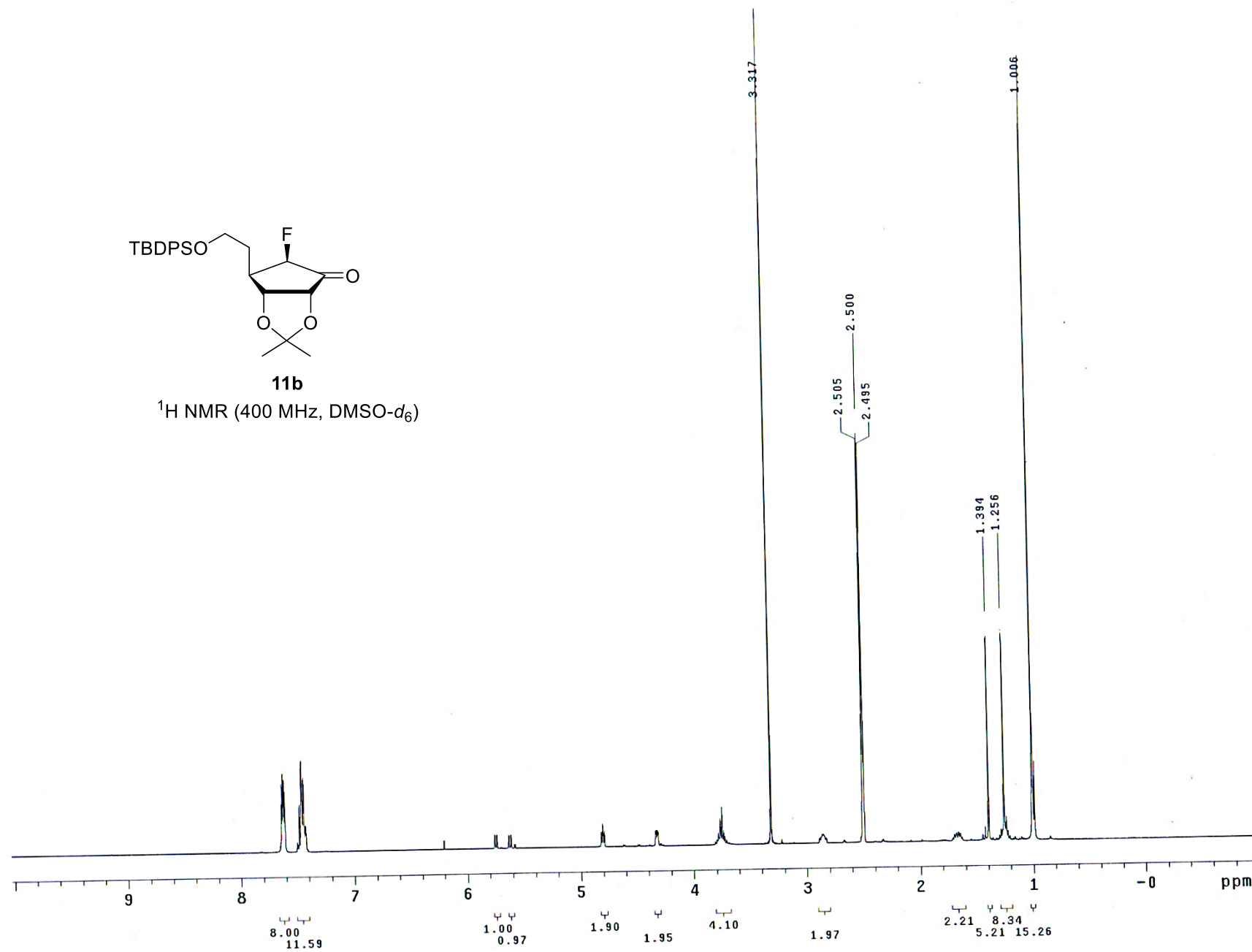
-207.681  
-207.723  
-207.765  
-207.818  
-207.860  
-211.417  
-211.459  
-211.565  
-211.607

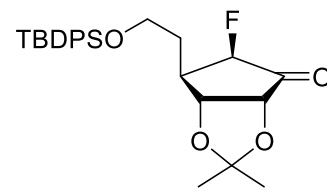




**11b**

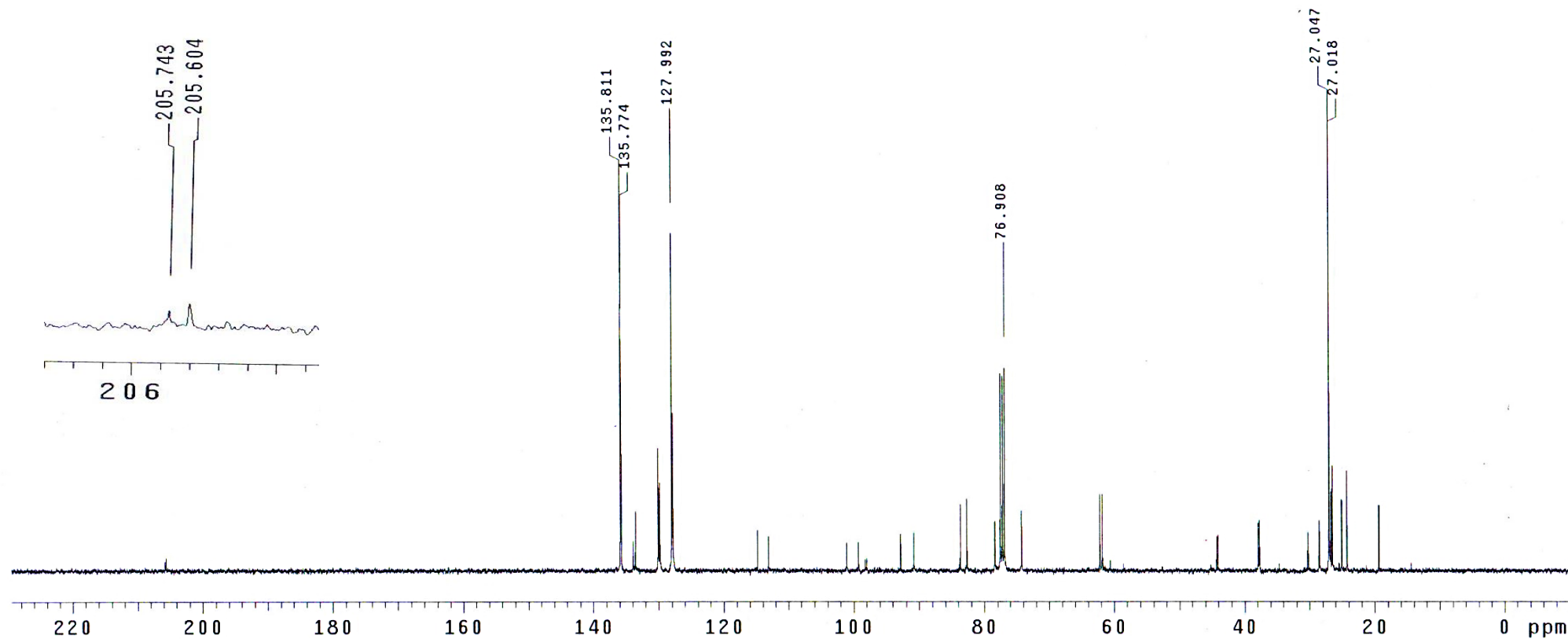
$^1\text{H}$  NMR (400 MHz,  $\text{DMSO}-d_6$ )





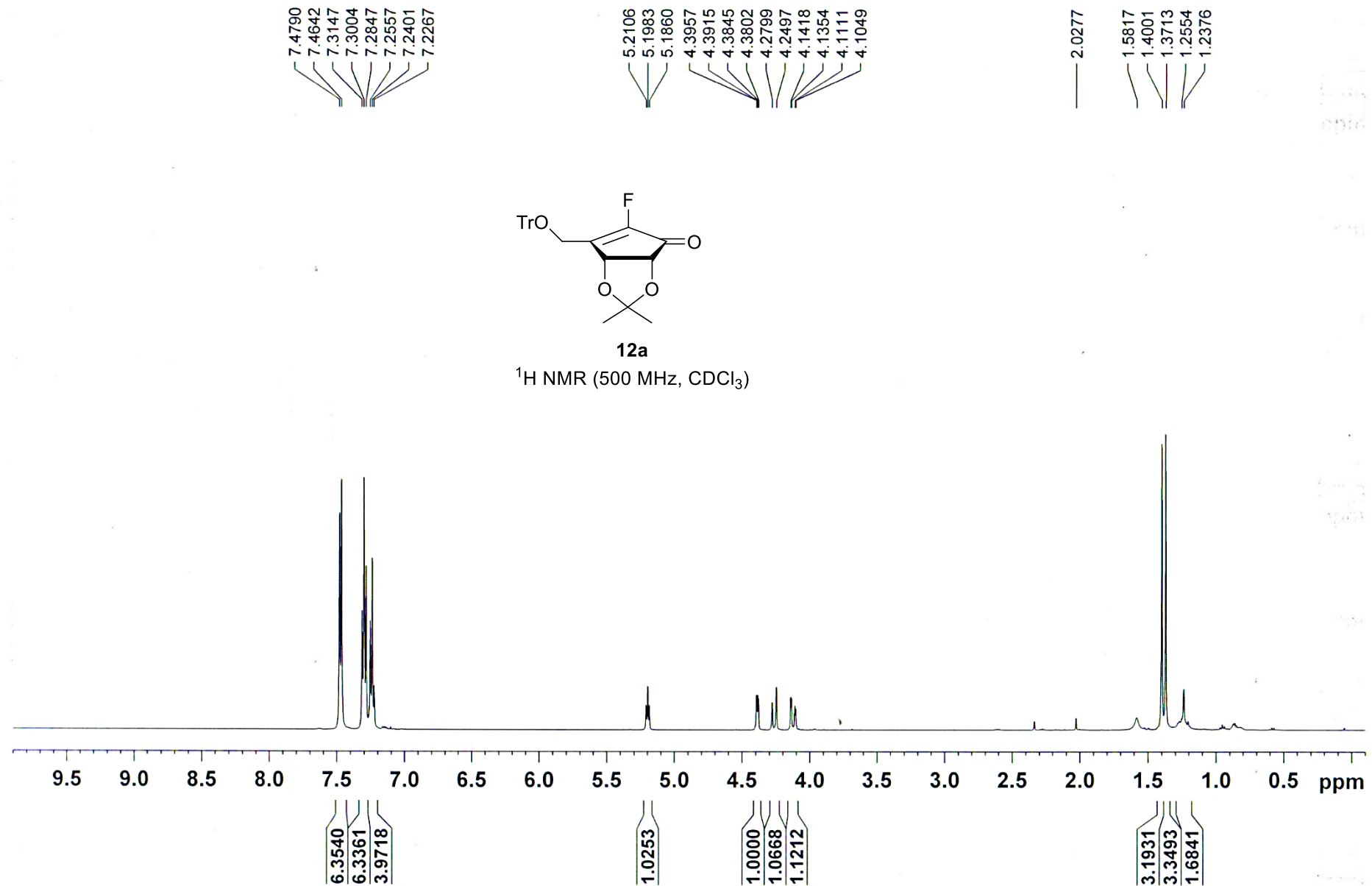
**11b**

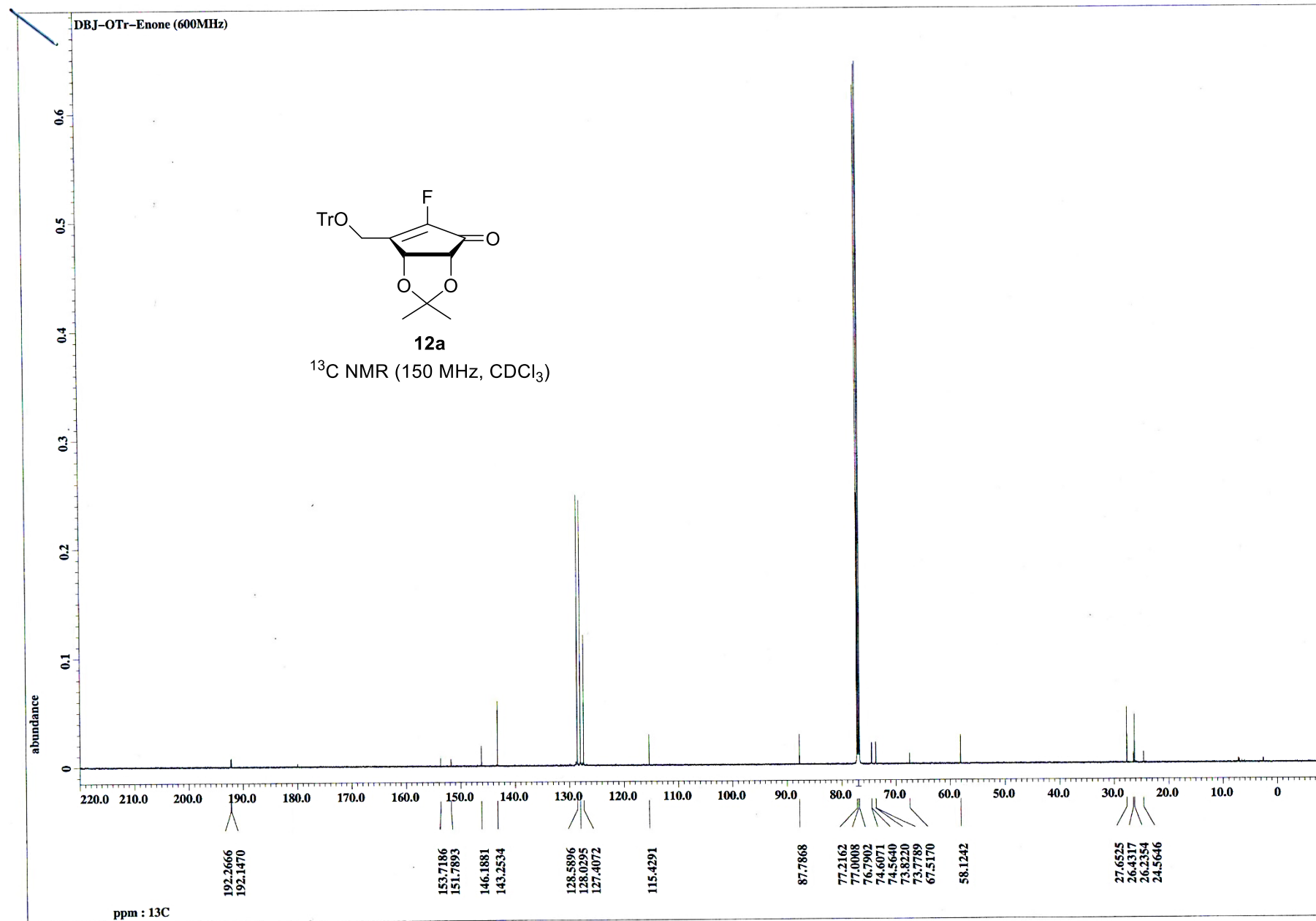
$^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ )



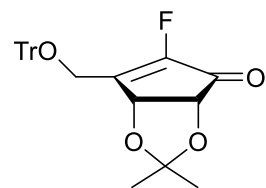


13C NMR spectrum of poly(2-vinylpyridine) in CDCl<sub>3</sub>. The spectrum shows two main multiplet regions. The first region, between -207 and -208 ppm, is assigned to the backbone carbons (CH<sub>2</sub>-CH) and is split into four peaks labeled -207.729, -207.809, -207.868, and -207.948. The second region, around -220.5 ppm, is assigned to the vinyl carbons (CH<sub>2</sub>=CH-) and is split into two peaks labeled -220.362 and -220.494. The x-axis is labeled 'ppm' and ranges from -202 to -224.



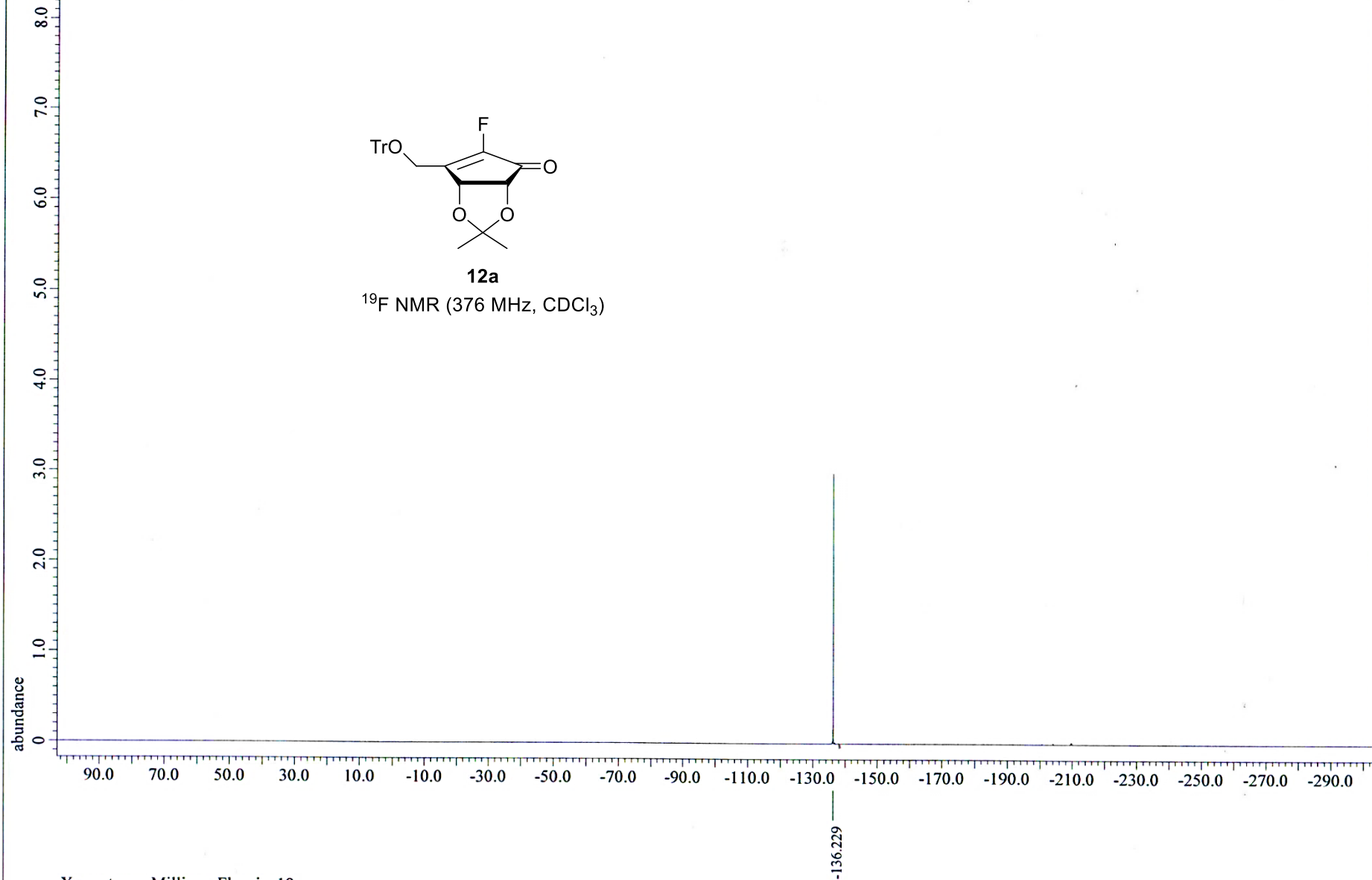


DBJ-OTr-Enone\_19F-1-2.jdf



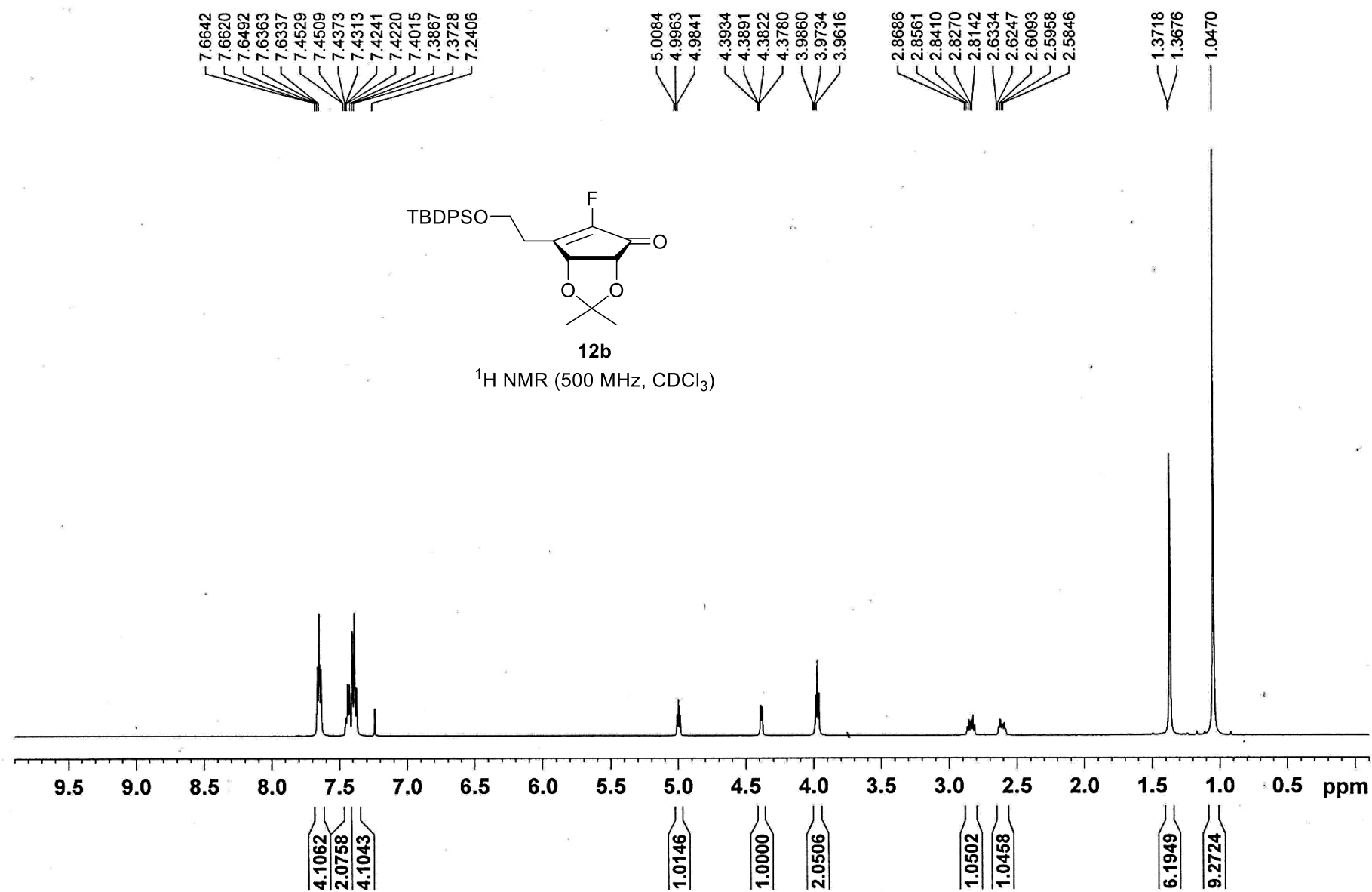
**12a**

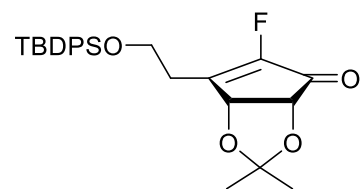
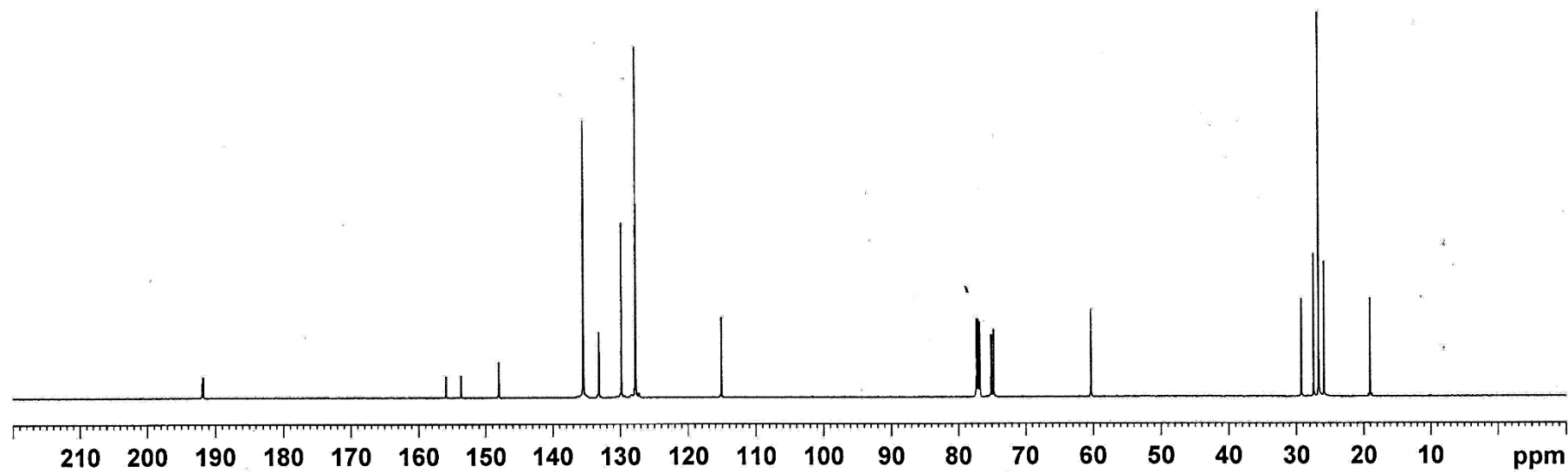
$^{19}\text{F}$  NMR (376 MHz,  $\text{CDCl}_3$ )



X : parts per Million : Fluorine19

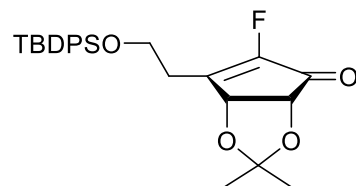
1) Isomerization 180123 (CDCl<sub>3</sub>, 500MHz)



[illegible] $^{13}\text{C}$  NMR (125 MHz,  $\text{CDCl}_3$ )

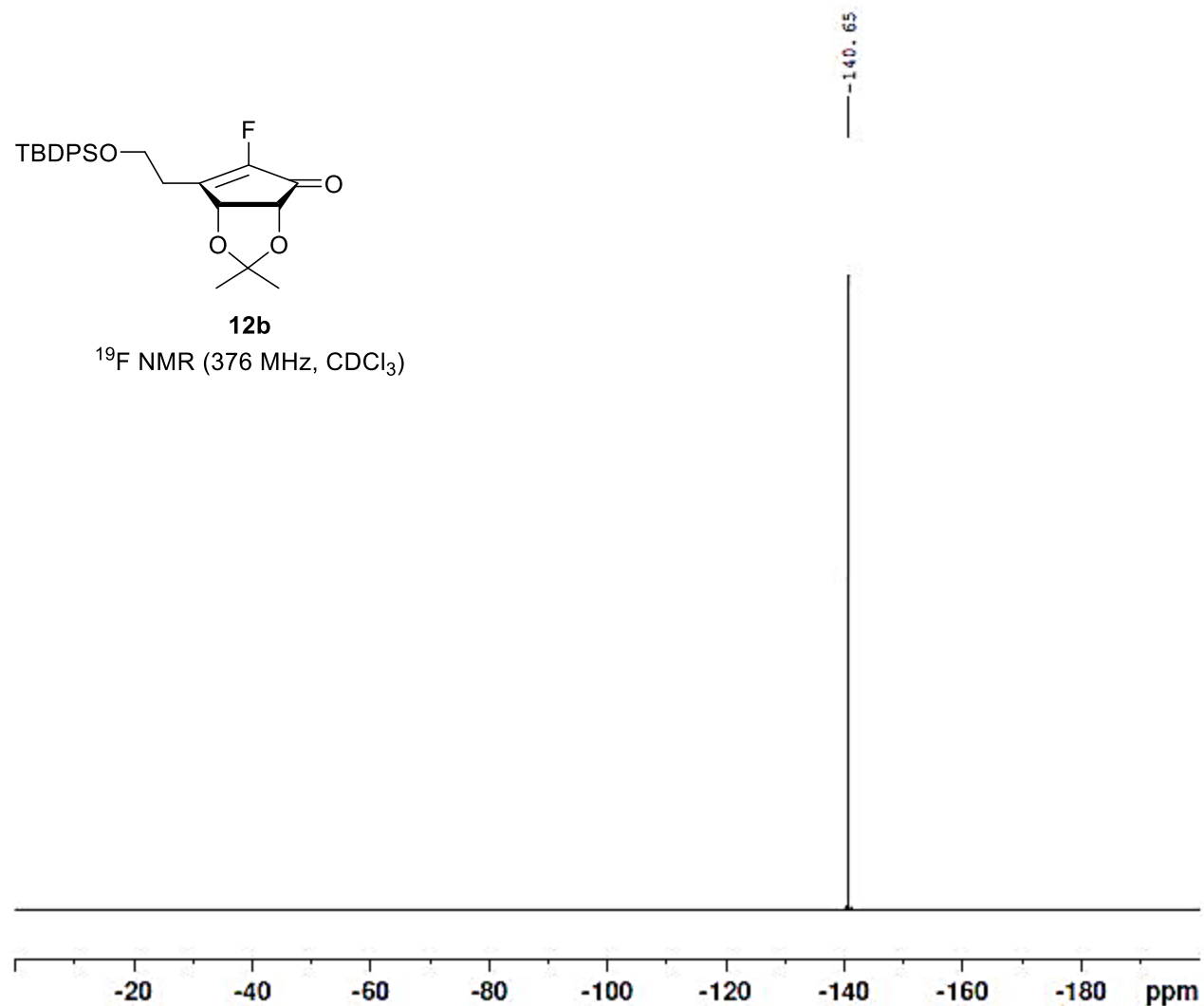


Isomerization-CDCl<sub>3</sub> / <sup>19</sup>F



**12b**

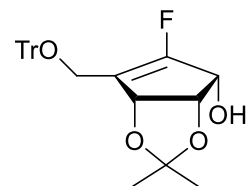
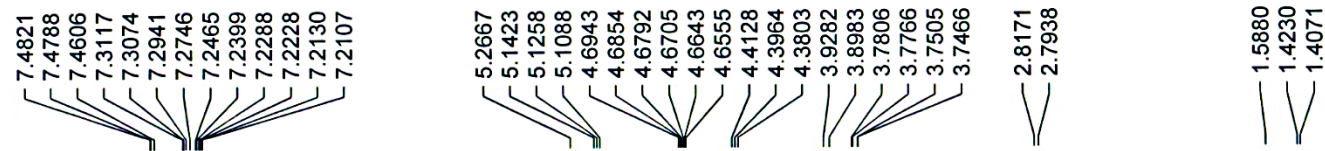
<sup>19</sup>F NMR (376 MHz, CDCl<sub>3</sub>)



Current Data Parameters  
NAME feb22-ph-jmh  
EXPNO 1  
PROCNO 1

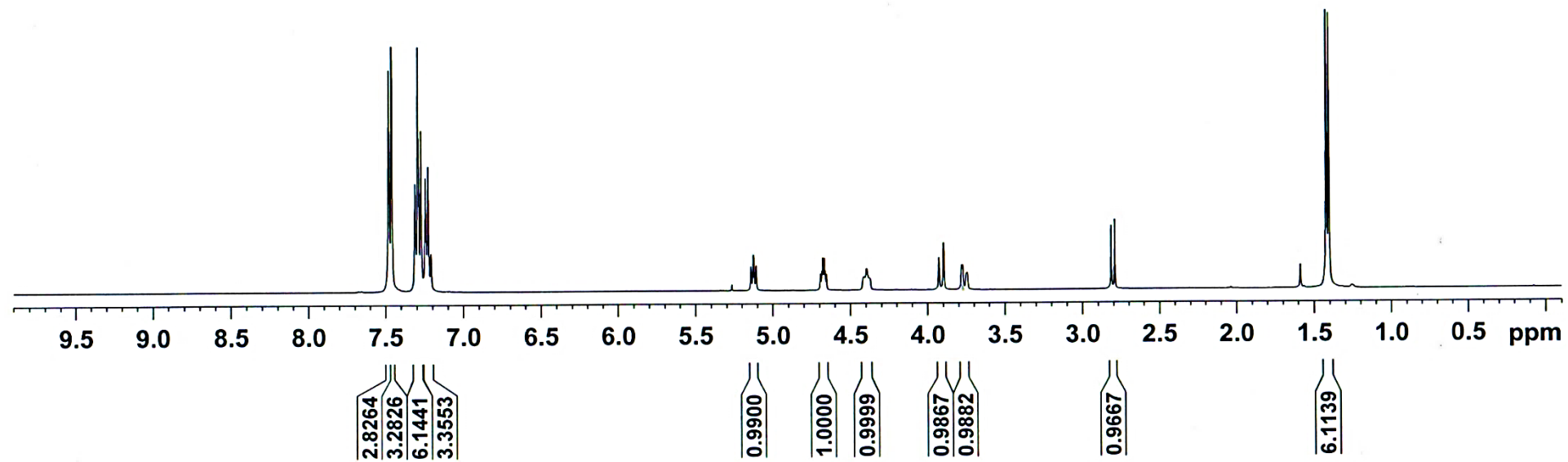
F2 - Acquisition Parameters  
Date\_ 20180222  
Time 10.16 h  
INSTRUM spect  
PROBHD Z3246\_0288 (PH  
PULPROG zgpg30  
TD 131072  
SOLVENT CDCl3  
NS 16  
DS 4  
SWH 66964.289 H:  
FIDRES 1.021794 H:  
AQ 0.9786710 s  
RG 201.38  
DW 7.467 u:  
DE 6.50 u:  
TE 298.0 K  
D1 2.00000000 s  
D11 0.03000000 s  
D12 0.00002000 s  
TD0 1  
SFO1 282.3761146 MHz  
NUC1 19F  
P1 19.20 u:  
PLW1 21.00000000 W  
SFO2 300.1312005 MHz  
NUC2 1H  
CPDPRG2 waltz16  
PCPD2 90.00 u:  
PLW2 10.00000000 W  
PLW12 0.17778000 W

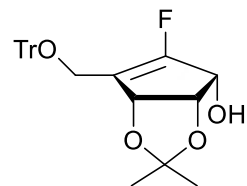
F2 - Processing parameters  
SI 65536  
SF 282.4043552 MHz  
WDW EM  
SSB 0  
LB 1.00 H:  
GB 0  
PC 1.00



**21a**

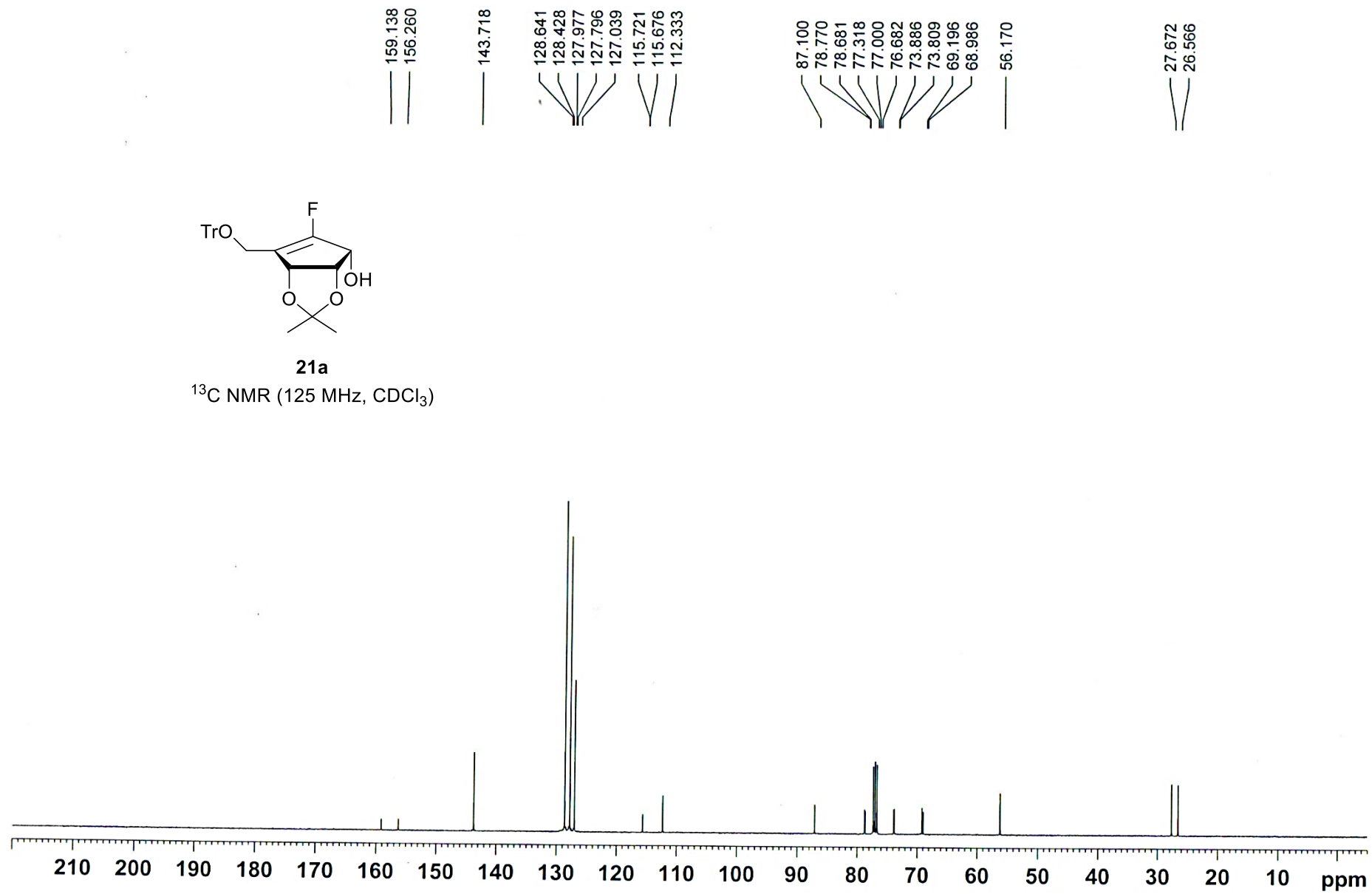
$^1\text{H}$  NMR (500 MHz,  $\text{CDCl}_3$ )

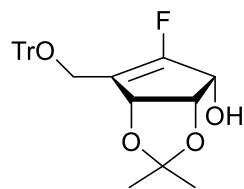




**21a**

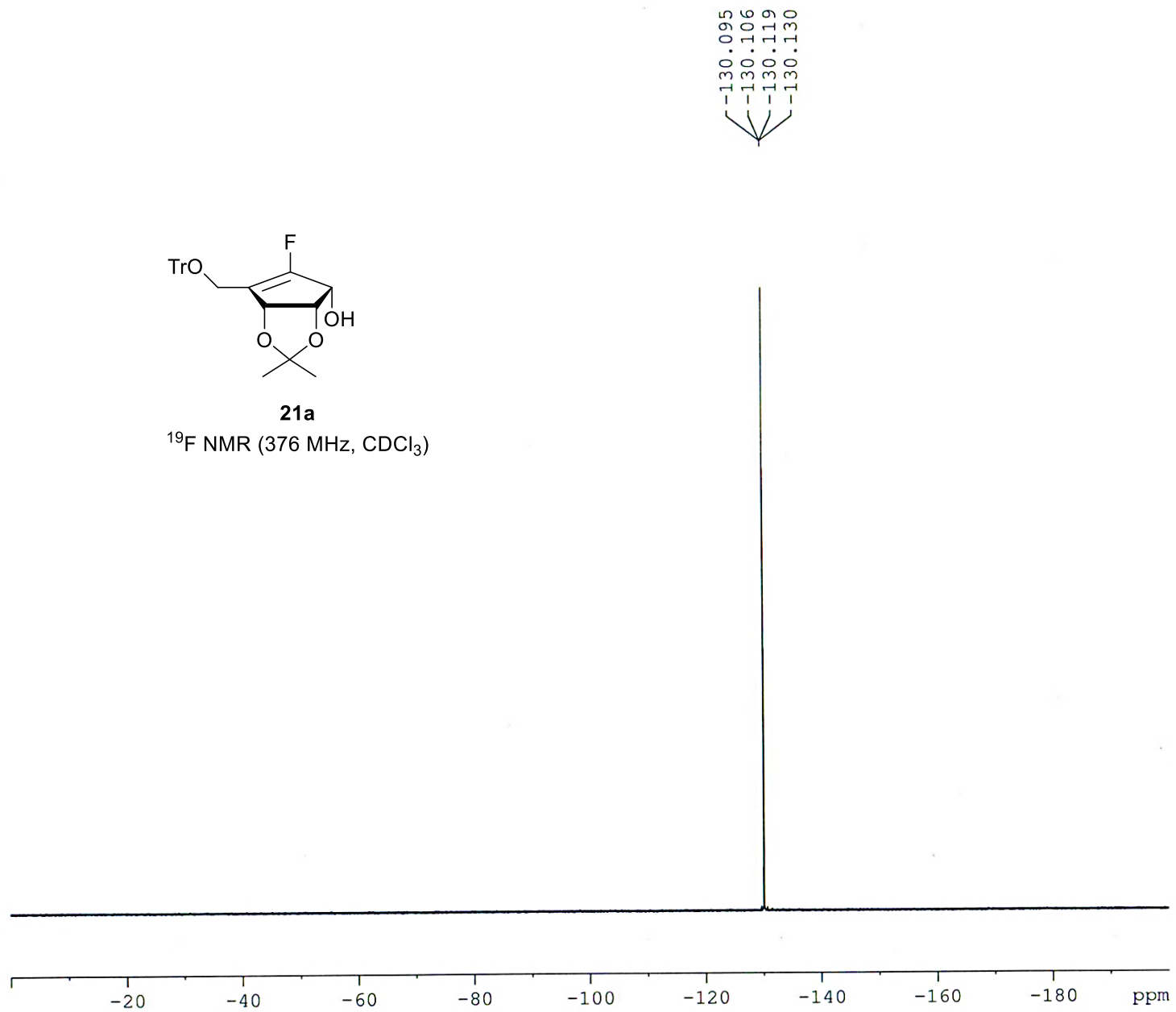
$^{13}\text{C}$  NMR (125 MHz,  $\text{CDCl}_3$ )





**21a**

$^{19}\text{F}$  NMR (376 MHz,  $\text{CDCl}_3$ )



Chemical structure of **21b** is shown above the spectrum. The structure is a 2,2-dimethyl-1,3-dioxolane-4-carboxylic acid derivative, specifically a 2,2-dimethyl-1,3-dioxolane-4-carboxylic acid derivative, with a TBDPSO group attached to the 4-position of the dioxolane ring.

**21b**  
 $^1\text{H}$  NMR (500 MHz,  $\text{CDCl}_3$ )

The spectrum displays the following chemical shifts (ppm) and integrations:

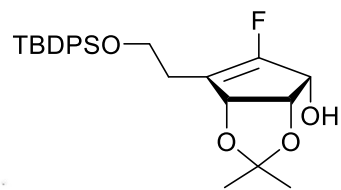
| Chemical Shift (ppm)   | Integration            |
|--|------------------------|
| 7.6569, 7.6467, 7.6443, 7.6342, 7.4352, 7.4207, 7.4065, 7.3877, 7.3730, 7.3592, 7.2405                 | 3.9953, 2.0185, 3.9947 |
| 4.7499, 4.7369, 4.7233, 4.5934, 4.5865, 4.5813, 4.5747, 4.5695, 4.5627, 4.3851, 3.8286, 3.8157, 3.8027 | 1.0000, 1.0025, 0.9884 |
| 2.7810, 2.7648, 2.5629, 2.5492, 2.5349, 2.5207, 2.5071, 2.3272, 2.3156, 2.3019, 2.2870, 2.2753         | 2.0532                 |
| 1.3894, 1.3579, 1.0390   | 0.9082, 1.0344, 1.0292 |
| 1.3894, 1.3579, 1.0390   | 3.0320, 3.1761, 9.3014 |

Chemical structure of **21b** is shown above the spectrum. The structure is a furanose derivative with a TBDPSO group, a fluorine atom, and a hydroxyl group.

**21b**  
 $^{13}\text{C}$  NMR (125 MHz,  $\text{CDCl}_3$ )

The spectrum displays the following chemical shifts (ppm):

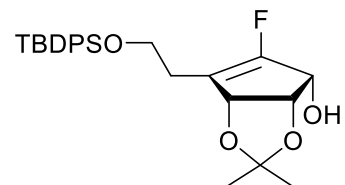
| Chemical Shift (ppm) |
|----------------------|
| 159.301              |
| 157.033              |
| 135.540              |
| 135.511              |
| 133.686              |
| 129.627              |
| 127.626              |
| 115.569              |
| 115.515              |
| 112.131              |
| 79.815               |
| 79.733               |
| 77.259               |
| 77.005               |
| 76.751               |
| 73.877               |
| 73.815               |
| 68.899               |
| 68.730               |
| 61.142               |
| 27.546               |
| 26.767               |
| 26.373               |
| 19.108               |



**21b**

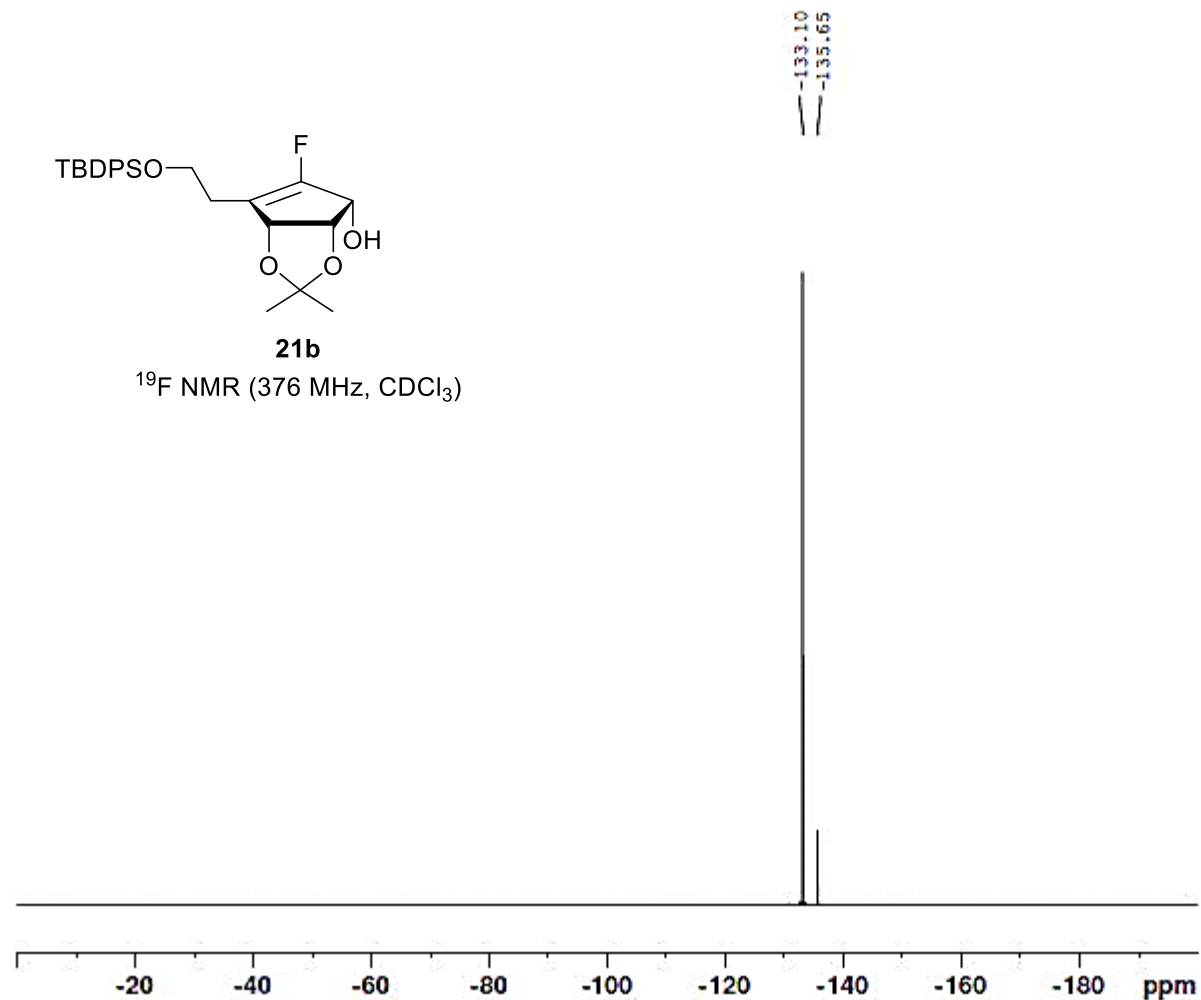
 $^{13}\text{C}$  NMR (125 MHz,  $\text{CDCl}_3$ )

Reduction-CDCl<sub>3</sub> / 19F



**21b**

<sup>19</sup>F NMR (376 MHz, CDCl<sub>3</sub>)



Current Data Parameters

NAME feb22-ph-jmh  
EXPNO 2  
PROCNO 1

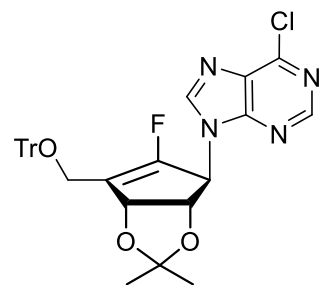
F2 - Acquisition Parameters

Date\_ 20180222  
Time 10.23 h  
INSTRUM spect  
PROBHD Z3246\_0288 (PH  
PULPROG zgpg30  
TD 131072  
SOLVENT CDCl<sub>3</sub>  
NS 16  
DS 4  
SWH 66964.289 Hz  
FIDRES 1.021794 Hz  
AQ 0.9786710 sec  
RG 201.38  
DW 7.467 usec  
DE 6.50 usec  
TE 298.0 K  
D1 2.00000000 sec  
D11 0.03000000 sec  
D12 0.00002000 sec  
TDO 1  
SFO1 282.3761146 MHz  
NUC1 19F  
P1 19.20 usec  
PLW1 21.00000000 W  
SFO2 300.1312005 MHz  
NUC2 1H  
CPDPRG2 waltz16  
PCPD2 90.00 usec  
PLW2 10.00000000 W  
PLW12 0.17778000 W

F2 - Processing parameters

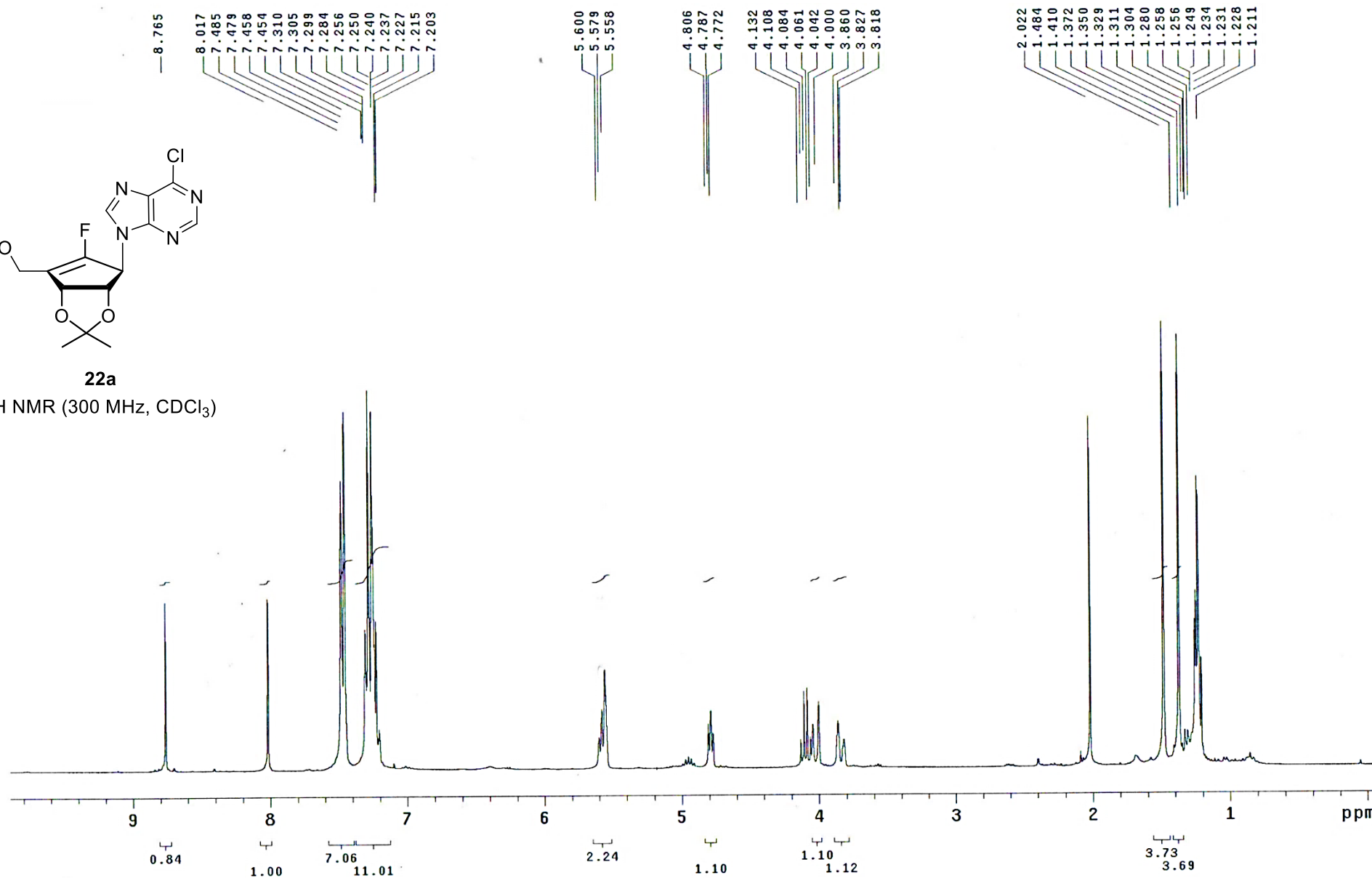
SF 65536  
SF 282.4043552 MHz  
WDW EM  
SSB 0  
LB 1.00 Hz  
GB 0  
PC 1.00

Ac  
Go

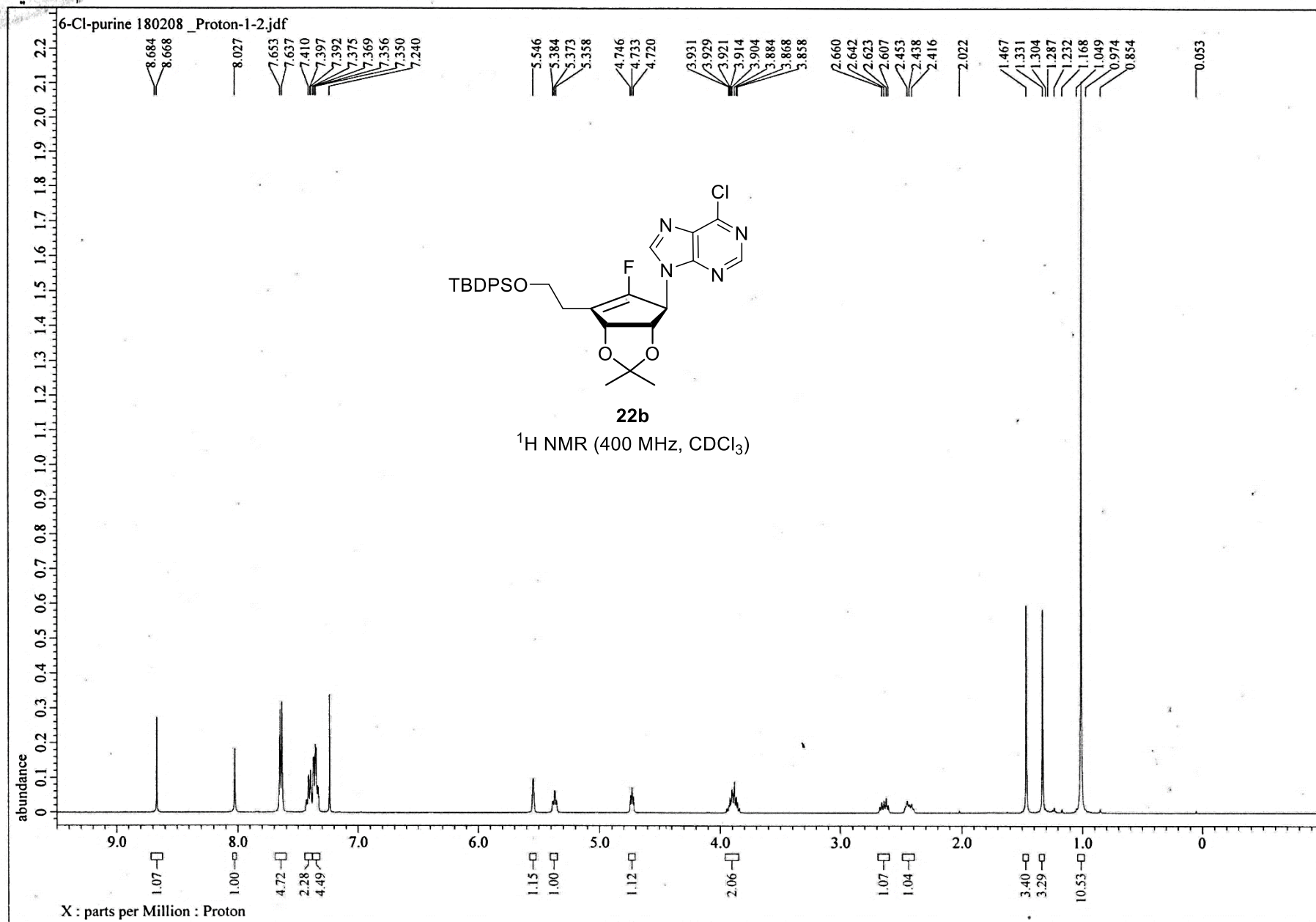


**22a**

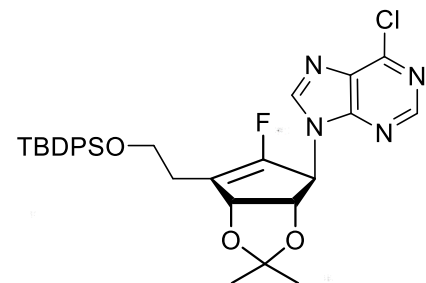
$^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ )





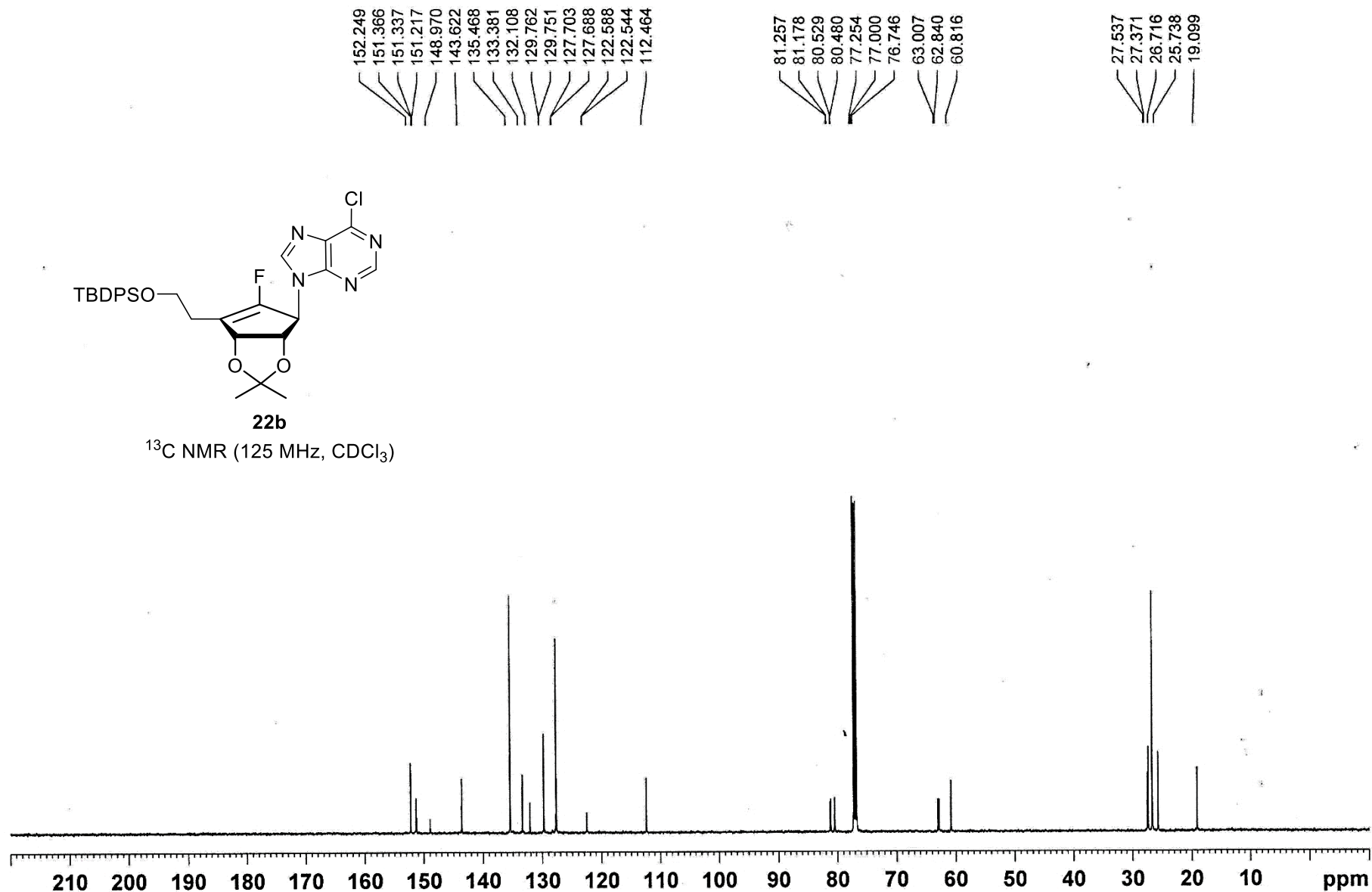


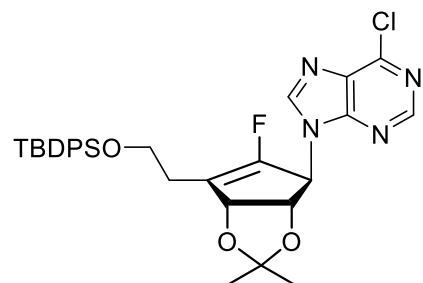
6-Cl-purine condensation (CDCl<sub>3</sub>, 500MHz)



**22b**

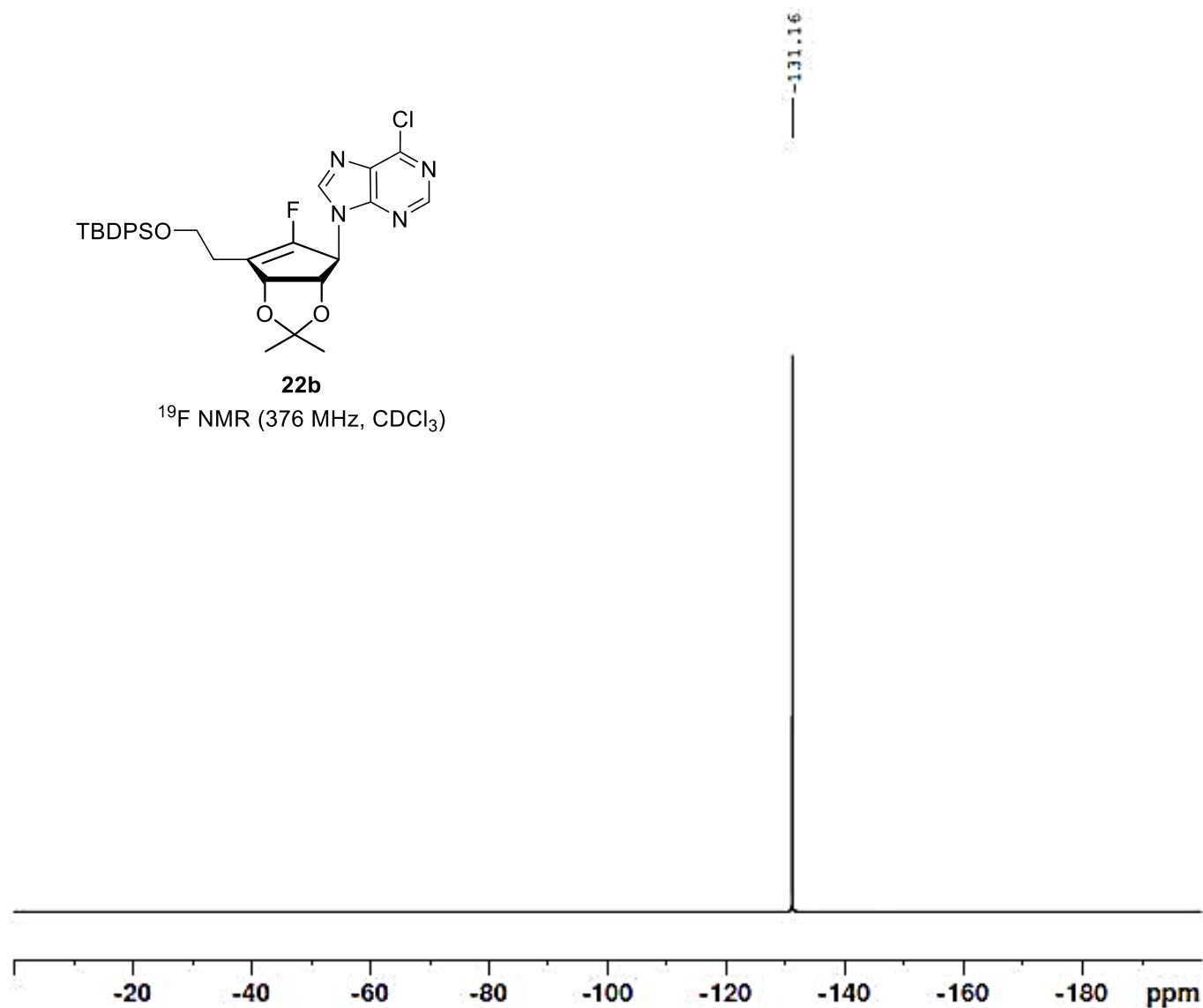
<sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>)





**22b**

$^{19}\text{F}$  NMR (376 MHz,  $\text{CDCl}_3$ )



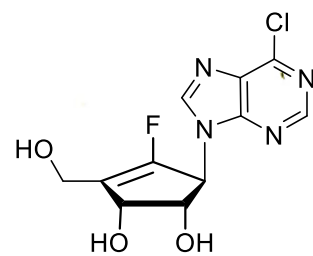
Current Data Parameters  
NAME mar12-ph-jmh  
EXPNO 1  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20180312  
Time 15.01 h  
INSTRUM spect  
PROBHD Z3246\_0288 (PH  
PULPROG zgpg30  
TD 131072  
SOLVENT  $\text{CDCl}_3$   
NS 16  
DS 4  
SWH 66964.289 Hz  
FIDRES 1.021794 Hz  
AQ 0.9786710 sec  
RG 201.38  
DW 7.467 usec  
DE 6.50 usec  
TE 298.0 K  
D1 2.00000000 sec  
D11 0.03000000 sec  
D12 0.00002000 sec  
TDO 1  
SFO1 282.3761146 MHz  
NUC1  $^{19}\text{F}$   
P1 19.20 usec  
PIN1 21.00000000 W  
SFO2 300.1312005 MHz  
NUC2  $^1\text{H}$   
PCPDPRG2 waltz16  
PCPD2 90.00 usec  
PIN2 10.00000000 W  
PIN12 0.17778000 W

F2 - Processing parameters  
SI 65536  
SF 282.4043552 MHz  
WDW EM  
SSB 0  
LB 1.00 Hz  
GB 0  
PC 1.00

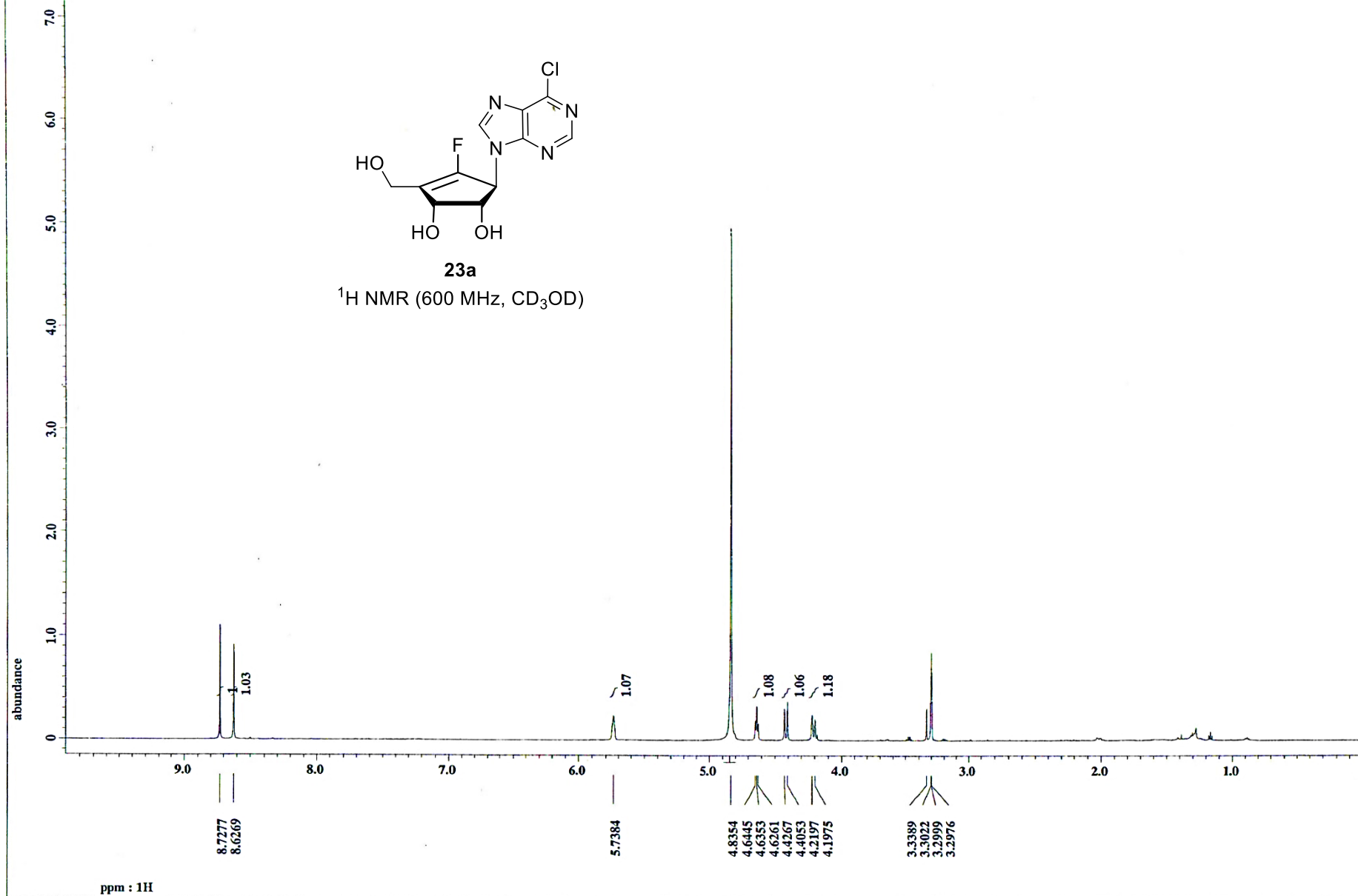
Ac  
Go

6-Cl-A (600MHz)

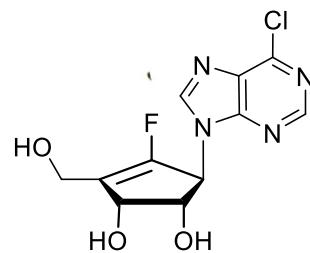


**23a**

<sup>1</sup>H NMR (600 MHz, CD<sub>3</sub>OD)



6-Cl-A (600MHz)



**23a**

$^{13}\text{C}$  NMR (150 MHz,  $\text{CD}_3\text{OD}$ )

abundance

220.0 210.0 200.0 190.0 180.0 170.0 160.0 150.0 140.0 130.0 120.0 110.0 100.0 90.0 80.0 70.0 60.0 50.0 40.0 30.0 20.0 10.0 0

155.4684  
154.1375  
153.9412  
153.5726  
152.4236  
148.1676

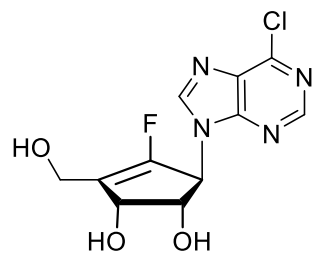
133.5661

123.9578

76.1126  
76.0838  
71.8470  
71.7895  
64.9005  
64.7808

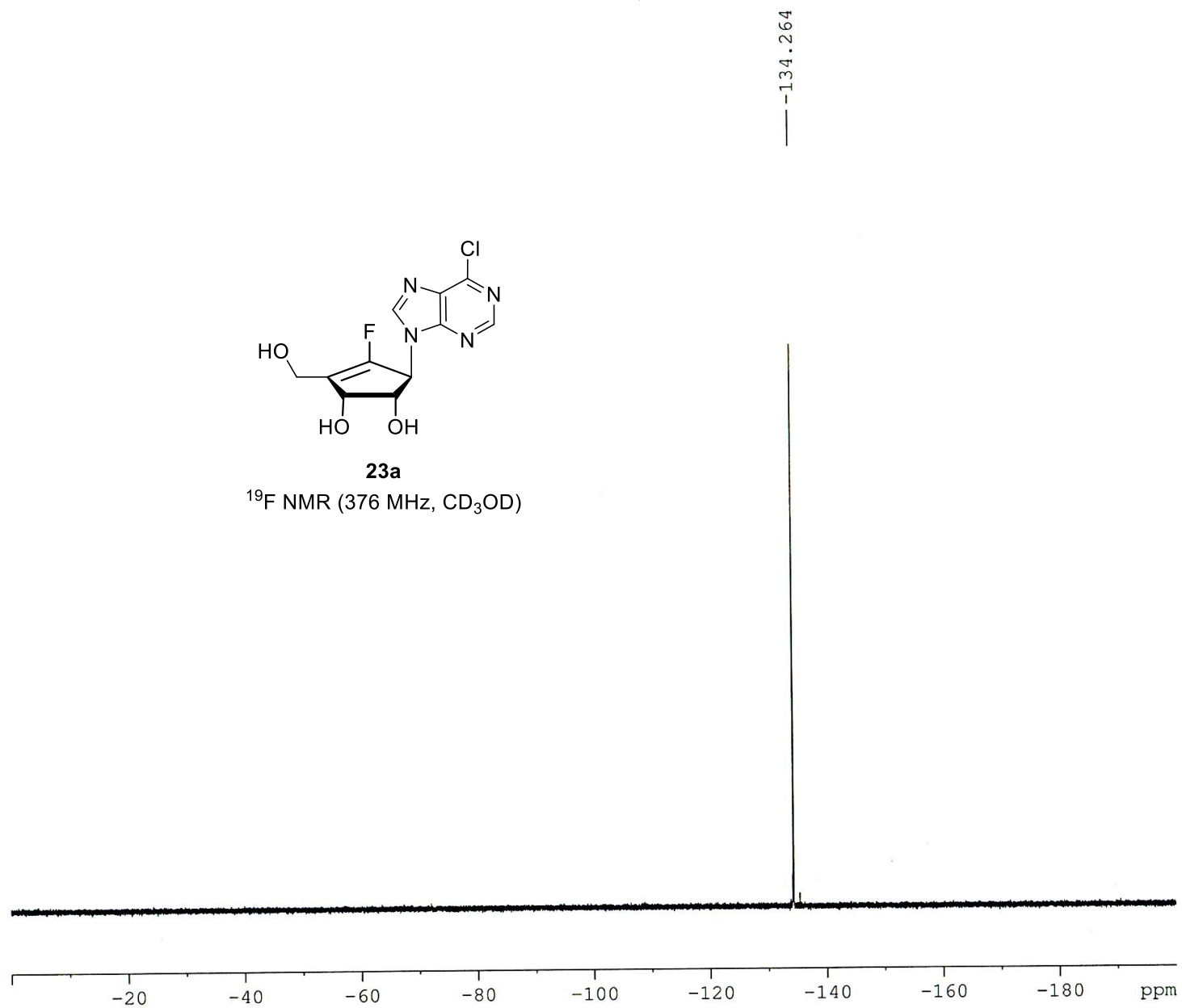
55.2395  
50.2271  
50.0835  
49.9399  
49.8010  
49.6574  
49.5138  
49.3750

ppm :  $^{13}\text{C}$

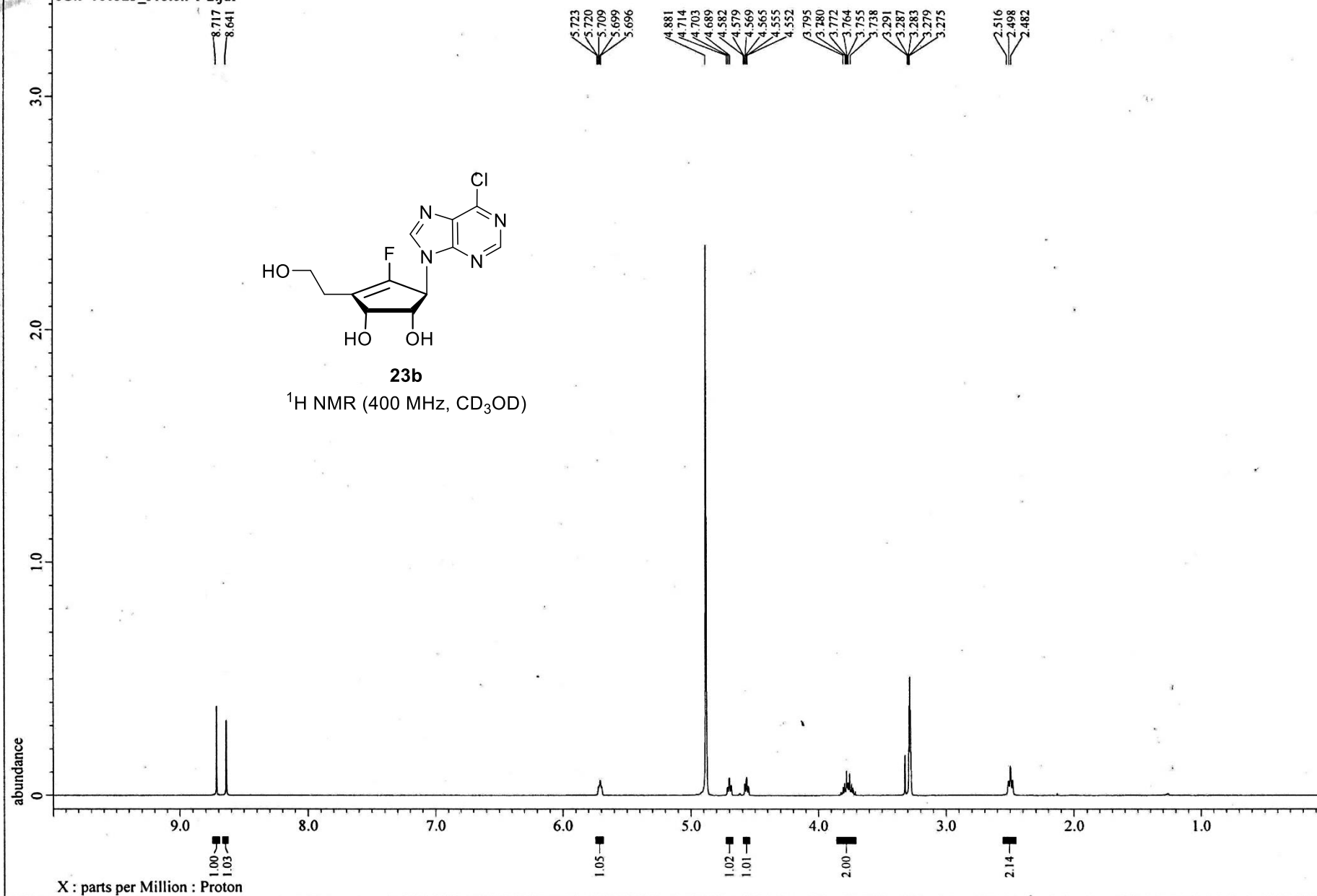


**23a**

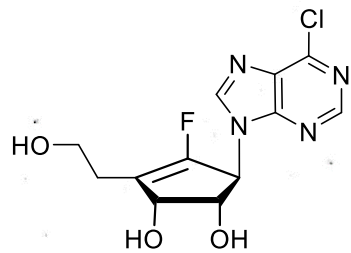
$^{19}\text{F}$  NMR (376 MHz,  $\text{CD}_3\text{OD}$ )



6CIP 180323\_Proton-1-2.jdf

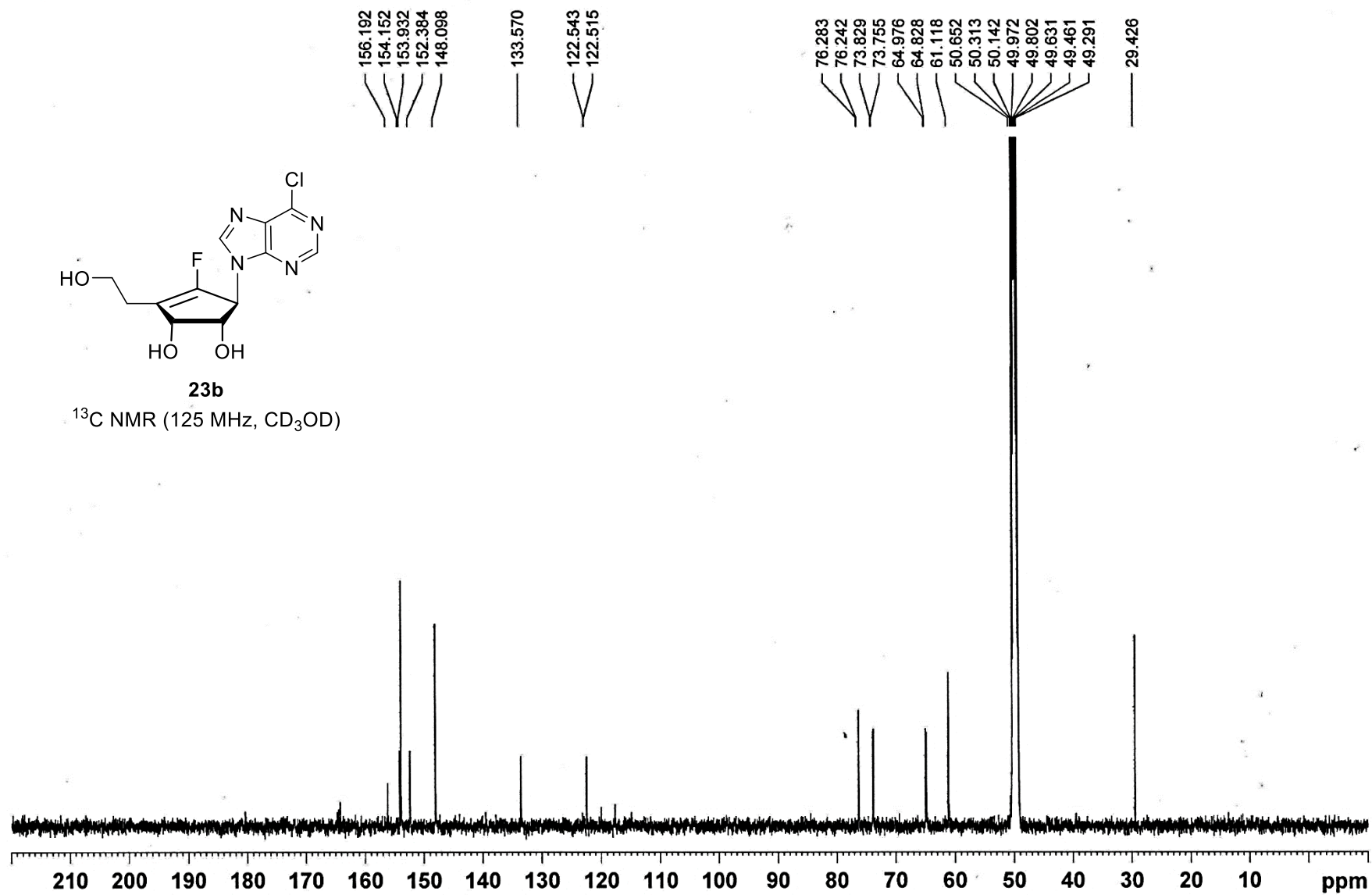


6-Cl purine (MeOD,500MHz)



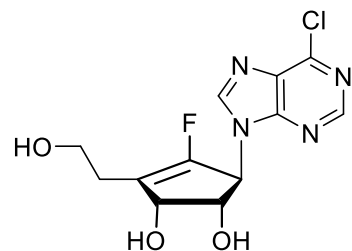
**23b**

$^{13}\text{C}$  NMR (125 MHz,  $\text{CD}_3\text{OD}$ )



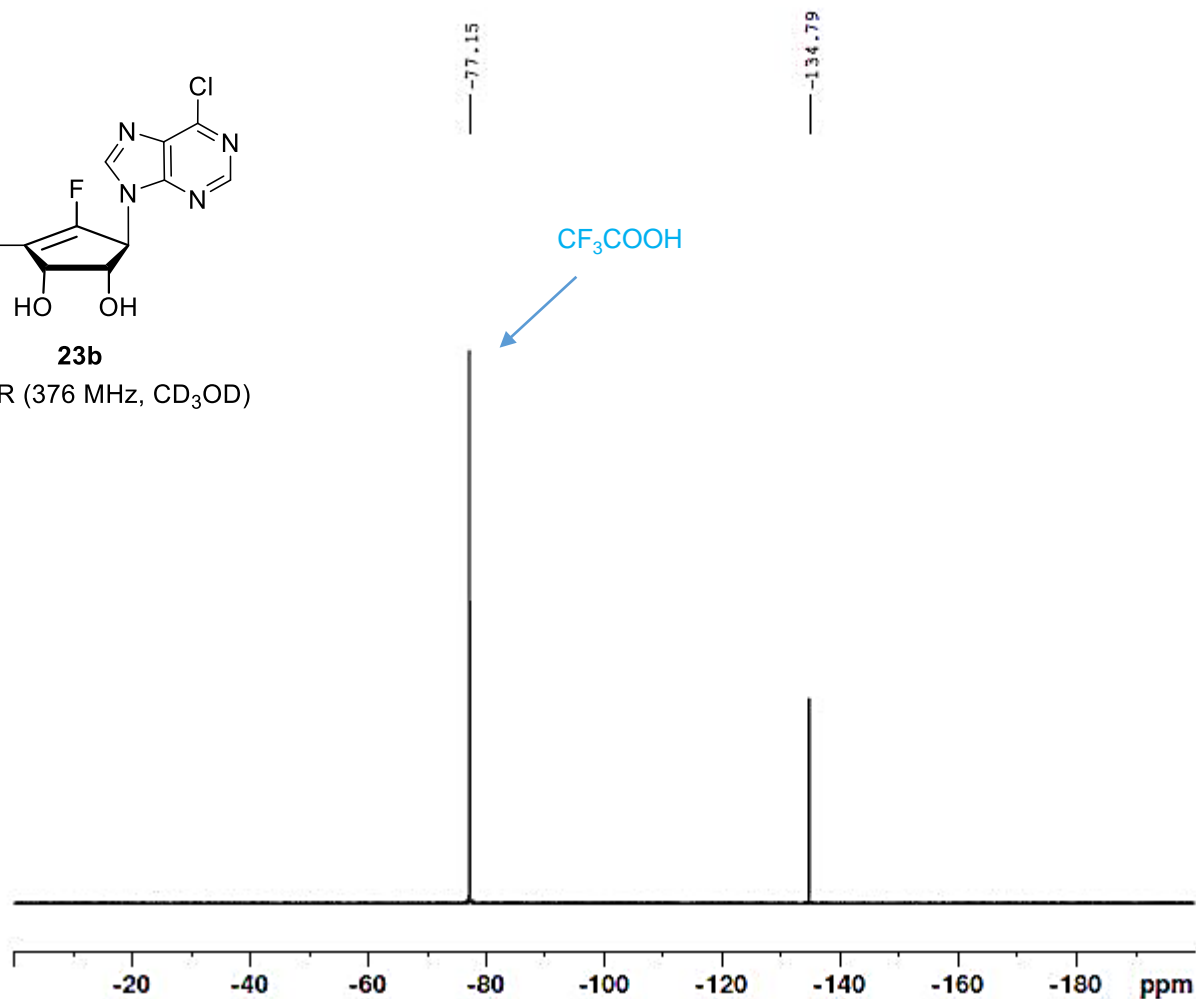


6CIP deprotection / 19F



**23b**

<sup>19</sup>F NMR (376 MHz, CD<sub>3</sub>OD)

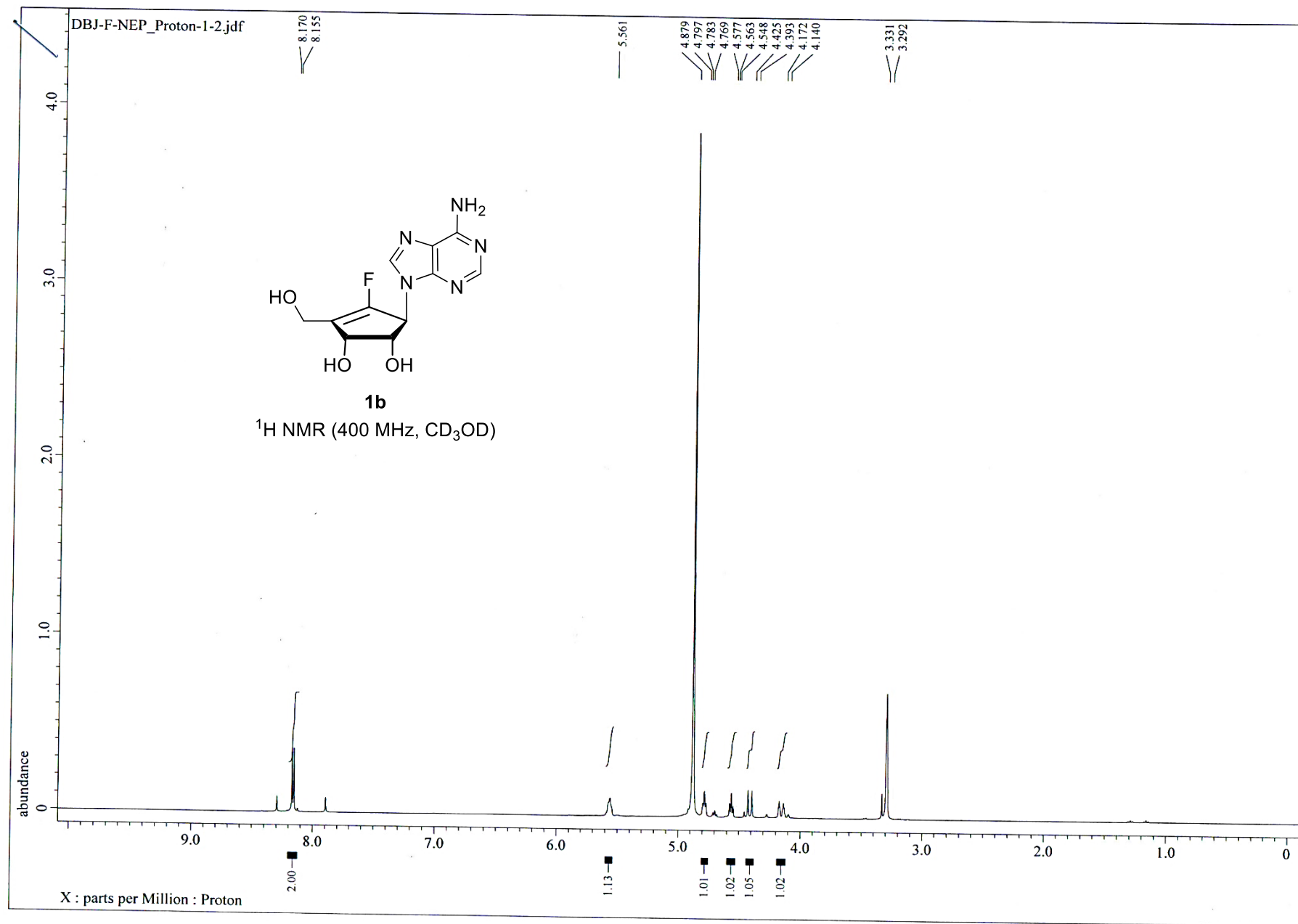


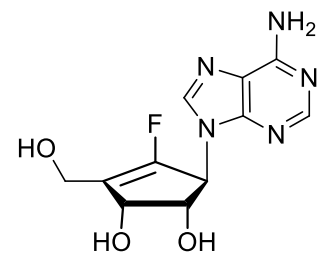
Current Data Parameters  
NAME mar27-ph-jmh  
EXPNO 1  
PROCNO 1

F2 - Acquisition Parameters  
Date\_ 20180327  
Time 13.58 h  
INSTRUM spect  
PROBHD Z3246\_0288 (PH  
PULPROG zgfhgqn.2  
TD 131072  
SOLVENT MeOD  
NS 32  
DS 4  
SWH 66964.289 Hz  
FIDRES 1.021794 Hz  
AQ 0.9786710 sec  
RG 201.38  
DW 7.467 usec  
DE 6.50 usec  
TE 298.0 K  
D1 2.00000000 sec  
D11 0.03000000 sec  
D12 0.00002000 sec  
TDO 1  
SFO1 282.3761146 MHz  
NUC1 19F  
P1 19.20 usec  
PLW1 21.00000000 W  
SFO2 300.1312005 MHz  
NUC2 1H  
CPDPRG[2] waltz16  
PCPD2 90.00 usec  
PLW2 10.00000000 W  
PLW12 0.17778000 W

F2 - Processing parameters  
SI 65536  
SF 282.4043552 MHz  
WDW EM  
SSB 0  
LB 1.00 Hz  
GB 0  
PC 1.00

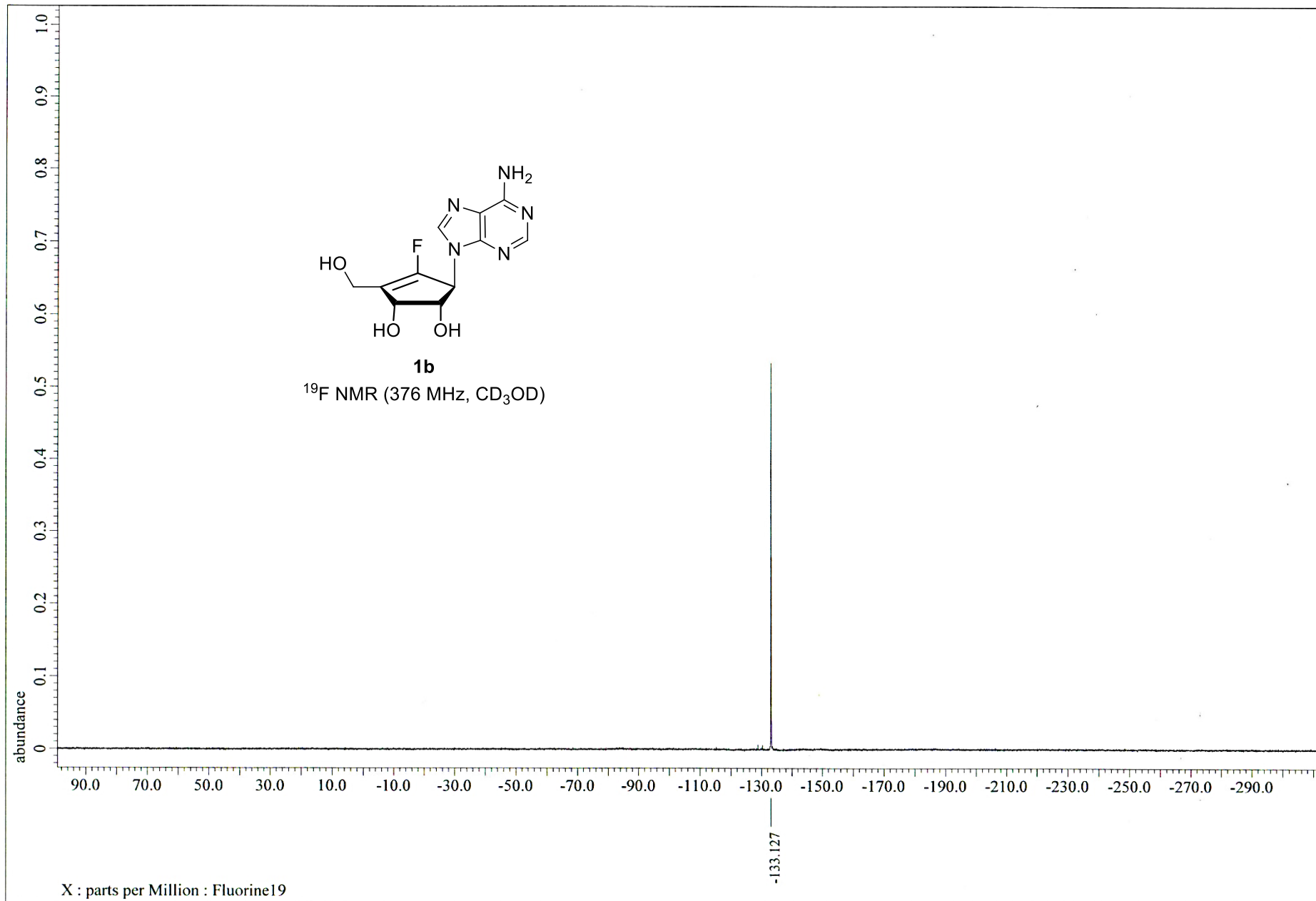
Act  
Go



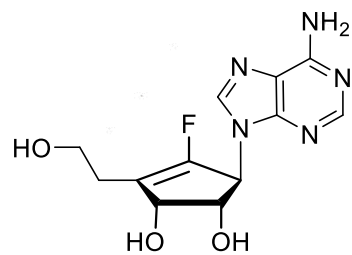


**1b**

$^{19}\text{F}$  NMR (376 MHz,  $\text{CD}_3\text{OD}$ )

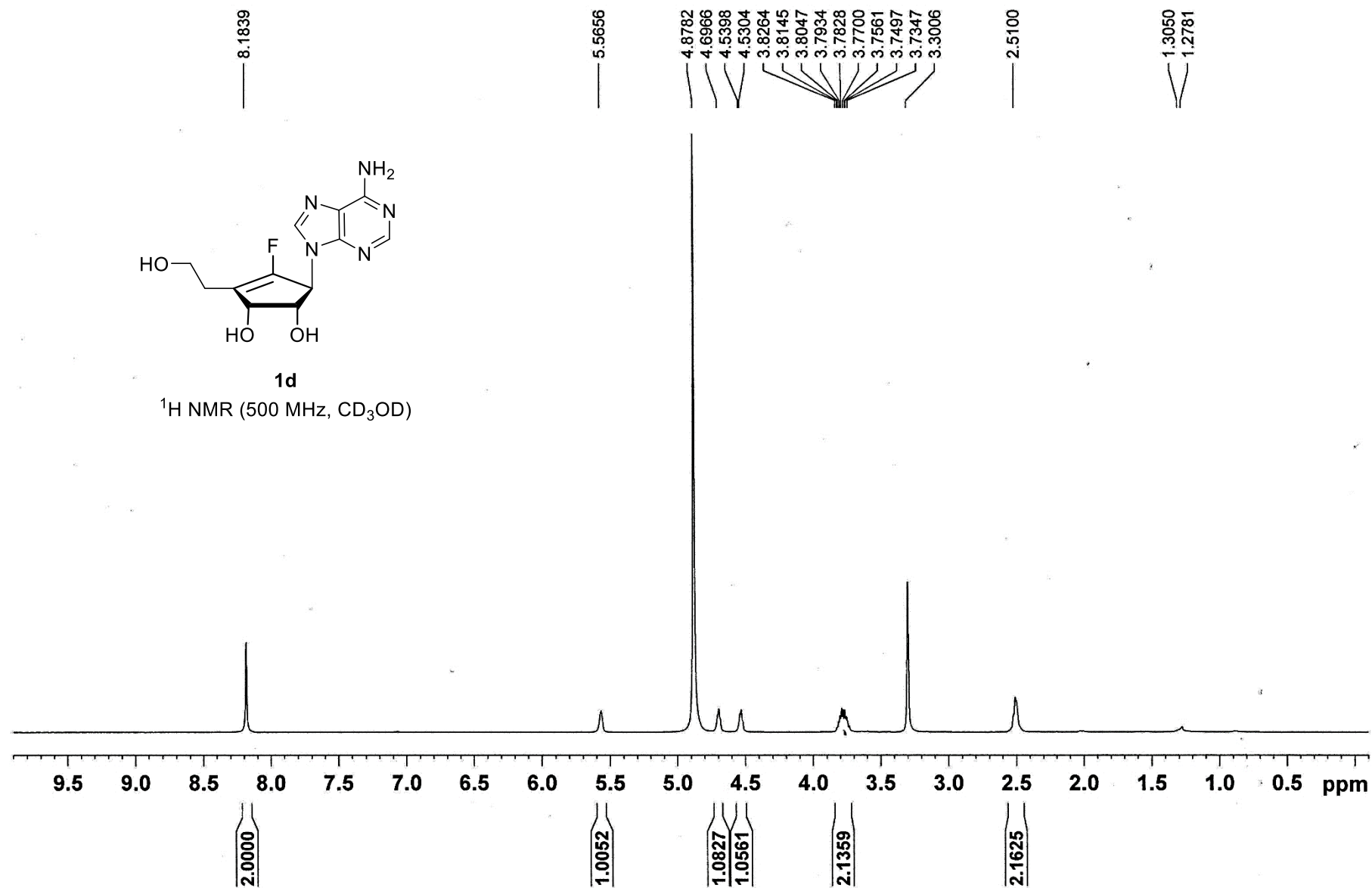


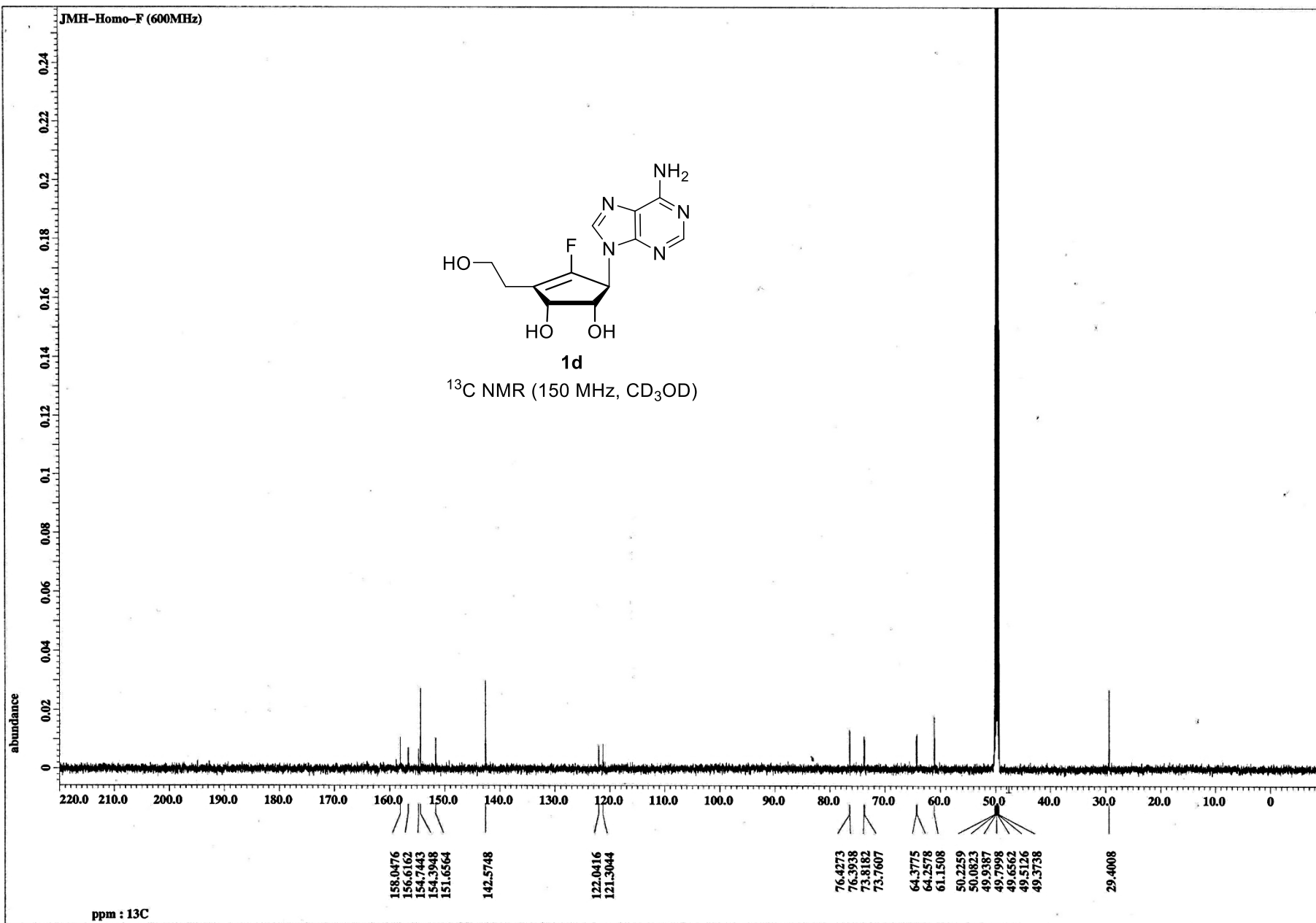
JMH-Homo-F (MeOD, 500MHz)

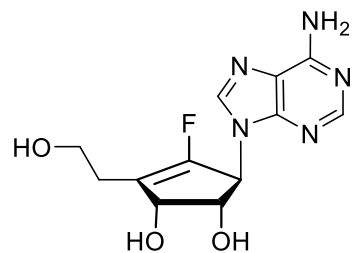


**1d**

$^1\text{H}$  NMR (500 MHz,  $\text{CD}_3\text{OD}$ )

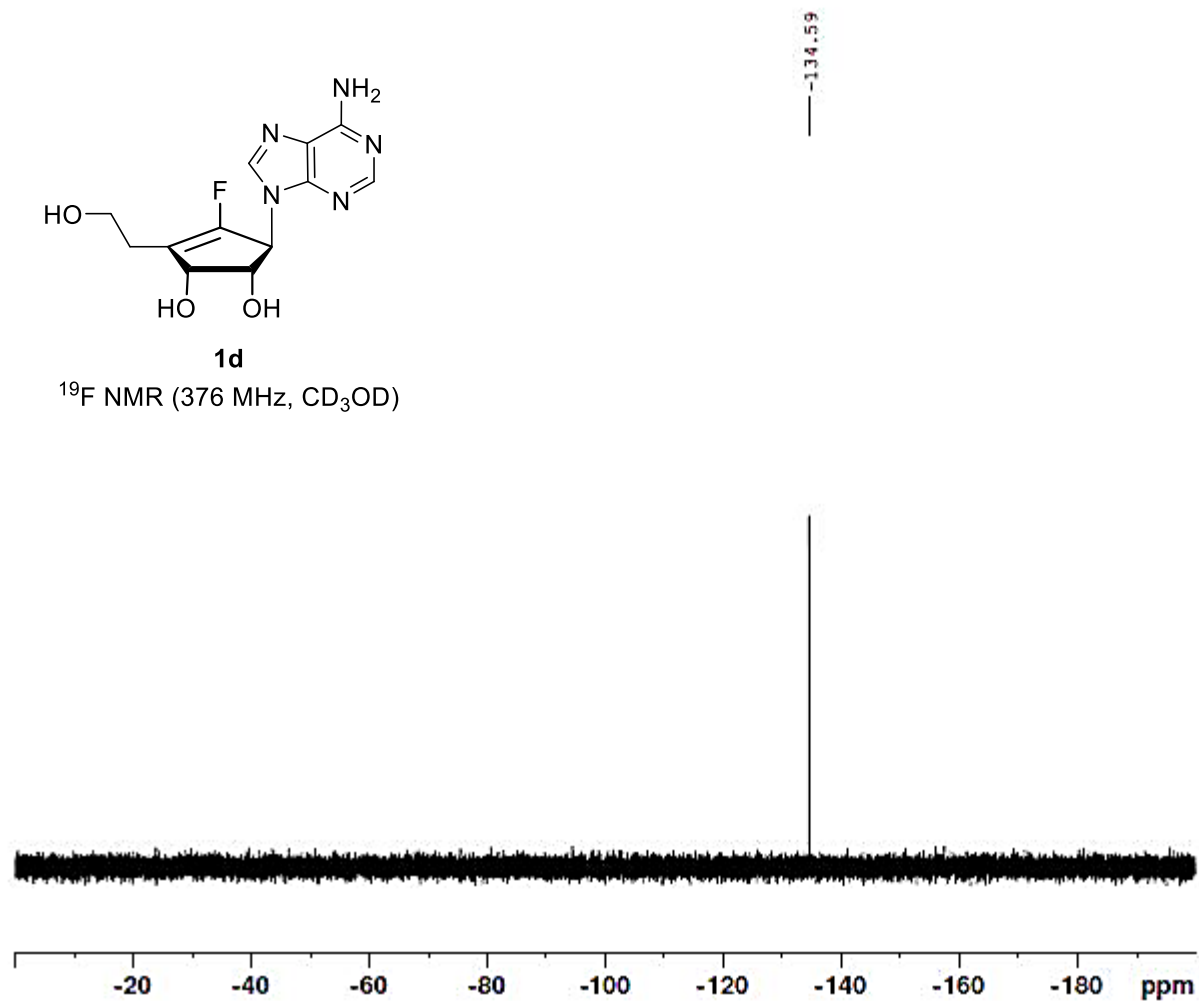






**1d**

<sup>19</sup>F NMR (376 MHz, CD<sub>3</sub>OD)



Current Data Parameters  
 NAME mar23-ph-jmh  
 EXPNO 2  
 PROCNO 1

F2 - Acquisition Parameters  
 Date\_ 20180323  
 Time 11.13 h  
 INSTRUM spect  
 PROBHD Z3246\_0288 (PH  
 PULPROG zgpg30  
 TD 131072  
 SOLVENT MeOD  
 NS 128  
 DS 4  
 SWH 66964.289 Hz  
 FIDRES 1.021794 Hz  
 AQ 0.9786710 sec  
 RG 201.38  
 DW 7.467 usec  
 DE 6.50 usec  
 TE 298.0 K  
 D1 2.00000000 sec  
 D11 0.03000000 sec  
 D12 0.00002000 sec  
 TDO 1  
 SFO1 282.3761146 MHz  
 NUC1 19F  
 P1 19.20 usec  
 PLW1 21.00000000 W  
 SFO2 300.1312005 MHz  
 NUC2 1H  
 CPDPRG2 waltz16  
 PCPD2 90.00 usec  
 PLW2 10.00000000 W  
 PLW12 0.17778000 W

F2 - Processing parameters  
 SI 65536  
 SF 282.4043552 MHz  
 WDW EM  
 SSB 0  
 LB 1.00 Hz  
 GB 0  
 PC 1.00