Supplementary Information

Synthesis, evaluation and molecular modelling of piceatannol analogues as arginase inhibitors

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Abbreviations: ABH (2(*S*)-amino-6-boronohexanoic acid), alc (alcohol), ald (aldehyde), ar (aromatic), ARG (Arginase), BEC (*R*-(2-boronoethyl)-L-cysteine), carb (carbamate), CHO (Chinese Hamster Ovary), EDG (ElectroDonnating Group), EWG (ElectroWithdrawing Group), imid (imidazole), morph (morpholine), NOHA (*N*ω-Hydroxy-Arginine), NOS (Nitric-Oxide Synthase), quant (quantitative yield).

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Quantum chemistry modelling

To address the various questions raised in this paper, we used the X-ray diffraction structure 3KV2 obtained by Di Costanzo and co-workers[1] to build a rather complete model of human arginase following most of the principles of the quantum chemical cluster approach.[2] The idea was to keep the duration of the chemical calculations at a reasonable level, but also to include all the necessary residues in order to give an accurate representation of electrostatic and steric effects inside the enzymatic cavity, and, of course, the complete coordination sphere of manganese cations. Our model features 21 residues, for a total of 241 atoms. The Cartesian coordinates of 25 of them, mostly alpha-carbon atoms, were frozen at all times to take into account the rigidity of the enzymatic structure around the manganese cluster. Softer constraints were applied at the entrance of the cavity, which is suggested to be more flexible.[3] The model is represented in figure S3 and its Cartesian coordinates can be found further down.
The electric charge of the system without inhibitor is -4 and the spin multiplicity was taken equal to +11 (ferromagnetic coupling), as suggested and applied successfully by Siegbahn.[4]
All calculations were performed with the Gaussian09 program, revision A.02.[5]
Given the size of the system, the structures (with or without inhibitor) were optimised at the DFT level of theory with the B3LYP functional[6] and Pople double-zeta basis sets 6-31G(d). The comparison of several of these structures, which were obtained with this method and also at the higher level of theory B3LYP/6-311+G(d,p) for verification, shows a surprisingly good consistency and thus suggests that 6-31G(d) is a sufficient basis set for the optimisation of these structures. However, the electronic energies presented in this work were calculated using single-point energy calculations at the B3LYP/6-311+G(d,p) level of theory.
The IEFPCM solvent model was applied to the system for all calculations, with a dielectric constant of ε = 78. Its actual value at the bottom of the pocket is probably significantly lower, but most parts of the largest inhibitors studied in this work is either partly solvated (in the pocket) or at the mouth of the cavity, in contact with the solution. To make sure that the binding mode hierarchy is not dependent on the value of the dielectric constant, we also optimized the structures of the three binding modes of catechol in the enzyme with a value of ε = 4, which is commonly accepted as a dielectric constant in a protein environment. The 'double' binding mode was also preferred with the latter value.
In this paper, the potential energies of complexation E^*_{comp} are always given relative to that of the unsubstituted catechol:

$$E_{comp}^{*(inhibitor+arginase)} = E^{(inhibitor+arginase)} - E^{(catechol+arginase)} - E^{(inhibitor)} + E^{(catechol)}$$

The size of our system and the frozen coordinates prevented us from computing thermodynamic corrections and the Gibbs free energies in particular, which would arguably allow better estimates of the affinity between the enzyme and its inhibitors. However, we

assume that the potential electronic energy is a relevant indicator in this study, where the different inhibitors have similar structures and sizes.

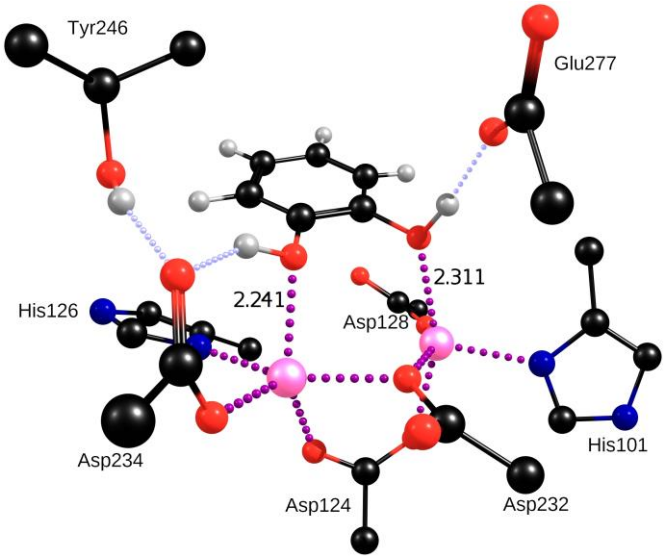
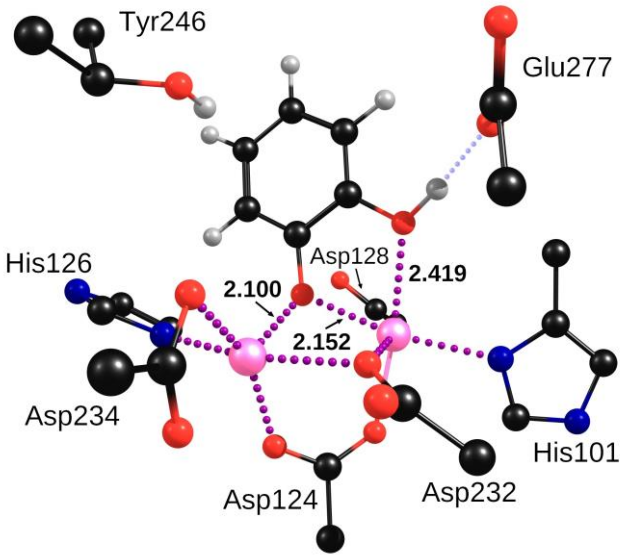


Fig. S1: Alternative 'double' binding mode of the catechol moiety to the manganese (pink atoms) cluster of arginase: the H-bond between the catechol and Asp234 replaces that with Tyr246 (Fig. 3A). Distances are shown in angstroms. Metal-ligand bonds are drawn with purple dotted lines and hydrogen bonds with pale blue dotted lines.



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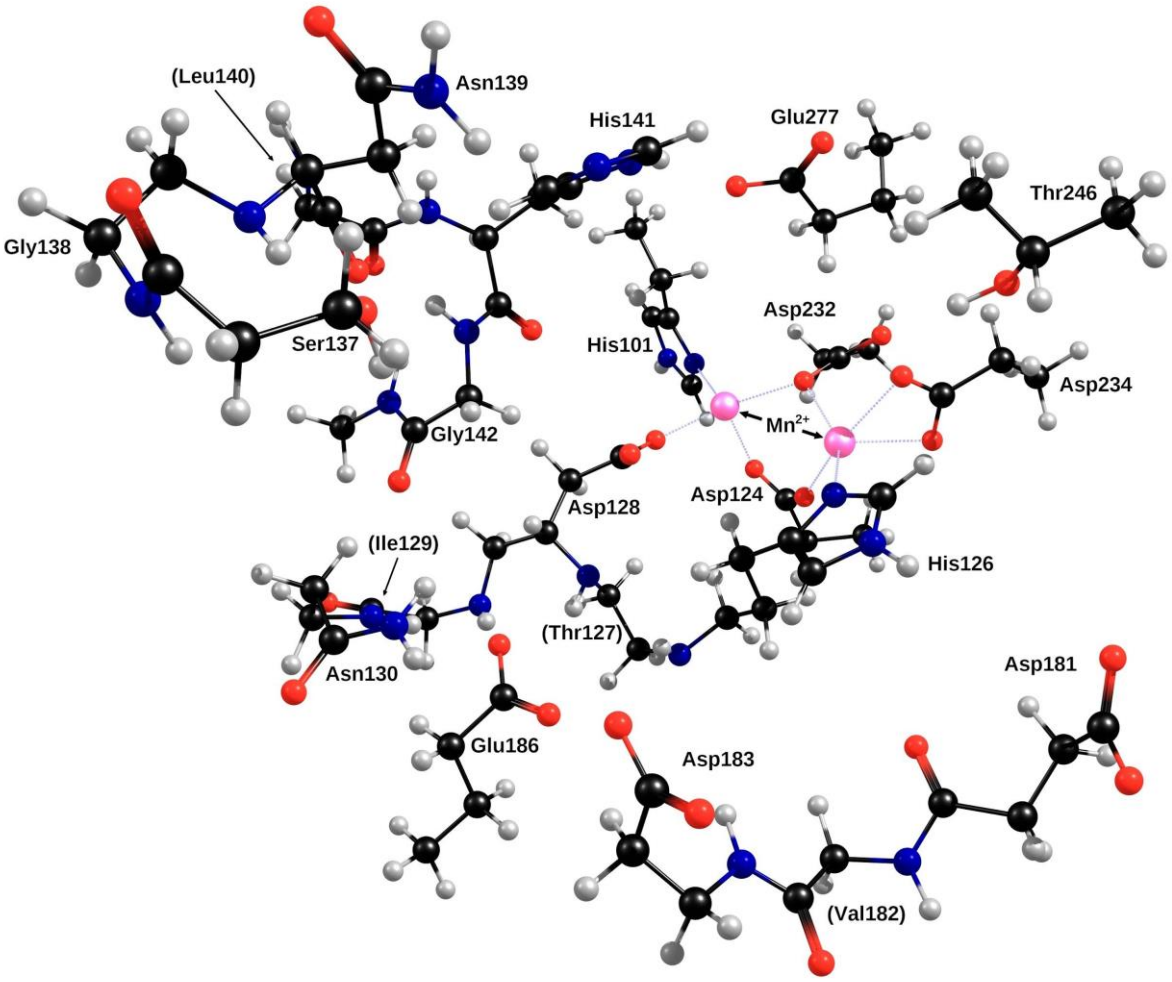


Fig. S3: Representation of the human arginase model used in this study. For reasons of clarity, some residues had to be slightly shifted. The side chains of the amino acids in parentheses were not included in the model.

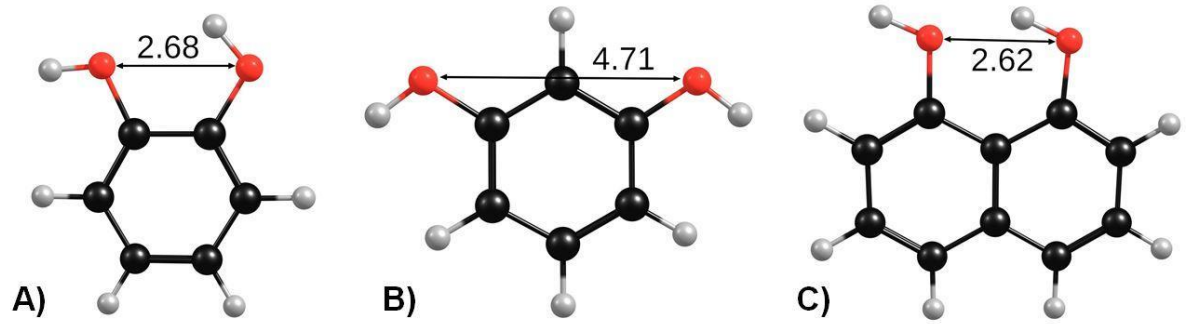


Fig. S4: Distance between the oxygen atoms of the phenol groups in: A) catechol (benzene-1,2-diol), B) resorcinol (benzene-1,3-diol) and C) 1,8-naphtalenediol (naphtalene-1,8-diol), in angstroms. The structures were optimized at the B3LYP/6-311+G(d,p) level of theory, in aqueous solution (IEFPCM).

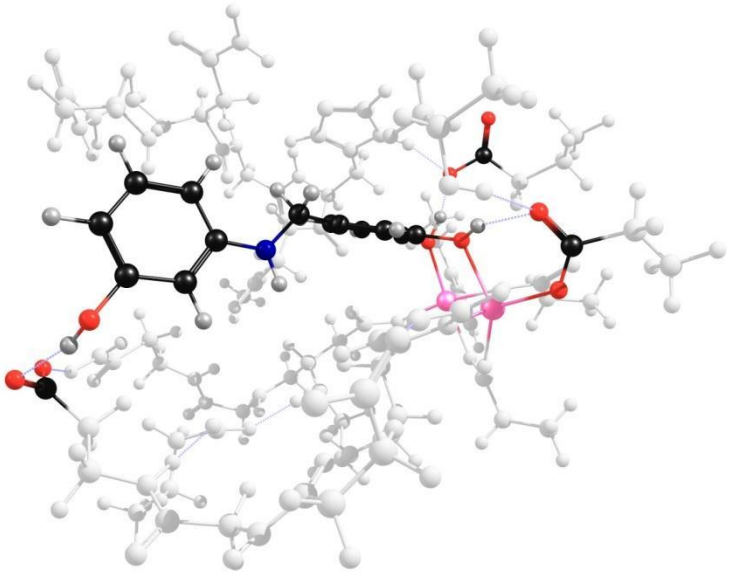


Fig. S5: Docking of 3p in the active site of arginase.

PDB files of the structures used in this study can be requested from Bruno Cardey (bruno.cardey@univ-fcomte.fr).

Table S1: Results of the screening at 500 µM on b-ARG1.

Name	Molecular weight (g/mol)	Inhibition % at 500 µM
1,3-benzodioxole	122,12	0%
1,8-naphtalendiol	160,17	61%
2-aminoaniline	108,14	34%
2-aminophenol	109,13	26%
2-mercaptophenol	126,17	26%
2-mercaptothiophenol	142,23	67%
3-bromocatechol	189,01	69%
3-carboxocatechol	138,12	38%
3-carboxycatechol	154,12	26%
3-cyanocatechol	135,12	32%
3-hydroxycatechol	126,11	44%
3-methoxycatechol	140,14	39%
4-(1-oxoeth-1-yl)catechol	152,15	22%
4-(2-aminoethyl)catechol	153,18	67%
4-(2-amino-propyl-3-oic)catechol	197,19	40%
4-(aminomethyl)catechol	139,15	40%
4-(ethyl-2-oic)catechol	168,15	48%
4-(hydroxymethyl)catechol	140,14	69%
4-(propenyl-3-oic)catechol	180,16	61%
4-aminocatechol	125,13	17%
4-bromocatechol	189,01	46%
4-carboxocatechol	138,12	18%
4-carboxycatechol	154,12	37%
4-chlorocatechol	144,55	44%
4-cyanocatechol	135,12	15%
4-hydroxycatechol	126,11	51%
4-nitrocatechol	155,11	9%
5-carboxo-3-nitrocatechol	183,12	10%
catechol	110,11	69%
ethyl salicylate	166,17	8%
methyl 4-carboxylatecatechol	168,15	66%
piperonal	150,09	2%
piperonyl acid	166,09	10%
piperonyl alcohol	152,15	0%
piperonyl amine	151,17	6%
resorcinol	110,11	7%
salicylaldehyde	122,04	21%
salicylamide	137,05	7%
salicylate de sodium	160,11	6%
salicylic alcohol	124,14	11%

Enzymatic assays

As arginase catalyses the conversion of L-arginine to L-ornithine and urea, arginase [purified liver bovine arginase (b-ARGI) or recombinant liver human arginase (h-ARGI)] activity was determined by spectroscopically measuring (Synergy HT BioTeck) the production of urea using an approach adapted from a previously described method.[7,8] Solutions of arginase I were prepared in 50 mM Tris-HCl buffer, pH 7.5, containing 100 mM of NaCl, 0.1% of bovine serum albumin and 20% v/v of glycerol to give arginase stock solutions at a final concentration of 12.5 mg/mL (b-ARGI) or 250 µg/mL (h-ARGI) and kept at -20 °C. Solutions of arginase I used in tests were prepared from 1.65 µL (b-ARGI) or 6 µL (h-ARGI) of previous stock solutions in 498 µL (b-ARGI) or 474 µL (h-ARGI) of buffer solution containing Tris-HCl (50 mM, pH 7.5) and 0.1% of bovine serum albumin (TBSA). Solution of urea was prepared in TBSA containing 15 mM of urea (SU). Solution of buffer was prepared in 50 mM Tris-HCl buffer, pH 7.5, containing 10 mM $MnCl_2$ as cofactor (THM). Solution of L-arginine was prepared in ultra-pure water, pH 9.7, containing 50 mM of L-arginine (L-ARG). The compounds to be tested were dissolved in DMSO at an initial concentration that was 7-fold greater than its final concentration in the well. To each well of a 96-well microtiter plate was added in this order: 10 µL of TBSA (blank), 10 µL of TBSA with arginase or 10 µL of SU (false positive control), 30 µL of THM, 10 µL of a solution of the inhibitor or its solvent (as 100% activity of arginase) and 20 µL of LARG. After incubating the microplate for 60 min at 37 °C in a water bath covered with a plastic sealing film, 60 µL of colorimetric reagent was added. This reagent, which is made immediately before use, is prepared by combining two stock solutions in 1:1 volumes of solutions A (10 mM o-phthaldialdehyde in 15% sulphuric acid) with solution B (4 mM primaquine diphosphate, 130 mM boric acid in 15% sulphuric acid). To allow colour development, after adding the colorimetric reagent, the microplate was allowed to stand for 15 minutes at room temperature. Inhibition of arginase is computed by measuring the optical density (OD) of the reaction mixture at 450 nm and normalising the OD value to the percent inhibition that is observed in the 100% activity of arginase. For the first screening, compounds were tested at final concentration of 500 µM and percentage of inhibition is directly observed as described above. For IC_{50} determination, compounds were tested at final concentrations of 1.0, 3.0, 10, 30, 100, 300, 1000 and 3000 µM. The normalised OD was used to generate a concentration-response curve by plotting the normalised OD on a semi-logarithmic scale. The IC_{50} values were estimated by nonlinear sigmoidal curve-fitting by using Prism (GraphPad Software, version 5.0.3). The type of inhibition and Ki value were determined with the same experimental approach, with three concentrations of inhibitor (around IC_{50} /2, IC_{50}, IC_{50} x2) and a 100% activity of arginase (control) under increasing concentrations of L-arginine (2.86, 7.15, 14.3 and 28.6 mM). The kinetics data were analysed using a Dixon Plot (obtained by reciprocal reaction-velocity vs inhibitor concentrations), Cornish-Bowden plot (arginine concentration multiplied by the reciprocal enzyme reaction velocity vs. inhibitor concentrations) and Lineweaver-Burk plot (obtained by reciprocal reaction velocities vs. reciprocal of substrate concentrations). The Ki value was obtained by a secondary plot of the Lineweaver-Burk plot (obtained by the slopes of the

regression lines in the Lineweaver-Burk plot vs inhibitor concentrations). These plots were established using Prism (v 5.0.3, GraphPad Software).

Functional cell assays

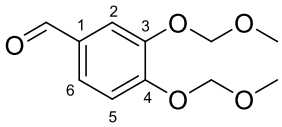
The intracellular activity towards human arginase 1 (h-ARG1) was assessed in transiently transfected CHO-K1 (ATCC® CCL-61™) cells. The cell culture was maintained in Ham's F-12 Nutrient Mix (Gibco) supplemented with 10% FBS (Gibco) at 37°C and 10% CO_2. Before the experiment, the cells were seeded into 96-well plates at 12 × 10^6 cells/well. The transfection was achieved using the pcDNA3.1 vector carrying h-ARG1 cDNA and Lipofectamine® 2000 reagent according to the instructions of the manufacturer. After 24 h, the culture medium was changed to Opti-MEM Reduced Serum Medium (Gibco) with the addition of L-arginine (5 mM, Merck), manganese (II) chloride (150 µM, Merck) and serial dilutions of the tested compounds. The compounds were initially dissolved in DMSO to obtain 90 mM stock solutions. Final DMSO concentrations in the reaction mixture did not exceed 2% (v/v). Following 24 h incubation, the level of urea released to the culture medium was determined. The colorimetrically detectable product was developed as described by Jung et al.[7] with minor changes. Measured absorbance values were normalized to the negative (cells transfected with empty vector, no enzyme activity) and positive (no inhibitor added, initial enzyme activity) controls. The enzyme inhibition curves were plotted using GraphPad Prism 8.0 and the IC_{50} values were determined.

Synthesis experiments

Starting material reagents and analytical grade solvents were purchased from Sigma Aldrich, TCI Chemicals, Fisher Scientific or Fluorochem. All reactions were routinely checked by TLC using Merck Kieselgel 60 F_{254} aluminium plates and visualised by UV light. IR spectra were performed on a Spectrum 65 PerkinElmer with UATR and principal absorption values are given in cm-1. ^{1}H and ^{13}C NMR spectra were recorded in DMSO-d6 using a Bruker AC 400 MHz (^{1}H) or 75 MHz (^{13}C) instruments. Chemical shifts are given in parts per million (ppm) and referenced to residual solvent pics and coupling constants J is given in Hertz (Hz). ESI – MS analyses were carried out at the Service Commun d'Analyse, ICMR – UMR CNRS 6229 – 51 100 Reims.

Synthesis of 3,4-bis(methoxymethoxy)benzaldehyde **1a**:

To a solution of 3,4-dihydroxybenzaldehyde (1 equiv., 2 g, 14.5 mmol) in DCM (145 mL) was added at 0 °C bromo(methoxy)methane (4.2 equiv., 7.6 g, 5.0 mL, 60.8 mmol) followed 30 min later by DIPEA (5.2 equiv., 9.73 g, 12.4 mL, 75.3 mmol), and then the reaction mixture was stirred at room temperature for 4 hours. The reaction mixture was treated with HCl 1 N (150 mL), the layers were separated, the aqueous phase was extracted with DCM (100 mL), the organic layers were combined, washed with NaOH 1N (80 mL), HCl 1 N (80 mL), brine (80 mL), dried over $MgSO_4$, filtered and concentrated under vacuum in order to get a crude compound (3.35 g) as brown oil. This crude compound was then purified by flash column chromatography, solid deposit (Celite), 40 g SiO_2, Heptane/EtOAc 100/0 for 5 CV, 100/0 to 80/20 for 15 CV, to give pure compound (3 g, yield = 92%) as a white solid.



Rf: 0.2 (Hept/AcOEt 8/2).

IR (UATR, cm^{-1}): 2935, 2833($\nu_{C=H\ ald}$), 1673($\nu_{C=O\ ald}$), 1584, 1505.

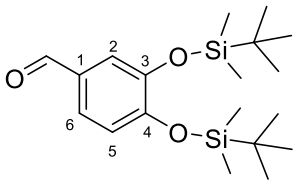
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 3.41 (s, 3 H, OC**H**$_3$), 3.42 (s, 3 H, OC**H**$_3$), 5.27 (s, 2 H, H_{OCH_2O}), 5.33 (s, 2 H, H_{OCH_2O}), 7.30 (d, *J*=6.9 Hz, 1 H, H_5), 7.58 (dd, *J*=6.9, 2.0 Hz, 1 H, H_6), 7.59 (d, *J*=2.0 Hz, 1 H, H_2), 9.85 (s, 1 H, C**H**O).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 55.80 (O**C**H$_3$), 55.90 (O**C**H$_3$), 94.30 (O**C**H$_2$O), 94.70 (O**C**H$_2$O), 115.40 (C_2), 115.59 (C_6), 126.25 (C_5), 130.54 (C_1), 146.96 (C_{3*}), 152.19 (C_{4*}), 191.42 (**C**HO).

Synthesis of 3,4-bis[(*tert*-butyldimethylsilyl)oxy]benzaldehyde **1b**:

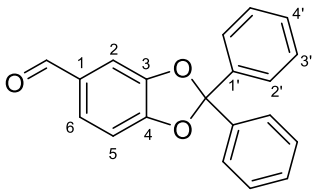
To a solution of TBDMSCl (2.5 equiv., 13.6 g, 90.5 mmol) in Et_2O (122 mL) vigorously stirred and cooled at 0 °C was added 3,4-dihydroxybenzaldehyde (1 equiv., 5 g, 36.2 mmol) followed by DBU (3 equiv., 16.5 g, 16.2 mL, 109 mmol) dropwise. After 15 min, the reaction mixture was allowed to reach room temperature and was stirred for 16 hours. The reaction mixture was diluted with Et_2O (30 mL), washed with HCl 1N (50 mL), the layers were separated and the aqueous layer was extracted with Et_2O (2 x 100 mL). The organic layers were combined, washed with HCl 1N (120 mL), brine (100 mL), dried over $MgSO_4$ and concentrated under vacuum to

obtain the crude compound (15.5 g) as brown oil. This crude compound was purified on flash column chromatography, 200 g SiO_2, liquid deposit (Hexane), Hexane/Et_2O, 100/0 for 5 CV, 100/0 to 90/10 for 10 CV to get pure compound (10.4 g, yield = 79%) as yellow oil.



Rf: 0.6 (Hept/Et_2O 9/1).
IR (UATR, cm^{-1}): 2955, 2928, 2857($\nu_{C\text{-}H\ ald}$), 1695 ($\nu_{C=O\ ald}$), 1571, 1505.
^1H NMR (400 MHz, DMSO-d_6) δ ppm: 0.23 (s, 12 H, SiC**H**$_3$), 0.96 (s, 18 H, SiC(C**H**$_3$)$_3$), 7.07 (d, *J*=8.2 Hz, 1 H, H_5), 7.34 (d, *J*=2.1 Hz, 1 H, H_2), 7.47 (dd, *J*=8.2, 2.1 Hz, 1 H, H_6), 9.82 (s, 1 H, C**H**O).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -4.31 (Si**C**H_3), 18.12 (Si**C**$(CH_3)_3$), 25.59 (SiC(**C**H_3)$_3$), 120.10 (C_2), 120.84 (C_5), 125.06 (C_6), 130.59 (C_1), 146.76 (C_{3*}), 152.34 (s, C_{4*}), 191.40 (**C**HO).

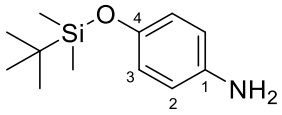
Synthesis of 2,2-diphenylbenzo[*d*][1,3]dioxole-5-carbaldehyde **1c**:
To a solution of 3,4-dihydroxybenzaldehyde (1 equiv., 10 g, 72.4 mmol) in ACN (200 mL) stirred at room temperature was added K_2CO_3 (2.2 equiv., 22 g, 159 mmol) followed 15 min later by 1,1-dichlorodiphenylmethane (1.05 equiv., 18 g, 14.7 mL, 76.0 mmol) added dropwise and the reaction mixture was stirred at room temperature overnight. To the reaction mixture was cautiously poured HCl 1N (150 mL) under stirring. The two layers were separated and the aqueous phase was extracted with Et_2O (100 mL). The organic layers were combined, washed with brine (100 mL), dried over $MgSO_4$, filtered, and concentrated under vacuum thus giving the crude product as brown oil. The crude product was then purified by manual column chromatography, solid deposit (Celite), 120 g SiO_2, Heptane/Et_2O 100/0 (250 mL), 90/10 (8 x 250 mL), to get the aimed compound (11.8 g, yield = 54%) as white solid.



Rf: 0.2 (Hept/Et_2O 9/1).
IR (UATR, cm^{-1}): 3067, 1679($\nu_{C=O}$), 1606.
^1H NMR (400 MHz, DMSO-d_6) δ ppm: 7.27 (d, *J*=8.1 Hz, 1 H, H_5), 7.41 - 7.49 (m, 7 H, $H_{2,3',4'}$), 7.51 - 7.57 (m, 4 H, $H_{2'}$), 7.59 (dd, *J*=8.1, 1.7 Hz, 1 H, H_6), 9.82 (s, 1 H, C**H**O).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 107.11 (C_2), 109.13 (C_5), 117.79 (Ph-**C**-Ph), 125.67 ($C_{2'}$), 128.56 (C_6), 128.70 ($C_{3'}$), 129.71 ($C_{4'}$), 131.85 (C_1), 138.97 ($C_{1'}$), 147.41 (C_{3*}), 151.55 (C_{4*}), 190.99 (**C**HO).

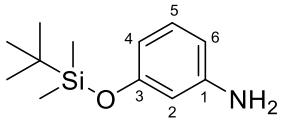
Synthesis of 4-[(*tert*-butyldimethylsilyl)oxy]aniline **1d**:

To a solution of the 4-aminophenol (1.0 equiv., 250 mg, 2.29 mmol) in DCM (23 mL) stirred and cooled at 0 °C was added TBDMSCl (1.5 equiv., 518 mg, 595 µL, 3.44 mmol) followed by DBU (2.0 equiv., 698 mg, 685 µL, 4.58 mmol) dropwise. After 15 min, the reaction mixture was allowed to reach room temperature and was stirred for 3 h. The reaction mixture was concentrated under vacuum to get the crude product. This crude product was then purified using flash column chromatography, solid deposit (Celite), 40 g SiO_2, Hexane/EtOAc 100/0, 5 CV, 100/0 to 75/25, 20 CV, to give the titled compound (468 mg, yield = 91%) as a colourless oil.



Rf: 0.3 (Hept/Et_2O 9/1).

^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 0.10 (s, 6 H, SiC**H**$_3$), 0.93 (s, 9 H, SiC(C**H**$_3$)$_3$), 4.59 (s, 2 H, N**H**$_2$), 6.44 - 6.50 (m, 2 H, H_3), 6.51 - 6.56 (m, 2 H, H_2).



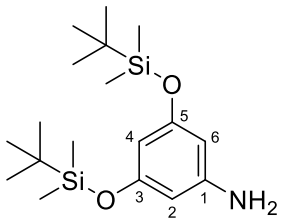
3-[(*tert*-butyldimethylsilyl)oxy]aniline **1e** was prepared as **1d** (425 mg, yield = 83%) as colourless oil.

Rf: 0.4 (Hept/Et_2O 9/1).

^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 0.09 - 0.23 (m, 6 H, SiC**H**$_3$), 0.89 - 0.99 (m, 9 H, SiC(C**H**$_3$)$_3$), 4.99 (br. s., 2 H, N**H**$_2$), 5.94 - 6.02 (m, 1 H, H_6), 6.07 - 6.13 (m, 1 H, H_2), 6.14 - 6.20 (m, 1 H, H_4), 6.84 (t, *J*=8.0 Hz, 1 H, H_5).

Synthesis of 3,5-bis[(*tert*-butyldimethylsilyl)oxy]aniline **1f**:

To a suspension of 5-aminobenzene-1,3-diol hydrochloride (1 equiv., 400 mg, 2.48 mmol) in DCM (25 mL) stirred and cooled at 0 °C was added TBDMSCl (3 equiv., 1.12 g, 1.29 mL, 7.43 mmol) followed by DBU (4.5 equiv., 1.70 g, 1.66 mL, 11.1 mmol) dropwise. After 15 min, the reaction mixture was allowed to reach room temperature and was stirred for 6 h. The reaction mixture was diluted with DCM (until 50 mL) washed with water (20 mL, acidified until pH 7 with 1N HCl), water (20 mL), brine (20 mL), dried over $MgSO_4$, filtered and concentrated under vacuum to get the crude extract (1.16 g) as yellow oil. This crude product was purified by flash column chromatography, solid deposit (Celite), 15 g SiO_2, Heptane/EtOAc 100/0, 5 CV, 100/0 to 85/15, 20 CV, to give the aimed compound (722 mg, yield = 82%) as a white solid.

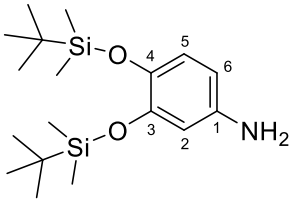


Rf: 0.5 (Hept/Et_2O 9/1).

IR (UATR, cm^{-1}): 3374(ν_{C-N}), 2931, 2859, 1583.

^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 0.14 (s, 12 H, SiC**H**$_3$), 0.92 (s, 18 H, SiC(C**H**$_3$)$_3$), 5.01 (s, 2 H, N**H**$_2$), 5.47 (t, *J*=2.2 Hz, 1 H, H_4), 5.73 (d, *J*=2.2 Hz, 2 H, $H_{2,6}$).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -4.46 (Si**C**H$_3$), 17.91 (Si**C**(CH$_3$)$_3$), 25.55 (SiC(**C**H$_3$)$_3$), 99.48 ($C_{2,6}$), 99.67 (C_4), 150.43 (C_1), 156.37 ($C_{3,5}$).



3,4-bis[(*tert*-butyldimethylsilyl)oxy]aniline **1g** was prepared as **1f** (645 mg, yield = 94%) as white solid.

Rf: 0.4 (Hept/Et_2O 9/1).

IR (UATR, cm^{-1}): 3439(ν_{C-N}), 2929, 2858, 1504.

^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 0.06 - 0.20 (m, 12 H, SiC**H**$_3$), 0.89 - 0.96 (m, 18 H, SiC(C**H**$_3$)$_3$), 4.58 (s, 2 H, N**H**$_2$), 6.03 (dd, *J*=8.3, 2.7 Hz, 1 H, H_6), 6.16 (d, *J*=2.7 Hz, 1 H, H_2), 6.50 (d, *J*=8.6 Hz, 1 H, H_5).

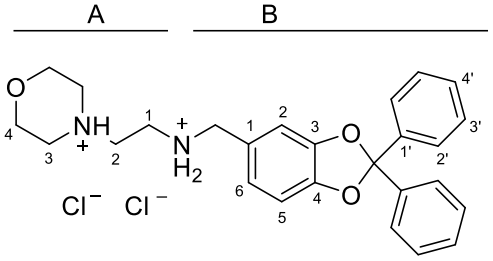
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -4.22 (Si**C**H$_3$), 18.07 (Si**C**(CH$_3$)$_3$), 25.81 (SiC(**C**H$_3$)$_3$), 107.21 (C_2), 107.34 (C_6), 120.90 (C_5), 136.45 (C_1), 143.28 (C_{3*}), 146.17 (C_{4*}).

Reductive amination:

To a solution of 3,4-bis[(*tert*-butyldimethylsilyl)oxy]benzaldehyde (1 equiv., 250 mg, 0.680 mmol) in MeOH (10 mL) under argon was added AcOH (1.5 equiv., 61.4 mg, 58.6 µL, 1.02 mmol), $MgSO_4$ (3 equiv., 246 mg, 2.05 mmol) , then amine (3 equiv.) and the reaction mixture was stirred at room temperature for 2 h. Then, the reaction mixture was cooled down to 0 °C and $NaBH_3CN$ (1.5 equiv., 64.3 mg, 1.02 mmol) was carefully added and the reaction mixture stirred for 10 min at 0 °C and left overnight at room temperature. The reaction mixture was concentrated under vacuum, recovered with EtOAc (30 mL), washed with $NaHCO_3$ (20 mL), the aqueous layer was extracted with EtOAc (20 mL), the organic layers were combined, washed with brine (20 mL), dried over $MgSO_4$, filtered and concentrated under vacuum in order to obtain the crude compound.

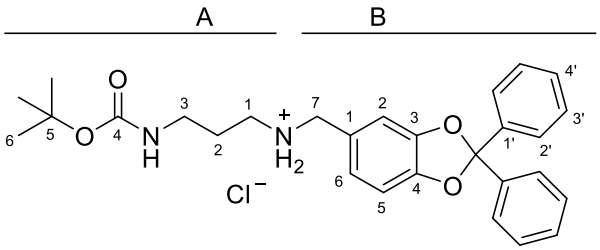
Method A: This crude product was diluted in Et_2O, treated with HCl 1N in Et_2O, triturated, filtered, washed with a minimum amount of Et_2O and dried under vacuum to get the aimed compound as a hydrochloride salt.

Method B: This crude product was purified by flash column chromatography, solid deposit (Celite), 15 g SiO_2, Heptane/EtOAc 100/0, 5 CV, 100/0 to X/Y, 20 CV, to give the aimed compound free base.



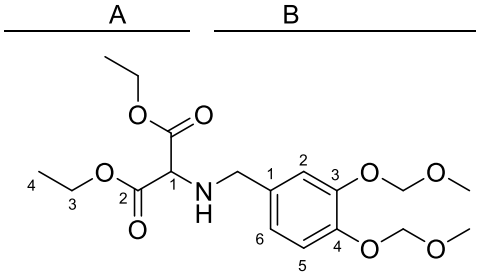
N-((2,2-diphenylbenzo[*d*][1,3]dioxol-5-yl)methyl)-2-morpholinoethan-1-amine dihydrochloride **2a w**as prepared following method **A** as yellowish solid (156 mg, yield = 42%).
Rf: 0.2 (DCM / MeOH [NH_3 1M] 95/5).

IR (UATR, cm^{-1}): 2925.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 3.12 (br s, 2 H, H_{A3eq}), 3.41 (br s, 6 H, $H_{A3ax,A4}$), 3.80 (br s, 2 H, H_{A1}), 3.97 (br s, 2 H, H_{A2}), 4.10 (br s, 2 H, H_{BCH_2}), 7.10 (s, 2 H, $H_{B2,B6}$), 7.34 (s, 1 H, H_{B5}), 7.39 - 7.49 (m, 6 H, $H_{B3',B4'}$), 7.54 (dd, *J*=7.8, 1.7 Hz, 4 H, $H_{B2'}$), 9.61 (br s, 2 H, N**H**$_2$), 11.30 (br s, 1 H, N**H**$_{morph}$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 49.96 (C_{BCH_2}), 51.56 ($C_{A1,A2}$), 52.06 (C_{A3}), 63.25 (C_{A4}), 108.69 (C_{B5}), 110.59 (C_2), 116.64 (Ph-**C**-Ph), 124.55 (C_{B6}), 125.66 (C_{B1}), 125.73 ($C_{B2'}$), 128.59 ($C_{B3'}$), 129.44 ($C_{B4'}$), 139.52 ($C_{B1'}$), 146.45 (C_{B3*}), 146.99 (C_{B4*}).



N^3-(*tert*-butoxy)carbonyl-*N*^{1}-((2,2-diphenylbenzo[*d*][1,3]dioxol-5-yl)methyl)propane-1,3-diamine hydrochloride **2b** was prepared following method **A** as white solid (189 mg, yield = 43%).
Rf: 0.2 (DCM / MeOH [NH_3 1M] 99/1).

IR (UATR, cm^{-1}): 2754, 1720.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 1.34 (s, 9 H, H_{A6}), 1.69 - 1.80 (m, 2 H, H_{A2}), 2.81 (br s, 2 H, H_{A1}), 2.91 - 3.02 (m, 2 H, H_{A3}), 4.01 (br s, 2 H, H_{BCH_2}), 6.93 (br s, 1 H, N**H**$_{carb}$), 7.04 (d, *J*=8.1 Hz, 1 H, H_{B6}), 7.08 (d, *J*=8.1 Hz, 1 H, H_{B5}), 7.29 (s, 1 H, H_{B2}), 7.39 - 7.49 (m, 6 H, $H_{B3',B4'}$), 7.50 - 7.58 (m, 4 H, $H_{B2'}$), 9.11 (br s, 2 H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 26.26 (C_{A2}), 28.19 (C_{A6}), 36.97 (C_{A3}), 44.13 (C_{A1}), 49.70 (C_{BCH_2}), 77.70 (C_{A5}), 108.59 (C_{B5}), 110.57 (C_{B2}), 116.58 (Ph-**C**-Ph), 124.48 (C_{B6}), 125.71 ($C_{B2'}$), 125.98 (C_{B1}), 128.57 ($C_{B3'}$), 129.42 ($C_{B4'}$), 139.58 ($C_{B1'}$), 146.44 (C_{B3*}), 146.86 (C_{B4*}), 155.69 (C_{A4}).



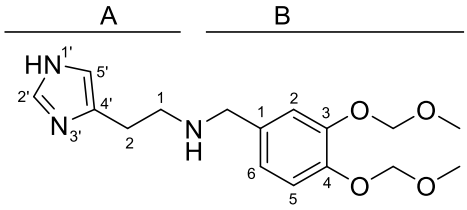
Diethyl 2-((3,4-bis(methoxymethoxy)benzyl)amino)malonate **2c** was prepared following method **B** as colourless oil (82 mg, yield = 19%).

Rf: 0.2 (Hept/AcOEt 8/2).

IR (UATR, cm^{-1}): 1760.

^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 1.18 (t, *J*=7.1 Hz, 6 H, H_{A4}), 2,89 (br s, 1H, N**H**), 3.39 (s, 3 H, C**H**$_3$O), 3.40 (s, 3 H, C**H**$_3$O), 3.64 (s, 2 H, H_{BCH_2}), 4.02 (s, 1 H, H_{A1}), 4.13 (qd, *J*=7.01, 2.2 Hz, 4 H, H_{A3}), 5.14 (s, 2 H, OC**H**$_2$O), 5.15 (s, 2 H, OC**H**$_2$O), 6.87 (dd, *J*=8.2, 2.1 Hz, 1 H, H_{B6}), 7.03 (d, *J*=8.2 Hz, 1 H, H_{B5}), 7.06 (d, *J*=2.1 Hz, 1 H, H_{B2}).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 13.88 (C_{A4}), 50.11 (C_{BCH_2}), 55.63 (**C**H$_3$O), 55.69 (**C**H$_3$O), 61.12 (C_{A3}), 63.38 (C_{A1}), 94.88 (O**C**H$_2$O), 94.92 (O**C**H$_2$O), 117.03 (C_{B6*}), 117.10 (C_{B2*}), 121.89 (C_{B5}), 133.71 (C_{B1}), 145.88 (C_{B3*}), 146.91 (C_{B4*}), 168.31 (C_{A2}).

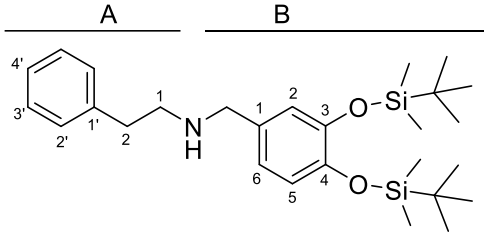


N-(3,4-bis(methoxymethoxy)benzyl)-2-(1*H*-imidazol-4-yl)ethan-1-amine **2d** was prepared following method **B** as colourless oil (115 mg, yield = 32%).

Rf: 0.2 (Hept/AcOEt 3/7).

^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 2.59 - 2.74 (m, 4 H, $H_{A1,A2}$), 3.33 (br s, 1 H, N**H**$_{amine}$), 3.35 - 3.45 (m, 6 H, OC**H**$_3$), 3.61 (s, 2 H, H_{BCH_2}), 5.11 - 5.18 (m, 4 H, OC**H**$_2$O), 6.73 (br. s., 1 H, $H_{A5'}$), 6.88 (dd, *J*=8.1, 1.2 Hz, H_{B6}), 7.01 (d, *J*=8.1 Hz, 1 H, H_{B5}), 7.06 (d, *J*=1.2 Hz, 1 H, H_{B2}), 7.47 (s, 1 H, $H_{A2'}$), 11.71 (br s, 1 H, N**H**$_{imid}$).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 48.78 (C_{BCH_2}), 52.44 ($C_{A1,A2}$), 55.62 (O**C**H$_3$), 55.70 (O**C**H$_3$), 94.86 (O**C**H$_2$O), 95.00 (O**C**H$_2$O), 116.89 (C_{B2}), 117.13 (C_{B6}), 121.61 ($C_{A5',B5}$), 134.40 ($C_{A2'}$), 135.38 ($C_{A4',B1}$), 145.53(C_{B3*}), 146.85 (C_{B4*}).

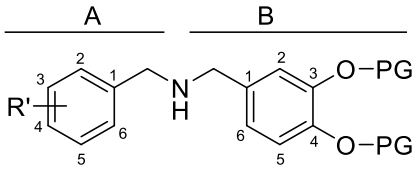


N-(3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)-2-phenylethan-1-amine **2e** was prepared following method **B** as colourless oil (205 mg, yield = 64%).

Rf: 0.2 (Hept/AcOEt 6/4).

^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 0.16 (s, 12 H, SiC**H**$_3$), 0.94 (s, 18 H, SiC(C**H**$_3$)$_3$), 1.96 (br s, 1 H, N**H**), 2.62 - 2.73 (m, 4 H, $H_{A1,A2}$), 3.58 (s, 2 H, H_{BCH_2}), 6.71 - 6.77 (m, 2 H, $H_{B5,B6}$), 6.82 (d, *J*=1.5 Hz, 1 H, H_{B2}), 7.13 – 7.20 (m, 3 H, $H_{A3',A4'}$), 7.22 - 7.28 (m, 2 H, $H_{A2'}$).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -0.5 (Si**C**H$_3$), 20.5 (Si**C**(CH$_3$)$_3$), 28.5 (SiC(**C**H$_3$)$_3$), 38.5 (C_{A1}), 53.0 (C_{BCH_2}), 55.3 (C_{A2}), 117.8 (C_{B6}), 118.2 (C_{B2}), 121.5 (C_{B5}), 128.5 ($C_{A4'}$), 130.9 ($C_{A3'}$), 131.3 ($C_{A2'}$), 134.3 (C_{B1}), 143.2 ($C_{A1'}$), 146.6 (C_{B3*}), 147.6 (C_{B4*}).



N-benzyl-1-(3,4-bis((*tert*-butyldimethylsilyl)oxy)phenyl)methanamine hydrochloride **2f** was prepared following method **A** as white solid (112 mg, yield = 33%).
Rf: 0.2 (Hept/Et_2O 8/2) [associated base].
IR (UATR, cm^{-1}): 2929, 2857, 1639, 1587, 1509.
^1H NMR (400 MHz, DMSO-d_6) δ ppm: 0.17 - 0.23 (m, 12 H, SiC**H**$_3$), 0.91 - 0.99 (m, 18 H, SiC(C**H**$_3$)$_3$), 4.02 (t, *J*=4.9 Hz, 2 H, H_{BCH_2}), 4.06 (t, *J*=5.3 Hz, 2 H, H_{ACH_2}), 6.88 (d, *J*=8.3 Hz, 1 H, H_{B5}), 7.01 (dd, *J*=8.3, 2.2 Hz, 1 H, H_{B6}), 7.11 (d, *J*=2.2 Hz, 1 H, H_{B2}), 7.39 - 7.44 (m, 3 H, $H_{B3,B4,B5}$), 7.53 (dd, *J*=7.4, 2.2 Hz, 2 H, $H_{B2,B6}$), 9.67 (br s, 2 H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -4.23 (Si**C**H_3), 18.10 (Si**C**$(CH_3)_3$), 25.70 (SiC(**C**H_3)$_3$), 49.29 (C_{ACH_2,BCH_2}), 120.62 (C_{B2}), 122.68 (C_{B6}), 123.87 (C_{B5}), 124.99 (C_{B1}), 128.58 ($C_{A3,A4,A5}$), 130.01 ($C_{A2,A6}$), 131.96 (C_{A1}), 146.10 (C_{B3*}), 146.87 (C_{B4*}).

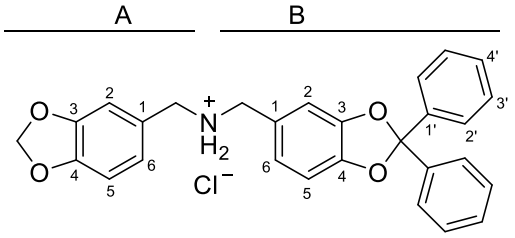
N-(3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)-1-(4-methoxyphenyl)methanamine hydrochloride **2g** was prepared following method **A** as white solid (142 mg, yield = 43%).
Rf: 0.2 (Hept/Et_2O 8/2) [associated base].
IR (UATR, cm^{-1}): 2932, 2858, 1575, 1509.
^1H NMR (400 MHz, DMSO-d_6) δ ppm: 0.20 (m, 12 H, SiC**H**$_3$), 0.95 (m, 18 H, SiC(C**H**$_3$)$_3$), 3.77 (s, 3 H, OC**H**$_3$), 4.01 (d, *J*=7.1 Hz, 4 H, H_{ACH_2,BCH_2}), 6.89 (d, *J*=8.1 Hz, 1 H, H_{B5}), 6.94 - 7.01 (m, 3 H, $H_{A2,A6,B6}$), 7.05 (d, *J*=2.0 Hz, 1 H, H_{B2}), 7.42 (d, *J*=8.6 Hz, 2 H, $H_{A3,A5}$), 9.14 - 9.38 (m, 2 H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -3.78 (Si**C**H_3), 18.54 (Si**C**$(CH_3)_3$), 26.13 (SiC(**C**H_3)$_3$), 49.87 (C_{ACH_2,BCH_2}), 55.70 (O**C**H_3), 114.55 ($C_{A3,A5}$), 121.27 (C_{B2}), 123.01 (C_{B6}), 123.98 (C_{A1}), 124.22 (C_{B5}), 125.34 (C_{B1}), 132.03 ($C_{A2,A6}$), 146.68 (C_{B3*}), 147.54 (C_{B4*}), 160.22 (C_{A4}).

N-(3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)-1-(3-methoxyphenyl)methanamine hydrochloride **2h** was prepared following method **A** as white solid (122 mg, yield = 37%).
Rf: 0.2 (Hept/Et_2O 8/2) [associated base].
IR (UATR, cm^{-1}): 2933, 1615, 1515.
^1H NMR (400 MHz, DMSO-d_6) δ ppm: 0.20 (m, 12 H, SiC**H**$_3$), 0.95 (m, 18 H, SiC(C**H**$_3$)$_3$), 3.77 (s, 3 H, OC**H**$_3$), 3.94 - 4.12 (m, 4 H, H_{ACH_2,BCH_2}), 6.89 (d, *J*=8.1 Hz, 1 H, H_{B5}), 6.94 - 7.02 (m, 2 H, $H_{A4,A6}$), 7.06 (dd, *J*=8.1, 2.0 Hz, 1 H, H_{B6}) 7.09 (d, *J*=2.0 Hz, 1 H, H_{B2}) 7.18 (br s, 1 H, H_{A2}) 7.33 (t, *J*=8.0 Hz, 1 H, H_{A5}) 9.58 (br. s., 2 H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -3.74 (Si**C**H_3), 18.60 (Si**C**$(CH_3)_3$), 26.19 (SiC(**C**H_3)$_3$), 49.80 (C_{ACH_2,BCH_2}), 55.68 (O**C**H_3), 115.00 (C_{A6}) 115.85 (C_{A4}), 121.13 (C_{B6}), 122.44 (C_{A2}), 123.25 (C_{B2}), 124.36 (C_{B5}), 125.46 (C_{A1}), 130.22 (C_{A5}), 133.84 (C_{B1}), 146.60 (C_{B3*}), 147.40 (C_{B4*}) 159.78 (C_{A3}).

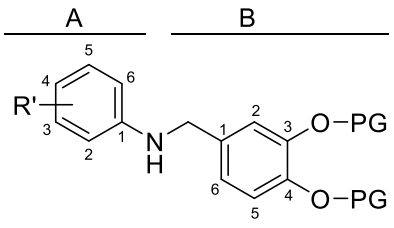
N-(3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)-1-(3-chlorophenyl)methanamine hydrochloride **2i** was prepared following method **A** as white solid (109 mg, yield = 32%).
Rf: 0.2 (Hept/Et_2O 9/1) [associated base].
IR (UATR, cm^{-1}): 2933, 1615, 1515.

^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 0.01 - 0.40 (m, 12 H, SiC**H**$_3$), 0.77 - 1.13 (m, 18 H, SiC(C**H**$_3$)$_3$), 3.95 - 4.17 (m, 4 H, H_{ACH_2,BCH_2}), 6.83 - 7.03 (m, 2 H, $H_{B5,B6}$), 7.08 (br s, 1 H, H_{B2}), 7.47 (br s, 3 H, $H_{A4,A5,A6}$), 7.65 (br s, 1 H, H_{A2}), 9.31 - 9.80 (m, 2 H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -4.20 (Si**C**H$_3$), 18.09 (Si**C**(CH$_3$)$_3$), 25.69 (SiC(**C**H$_3$)$_3$), 48.81 (C_{ACH_2}*), 49.43 (C_{BCH_2}*), 120.60 (C_{B6}), 122.68 (C_{B2}), 123.85 (C_{B5}), 124.99 (C_{B1}), 128.77 ($C_{A2,A5}$), 129.91 (C_{A6}), 130.41 (C_{A4}), 133.04 (C_{A1}), 134.42 (C_{A3}), 146.07 (C_{B3}*), 146.90 (C_{B4}*).

N-(3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)-1-(2,4-dichlorophenyl)methanamine hydrochloride **2j** was prepared following method **A** as pink solid (125 mg, yield = 35%).
Rf: 0.2 (Hept/Et$_2$O 9/1) [associated base].
IR (UATR, cm^{-1}): 2933, 1615, 1515.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 0.15 - 0.25 (m, 12 H, SiC**H**$_3$), 0.88 - 1.04 (m, 18 H, SiC(C**H**$_3$)$_3$), 4.02 - 4.25 (m, 4 H, H_{ACH_2,BCH_2}), 6.90 (d, *J*=8.3 Hz, 1 H, H_{B5}), 7.03 (dd, *J*=8.3, 2.1 Hz, 1 H, H_{B6}), 7.12 (d, *J*=2.1 Hz, 1 H, H_{B2}), 7.55 (dd, *J*=8.4, 2.0 Hz, 1 H, H_{A5}), 7.71 (d, *J*=2.0 Hz, 1 H, H_{A3}), 7.77 (d, *J*=8.4 Hz, 1 H, H_{A6}), 9.72 (br s, 2 H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -3.70 (Si**C**H$_3$), 18.62 (Si**C**(CH$_3$)$_3$), 26.19 (SiC(**C**H$_3$)$_3$), 45.79 (C_{ACH_2}*), 49.99 (C_{BCH_2}*), 121.24 (C_{B6}), 123.42 (C_{B2}), 124.57 (C_{B5}), 125.12 (C_{A1}), 128.14 (C_{A6}), 129.49 (C_{A5}), 129.58 (C_{B1}), 133.67 (C_{A3}), 134.97 (C_{A2}), 135.04 (C_{A4}), 146.65 (C_{B3}*), 147.53 (C_{B4}*).



1-(benzo[*d*][1,3]dioxol-5-yl)-*N*-((2,2-diphenylbenzo[*d*][1,3]dioxol-5-yl)methyl)methanamine hydrochloride **2k** was prepared following method **A** as white solid (226 mg, yield = 58%).
Rf: 0.2 (Hept/Et$_2$O 9/1).
IR (UATR, cm^{-1}): 2757.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 4.01 (br s, 1 H, H_{ACH_2}), 4.03 (br s, 2 H, H_{BCH_2}), 6.04 (s, 2 H, O-C**H**$_2$-O), 6.94 (d, *J*=8.0 Hz, 1 H, H_{A5}), 6.97 (dd, *J*=8.0, 1.5 Hz, 1 H, H_{A6}), 7.02 (dd, *J*=8.0, 1.5 Hz, 1 H, H_{B6}), 7.08 (d, *J*=8.0 Hz, 1 H, H_{B5}), 7.13 (d, *J*=1.5 Hz, 1 H, H_{A2}), 7.24 (d, *J*=1.5 Hz, 1 H, H_{B2}), 7.39 - 7.49 (m, 6 H, $H_{B3',B4'}$), 7.50 - 7.57 (m, 4 H, $H_{B2'}$), 9.31 (br s, 2 H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 49.47 (C_{ACH_2}*), 49.60 (C_{BCH_2}*), 101.30 (O-**C**H$_2$-O), 108.25 (C_{A5}), 108.62 (C_{B5}), 110.26 (C_6), 110.62 (C_{A2}), 116.58 (Ph-**C**-Ph), 124.12 (C_{A6}), 124.48 (C_{B6}), 125.31 ($C_{A1,B1}$), 125.74 ($C_{B2'}$), 128.58 ($C_{B3'}$), 129.44 ($C_{B4'}$), 139.53 ($C_{B1'}$), 146.44 (C_{A3}*), 146.88 (C_{A4}*), 147.28 (C_{B3}*), 147.67 (C_{B4}*).



N-(3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)aniline **2l** was prepared following method **B** as colourless oil (269 mg, yield = 89%).
Rf: 0.2 (Hept/Et_2O 8/2).
IR (UATR, cm^{-1}): 2574, 2429, 1593.
^1H NMR (400 MHz, DMSO-d_6) δ ppm: 0.06 - 0.18 (m, 12 H, SiC**H**$_3$), 0.86 - 0.97 (m, 18 H, SiC(C**H**$_3$)$_3$), 4.14 (d, *J*=6.1 Hz, 2 H, H_{BCH_2}), 6.13 (t, *J*=6.1 Hz, 1 H, N**H**$_2$), 6.48 (t, *J*=7.3 Hz, 1 H, H_{A4}), 6.54 (dd *J*=8.6, 1.0 Hz, 2 H, $H_{A2,A6}$), 6.77 (d, *J*=7.8 Hz, 1 H, H_{B5}), 6.79 - 6.84 (m, 2 H, $H_{B2,B6}$), 7.00 (dd, *J*=8.6, 7.3 Hz, 2 H, $H_{A3,A5}$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -4.26 (Si**C**H$_3$), 18.04 (Si**C**(CH$_3$)$_3$), 25.71 (SiC(**C**H$_3$)$_3$), 45.61 (C_{BCH_2}), 112.26 ($C_{A2,A6}$), 115.57 (C_{A4}), 119.65 (C_{B6}), 120.25 (C_{B2}), 120.47 (C_{B5}), 128.71 ($C_{A3,A5}$), 133.66 (C_{B1}), 144.57 (C_{A1}), 145.89 (C_{B3*}), 148.60 (C_{B4*}).

N-(3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)-4-methoxyaniline hydrochloride **2m** was prepared following method **A** as violet solid (256 mg, yield = 74%).
Rf: 0.2 (Hept/Et_2O 8/2) [associated base].
IR (UATR, cm^{-1}): 2928, 2856, 2577, 2413, 1577, 1509.
^1H NMR (400 MHz, DMSO-d_6) δ ppm: 0.10 - 0.18 (m, 12 H, SiC**H**$_3$), 0.90 - 0.94 (m, 18 H, SiC(C**H**$_3$)$_3$), 3.72 (s, 3 H, OC**H**$_3$), 4.34 (s, 2 H, H_{BCH_2}), 6.82 (d, *J*=7.8 Hz, 1 H, H_{B5}), 6.87 - 6.96 (m, 4 H, $H_{A3,A5;B2,B6}$), 7.14 - 7.30 (m, 2 H, $H_{A2,A6}$), 11.06 (br s, 1H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -4.27 (Si**C**H$_3$), 18.09 (Si**C**(CH$_3$)$_3$), 25.68 (SiC(**C**H$_3$)$_3$), 55.41 (O**C**H$_3$), 64.90 (C_{BCH_2}), 114.58 ($C_{A2,A5,B6}$), 120.57 (C_{B2}), 122.80 (C_{B5}), 123.83 (C_{A4}), 124.42 (C_{A6}), 145.95 ($C_{A1,A3,B1,B3*}$), 146.60 (C_{B4*}).

N-(3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)-3-methoxyaniline hydrochloride **2n** was prepared following method **A** as white solid (91 mg, yield = 26%).
Rf: 0.2 (Hept/Et_2O 8/2) [associated base].
IR (UATR, cm^{-1}): 2929, 2856, 2578, 2413, 1576, 1510.
^1H NMR (400 MHz, DMSO-d_6) δ ppm: 0.09 - 0.19 (m, 12 H, SiC**H**$_3$), 0.88 - 0.95 (m, 18 H, SiC(C**H**$_3$)$_3$), 3.68 (s, 3 H, OC**H**$_3$), 4.28 (br s, 2 H, H_{BCH_2}), 6.45 - 6.65 (m, 3 H, $H_{A4,A5,A6}$), 6.79 (d, *J*=8.3 Hz, 1 H, H_{B5}), 6.84 - 6.91 (m, 2 H, $H_{B2,B6}$), 7.07 - 7.18 (m, 1 H, H_{A2}), 11.06 (br s, 1H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -4.29 (Si**C**H$_3$), 18.08 (Si**C**(CH$_3$)$_3$), 25.76 (SiC(**C**H$_3$)$_3$), 54.92 (O**C**H$_3$), 64.91 (C_{BCH_2}), 120.51 ($C_{A4,A5,A6,B5,B6}$), 129.85 ($C_{A2,B2}$), 145.93 ($C_{A1,B1,B3,B4}$), 160.03 (C_{A3}).

N-(3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)-4-((*tert*-butyldimethylsilyl)oxy)aniline **2o** was prepared following method **B** as colourless oil (258 mg, yield = 33%).
Rf: 0.3 (Hept/Et_2O 8/2).
IR (UATR, cm^{-1}): 2931, 1509.
^1H NMR (400 MHz, DMSO-d_6) δ ppm: 0.08 - 0.21 (m, 18 H, SiC**H**$_3$), 0.87 - 0.98 (m, 27 H, SiC(C**H**$_3$)$_3$), 4.33 (s, 2 H, H_{BCH_2}), 6.76 - 6.94 (m, 5 H, $H_{A3,A5,B2,B5,B6}$), 7.04 - 7.24 (m, 2 H, $H_{A2,A6}$), 10.98 (br s, 1H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -4.22 (Si**C**H$_3$), 18.14 (Si**C**(CH$_3$)$_3$), 25.76 (SiC(**C**H$_3$)$_3$), 64.30 (C_{BCH_2}), 116.00 (C_{B2}), 120.56 ($C_{A3,A5}$), 120.68 ($C_{A2,A6}$), 122.61 (C_{B6}), 123.59 (C_{B5}), 124.86 (C_{B1}), 133.78 (C_{A1}), 146.09 (C_{B3*}), 146.62 (C_{B4*}), 159.82 (C_{A4}).

N-(3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)-3-((*tert*-butyldimethylsilyl)oxy)aniline **2p** was prepared following method **B** as colourless oil (169 mg, yield = 77%).

Rf: 0.3 (Hept/Et_2O 8/2).

IR (UATR, cm^{-1}): 2929, 1509.

^1H NMR (400 MHz, DMSO-d_6) δ ppm: -0.01 - 0.20 (m, 18 H, SiC**H**$_3$), 0.84 - 0.97 (m, 27 H, SiC(C**H**$_3$)$_3$), 4.11 (d, *J*=5.9 Hz, 2 H, H_{BCH_2}), 5.91 - 6.03 (m, 2 H, $H_{A2,A4}$), 6.12 – 6.27 (m, 2 H, N**H**$_2$, H_{A5}), 6.71 - 6.91 (m, 4 H, $H_{A6,B2,B5,B6}$).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -4.30 - -3.40 (Si**C**H_3), 18.00– 19.00 (Si**C**$(CH_3)_3$), 26.12 (SiC(**C**H_3)$_3$), 46.13 (C_{BCH_2}), 104.12 (C_{A2}), 106.81 (C_{A4}), 107.67 (C_{A6}), 119.81 (C_{B6}), 120.46 (C_{B2}), 120.95 (C_{B5}), 129.79 (C_{A5}), 134.08 (C_{B1}), 145.01 (C_{B3*}), 146.43 (C_{B4*}), 150.45 (C_{A15}), 156.36 (C_{A17}).

3-((3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)amino)-5-hydroxybenzoic acid **2q** was prepared following method **B** as colourless oil (164 mg, yield = 37%).
Rf: 0.2 (Hept/AcOEt 2/8).

IR (UATR, cm^{-1}): 3436($\nu_{O\text{-}H\ alc}$), 2908($\nu_{O\text{-}H\ ac}$), 1685($\nu_{C=O\ ac}$), 1622, 1592, 1508.

^1H NMR (400 MHz, DMSO-d_6) δ ppm: 3.39 (s, 6 H, OC**H**$_3$), 4.14 (d, *J*=5.0 Hz, 2 H, H_{BCH_2}), 5.14 (s, 4 H, OC**H**$_2$O), 6.18 (t, *J*=1.6 Hz, 1 H, H_{A6}), 6.34 (t, *J*=5.0 Hz, 1 H, N**H**$_2$), 6.56 (t, *J*=1.6 Hz, 1 H, H_{A4}), 6.70 (t, *J*=1.6 Hz, 1 H, H_{A2}), 6.92 (dd, *J*=8.2, 1.8 Hz, 1 H, H_{B6}), 7.04 (d, *J*=8.2 Hz, 1 H, H_{B5}), 7.09 (d, *J*=1.8 Hz, 1 H, H_{B2}), 9.23 (br s, 1 H, O**H**), 12.47 (br s, 1 H, CO_2**H**).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 46.09 (C_{BCH_2}), 55.65 (O**C**H_3), 94.95 (O**C**H_2O), 103.05 (C_{A6}), 104.18 (C_{A4}), 105.22 (C_{A2}), 116.35 (C_{B6}), 117.26 (C_{B2}), 120.92 (C_{B5}), 132.05 (C_{A3}), 134.26 (C_{B1}), 145.74 (C_{B3*}), 147.01 (C_{B4*}), 149.90 (C_{A5}), 158.01 (C_{A1}), 167.86 (**C**O_2H).

5-((3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)amino)-2-hydroxybenzoic acid **2r** was prepared following method **B** as off-white solid (156 mg, yield = 45%).
Rf: 0.2 (Hept/AcOEt 5/5).

IR (UATR, cm^{-1}): 2929($\nu_{O\text{-}H\ alc}$), 2857($\nu_{O\text{-}H\ ac}$), 1638($\nu_{C=O\ ac}$), 1587, 1509.

^1H NMR (400 MHz, DMSO-d_6) δ ppm: 0.08 (s, 6 H, SiC**H**$_3$), 0.15 (s, 6 H, SiC**H**$_3$), 0.88 (s, 9 H, SiC(C**H**$_3$)$_3$), 0.93 (s, 9 H, SiC(C**H**$_3$)$_3$), 4.11 (s, 2 H, H_{BCH_2}), 6.69 (d, *J*=8.8 Hz, 1 H, H_{B5}), 6.75 - 6.83 (m, 3 H, $H_{A2,A5,A6}$), 6.85 (dd, *J*=8.8, 2.8 Hz, 1 H, H_{B6}), 6.92 (d, *J*=2.8 Hz, 1 H, H_{B2}), 10.51 (br. s, 2 H, O**H**, CO_2**H**), 11.98 (br. s, 1 H, N**H**$_2$).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -3.81 (Si**C**H_3), 18.55 (Si**C**$(CH_3)_3$), 26.17 (SiC(**C**H_3)$_3$), 46.92 (C_{BCH_2}), 113.06 (C_{A4}), 117.74 (C_{A3}), 120.14 (C_{B6}), 120.83 (C_{A2}), 121.02 ($C_{A6,B2}$), 122.40 (C_{B5}), 133.90 ($C_{A1,B1}$), 145.10 (C_{B3*}), 146.42 (C_{B4*}), 153.26 (C_{A4}) , 172.57 (**C**O_2H).

N-(3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)-3,5-bis((*tert*-butyldimethylsilyl)oxy)aniline **2s** was prepared following method **B** as colourless oil (380 mg, yield = 57%).
Rf: 0.4 (Hept/Et_2O 9/1).

IR (UATR, cm^{-1}): 2929, 2857, 2578, 2414, 1603, 1578, 1510.

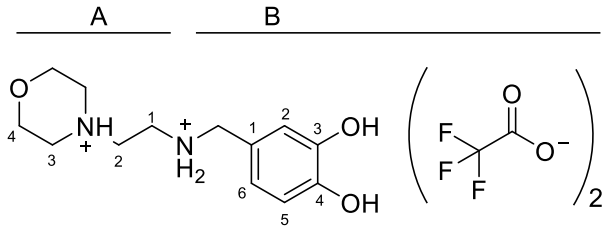
^1H NMR (400 MHz, DMSO-d_6) δ ppm: 0.04 - 0.16 (m, 24 H, SiC**H**$_3$), 0.86 - 0.96 (m, 36 H, SiC(C**H**$_3$)$_3$), 4.07 (d, *J*=5.9 Hz, 2 H, H_{BCH_2}), 5.47 (t, *J*=1.9 Hz, 1 H, H_{A4}), 5.67 (d, *J*=1.9 Hz, 2 H, $H_{A2,A6}$), 6.24 (t, *J*=5.9 Hz, 1 H, N**H**$_2$), 6.72 - 6.80 (m, 3 H, $H_{B2,B5,B6}$).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -4.74 - -4.09 (Si**C**H_3), 17.71 - 18.39 (Si**C**$(CH_3)_3$), 25.62 (SiC(**C**H_3)$_3$), 45.57 (C_{BCH_2}), 97.96 ($C_{A2,A6}$), 99.68 (C_{A4}), 119.09 (C_{B2}), 119.80 (C_{B6}), 120.46 (C_{B5}), 133.58 (C_{B1}), 144.48 (C_{B3*}), 145.97 (C_{B4*}), 150.27 ($C_{A3,A5}$), 156.33 (C_{A1}).

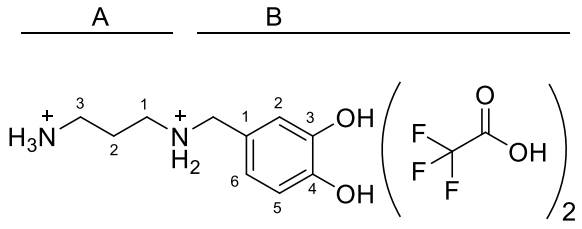
N-(3,4-bis((*tert*-butyldimethylsilyl)oxy)benzyl)-3,4-bis((*tert*-butyldimethylsilyl)oxy)aniline **2t** was prepared following method **B** as yellow oil (635 mg, yield = 91%).
Rf: 0.3 (Hept/Et_2O 9/1).

IR (UATR, cm^{-1}): 2931, 2858, 2545, 1596, 1512.
^1H NMR (400 MHz, DMSO-d_6) δ ppm: 0.00 - 0.13 (m, 12 H, SiC**H**$_3$), 0.79 - 0.98 (m, 18 H, SiC(C**H**$_3$)$_3$), 3.38 (s, 6 H, OC**H**$_3$), 4.06 (d, *J*=5.4 Hz, 2 H, H_{BCH_2}), 5.13 (s, 4 H, OC**H**$_2$O), 5.76 (t, *J*=5.4 Hz, 1 H, N**H**$_2$), 6.01 - 6.13 (m, 2 H, $H_{A2,A6}$), 6.55 (d, *J*=8.3 Hz, 1 H, H_{A5}), 6.91 (d, *J*=8.1 Hz, 1 H, H_{B6}), 7.03 (d, *J*=8.1 Hz, 1 H, H_{B5}), 7.08 (s, 1 H, H_{B2}).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: -4.30 (Si**C**H$_3$), 18.04 (Si**C**(CH$_3$)$_3$), 25.76 (SiC(**C**H$_3$)$_3$), 47.00 (C_{BCH_2}), 55.62 (O**C**H$_3$), 94.92 (O**C**H$_2$O), 105.61 (C_{A2}), 105.66 (C_{B2}), 116.16 (C_{A6}), 117.35 (C_{B6}), 120.85 (C_{A5}), 120.95 (C_{B5}), 134.71 (C_{B1}), 136.46 (C_{A1}), 143.78 (C_{A3*}), 145.61 (C_{B3*}), 146.25 (C_{A4*}), 147.09 (C_{A4*}).

Diphenylmethylidene deprotection:
N-((2,2-diphenylbenzo[*d*][1,3]dioxol-5-yl)methyl)-2-morpholinoethan-1-amine **2a** (1 equiv., 120 mg, 0.26 mmol) was stirred in TFA (20 equiv., 604 mg, 394 µL, 5.3 mmol) at room temperature for 15 min and H_2O (20 equiv., 95 mg, 95 µL, 5.3 mmol) was added and the reaction mixture was stirred at room temperature for 1h. The reaction mixture was co-evaporated with acetone (5 times) to afford the pure compound (39 mg, yield = 31%) as an off-white solid.



4-(((2-morpholinoethyl)amino)methyl)benzene-1,2-diol ditrifluoroacetate **3a**
IR (UATR, cm^{-1}): 3016($\nu_{O\text{-}H\ alc}$), 1606, 1535.
^1H NMR (400 MHz, DMSO-d_6) δ ppm: 3.02 - 3.21 (m, 2 H, H_{A3eq}), 3.27 - 3.61 (m, 6 H, $H_{A3ax,A4}$), 3.71 - 3.89 (m, 2 H, H_{A1}), 3.99 (br. s., 4 H, H_{A2,BCH_2}), 6.77 (d, *J*=8.1 Hz, 1 H, H_{B5}), 6.82 (dd, *J*=8.1, 2.0 Hz, 1 H, H_{B6}), 6.93 (d, *J*=2.0 Hz, 1 H, H_{B2}), 8.95 - 9.52 (m, 4 H, **OH**$_{ar}$, N**H**$_2$), 11.11 - 11.48 (m, 1 H, N**H**$_{morph}$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 50.24 (C_{A2,BCH_2}), 51.56(C_{A4}), 52.11(C_{A1}), 63.24(C_{A3}), 115.55 (C_{B5}), 117.53 (C_{B2}), 121.32 (C_{B6}), 122.13 (C_{B1}), 145.30 (C_{B3*}), 146.22 (C_{B4*}).
HRMS (ES^+): $[M+H]^+$ calculated for $C_{13}H_{21}N_2O_3$: 253.1552 ; found 253.1550.

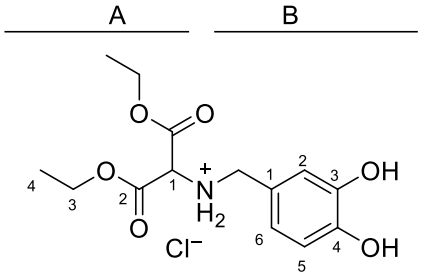


4-(((3-aminopropyl)amino)methyl)benzene-1,2-diol ditrifluoroacetate **3b** was prepared as **3a** as yellow oil (29 mg, yield = 25%).

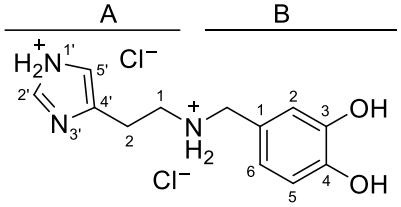
IR (UATR, cm^{-1}): 2907, 2799, 2407, 1615, 1520, 1505.
^1H NMR (400 MHz, DMSO-d_6) δ ppm : 1.97 (quin, *J*=7.6 Hz, 2 H, H_{A2}), 2.87 (t, *J*=7.6 Hz, 2 H, H_{A1}), 2.92 (t, *J*=7.6 Hz, 2 H, H_{A3}), 3.91 (s, 2 H, H_{BCH_2}), 6.76 (d, *J*=8.1 Hz, 1 H, H_{B5}), 6.79 (dd, *J*=8.1, 1.7 Hz, 1 H, H_{B6}), 6.91 (d, *J*=1.7 Hz, 1 H, H_{B2}), 7.89 - 8.33 (m, 3 H, N**H**$_3$), 8.95 - 9.40 (m, 4 H, **OH**$_{ar}$, N**H**$_2$).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 23.62 (C_{A2}) 36.09 (C_{A3}) 43.19 (C_{A1}) 49.92 (C_{BCH_2}) 115.51 (C_{B2}) 117.61 (C_{B5}) 121.37 (C_{B6}) 122.27 (C_{B1}) 145.25 (C_{B3*}) 146.09 (C_{B4*}).
HRMS (ES$^+$): $[M+H]^+$ calculated for $C_{10}H_{17}N_2O_2$: 197.1290 ; found 197.1288.

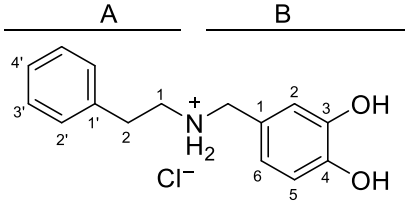
Silylether and methoxymethylether deprotection:
To a solution of Diethyl 2-((3,4-bis(methoxymethoxy)benzyl)amino)malonate **2c** (1 equiv., 80 mg, 0.21 mmol) in MeOH (10 mL) was added HCl 37% in water (10 equiv., 172 µL, 2.1 mmol) and the reaction mixture was stirred at room temperature for 16 hours. The reaction mixture was concentrated under vacuum, co-evaporated with acetone several times, then suspended in acetone, sonicated and filtrated to get aimed compound (32 mg, yield = 52%) as white solid.



Diethyl 2-((3,4-dihydroxybenzyl)amino)malonate hydrochloride **3c**
IR (UATR, cm^{-1}): 2983, 1744, 1603, 1523.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 1.22 (t, *J*=7.0 Hz, 6 H, H_{A4}), 4.00 (br s, 2 H, H_{BCH_2}), 4.13 - 4.33 (m, 4 H, H_{A3}), 4.92 (br s, 1 H, H_{A1}), 6.66 - 6.79 (m, 2 H, $H_{B5,B6}$), 6.88 (s, 1 H, H_{B2}), 8.91 - 9.41 (m, 2 H, **OH**$_{ar}$), 9.89 - 10.39 (m, 1 H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 13.7 (C_{A4}), 49.8 (C_{BCH_2}), 60.4 (C_{A1}), 63.0 (C_{A3}), 115.4 (C_{B6}), 118.0 (C_{B2}), 121.9 (C_{B5}), 145.2 ($C_{B1,B3*}$) 146.4 (C_{B4*}) 163.1 (C_{A2}).
HRMS (ES$^+$): $[M+H]^+$ calculated for $C_{14}H_{20}NO_6$: 298.1291 ; found 298.1289.



4-(((2-(1*H*-imidazol-4-yl)ethyl)amino)methyl)benzene-1,2-diol dihydrochloride **3d** was prepared as **3c** as yellow oil (51 mg, yield = 72%).
IR (UATR, cm^{-1}): 3003($\nu_{O\text{-}H\ alc}$), 2794, 1622, 1529.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 3.07 - 3.27 (m, 4 H, $H_{A1,A2}$), 3.95 (br s, 2 H, H_{BCH_2}), 6.72 - 6.86 (m, 2 H, $H_{B5,B6}$), 6.93 (d, *J*=1.7 Hz, 1 H, H_{B2}), 7.52 (s, 1 H, $H_{A5'}$), 9.04 (d, *J*=1.0 Hz, 1 H, $H_{A2'}$), 9.08 - 9.32 (m, 2 H, **OH**$_{ar}$), 9.39 (br s, 2 H, N**H**$_2$), 14.44 - 14.79 (m, 2 H, $H_{A1'}$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 20.83 (C_{A2}), 44.26 (C_{A1}), 49.78 (C_{BCH_2}), 115.57 (C_{B6}), 116.70 ($C_{A5'}$), 117.65 (C_{B2}), 121.38 (C_{B5}), 122.21 ($C_{A4'}$), 128.81 (C_{B1}), 134.66 ($C_{A2'}$), 145.25 (C_{B3*}), 146.10 (C_{B4*}).
HRMS (ES$^+$): $[M+H]^+$ calculated for $C_{12}H_{16}N_3O_2$: 234.1243 ; found 234.1245.



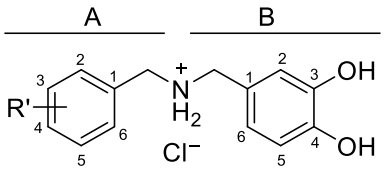
4-((phenethylamino)methyl)benzene-1,2-diol hydrochloride **3e** was prepared as **3c** black oil (280 mg, quant).

IR (UATR, cm^{-1}): 3130($\nu_{O\text{-}H\ alc}$), 1710, 1608, 1529.

^1H NMR (400 MHz, DMSO-d_6) δ ppm: 2.92 - 3.11 (m, 4 H, $H_{A1,A2}$), 3.95 (br s, 2 H, H_{BCH_2}), 6.74 - 6.83 (m, 2 H, $H_{B5,B6}$), 6.92 (s, 1 H, H_{B2}), 7.20 - 7.28 (m, 3 H, $H_{A3',A4'}$), 7.28 - 7.36 (m, 2 H, $H_{A2'}$), 9.07 - 9.33 (m, 4 H, **OH**$_{ar}$, N**H**$_2$).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 31.4 (C_{A2}), 47.1 (C_{A1}), 49.8 (C_{BCH_2}), 115.6 (C_{B6}), 117.6 (C_{B2}), 121.3 (C_{B5}), 122.4 ($C_{A1'}$), 126.7 ($C_{A4'}$), 128.6 ($C_{A2'}$), 128.7 ($C_{A3'}$), 137.3 (C_{B1}), 145.3 (C_{B3*}), 146.08 (C_{B4*}).

HRMS (ES^+): $[M+H]^+$ calculated for $C_{15}H_{18}NO_2$: 244.1338 ; found 244.1337.



4-((benzylamino)methyl)benzene-1,2-diol hydrochloride **3f** was prepared as **3c** as yellow oil (63 mg, yield = 66%).

IR (UATR, cm^{-1}): 3038($\nu_{O\text{-}H\ alc}$), 1608, 1518.

^1H NMR (400 MHz, DMSO-d_6) δ ppm: 3.93 (s, 2 H, H_{ACH_2*}), 4.08 (s, 2 H, H_{BCH_2*}), 6.76 (s, 2 H, $H_{B5,B6}$), 6.89 (s, 1 H, H_{B2}), 7.36 - 7.47 (m, 3 H, $H_{A3,A4,A5}$), 7.48 - 7.56 (m, 2 H, $H_{A2,A6}$), 9.10 (s, 1 H, **OH**$_{ar}$), 9.24 (s, 1 H, **OH**$_{ar}$), 9.35 (br s, 2 H, N**H**$_2$).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 49.41 (C_{ACH_2*}), 49.72 (C_{BCH_2*}), 115.53 (C_{B2}), 117.59 (C_{B6}), 121.39 (C_{B5}), 122.24 (C_{B1}), 128.60 ($C_{A3,A5}$), 128.84 (C_{A4}), 129.99 ($C_{A2,A6}$), 131.99 (C_{A1}), 145.26 (C_{B3*}), 146.09 (C_{B4*}).

HRMS (ES^+): $[M+H]^+$ calculated for $C_{14}H_{16}NO_2$: 230.1181 ; found 230.1178.

4-(((4-methoxybenzyl)amino)methyl)benzene-1,2-diol hydrochloride **3g** was prepared as **3c** as white solid (35 mg, yield = 50%).

IR (UATR, cm^{-1}): 3040($\nu_{O\text{-}H\ alc}$), 2957, 1613, 1585, 1516.

^1H NMR (400 MHz, DMSO-d_6) δ ppm: 3.76 (s, 3 H, OC**H**$_3$), 3.88 (br. s., 2 H, H_{ACH_2*}), 4.00 (br. s., 2 H, H_{BCH_2*}), 6.76 (s, 2 H, $H_{B5,B6}$), 6.89 (s, 1 H, H_{B2}), 6.97 (d, *J*=8.6 Hz, 2 H, $H_{A3,A5}$), 7.45 (d, *J*=8.6 Hz, 2 H, $H_{A2,A6}$), 9.11 (s, 1 H, **OH**$_{ar}$), 9.25 (s, 1 H, **OH**$_{ar}$), 9.36 (br. s., 2 H, N**H**$_2$).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 48.84 (C_{ACH_2*}), 49.33 (C_{BCH_2*}), 55.18 (O**C**H$_3$), 113.92 ($C_{A3,A5}$), 115.55 (C_{B2}), 117.61 (C_{B6}), 121.35 (C_{B5}), 122.30 (C_{B1}), 123.72 (C_{A1}), 131.62 ($C_{A2,A6}$), 145.23 (C_{B3*}), 146.04 (C_{B4*}), 159.61 (C_{A4}).

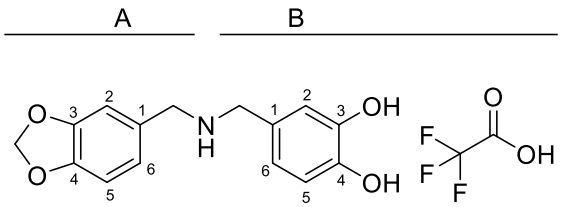
HRMS (ES^+): $[M+H]^+$ calculated for $C_{15}H_{18}NO_3$: 260.1287 ; found 260.1285.

4-(((3-methoxybenzyl)amino)methyl)benzene-1,2-diol hydrochloride **3h** was prepared as **3c** as white solid (58 mg, yield = 93%).

IR (UATR, cm^{-1}): 2958, 1603, 1524.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 3.77 (s, 3 H, OC**H**$_3$), 3.91 (t, *J*=5.4 Hz, 2 H, H_{ACH_2*}), 4.04 (t, *J*=5.5 Hz, 2 H, H_{BCH_2*}), 6.77 (s, 2 H, $H_{A4,A6}$), 6.90 (s, 1 H, H_{A2}), 6.96 (dd, *J*=8.3, 2.2 Hz, 1 H, H_{B6}), 7.07 (d, *J*=8.3 Hz, 1 H, H_{B5}), 7.18 (s, 1 H, H_{B2}), 7.33 (t, *J*=8.0 Hz, 1 H, H_{A5}), 9.45 (br s, 4 H, **OH**$_{ar}$, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 49.29 (C_{ACH_2*}), 49.64 (C_{BCH_2*}), 55.19 (O**C**H$_3$), 114.51 (C_{A4}), 115.34 (C_{B2}), 115.55 (C_{A2}), 117.65 (C_{B6}), 121.43 (C_{B5}), 121.99 (C_{A6}), 122.20 (C_{B1}), 129.71 (C_{A5}), 133.38 (C_{A1}), 145.25 (C_{B3*}), 146.10 (C_{B4*}), 159.29 (C_{A3}).
HRMS (ES$^+$): $[M+H]^+$ calculated for $C_{15}H_{18}NO_3$: 260.1287 ; found 260.1287.

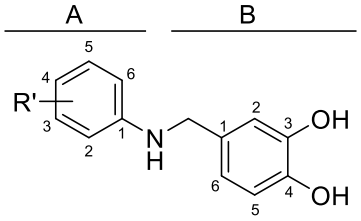
4-(((3-chlorobenzyl)amino)methyl)benzene-1,2-diol hydrochloride **3i** was prepared as **3c** as white solid (46 mg, yield = 81%).
IR (UATR, cm^{-1}): 3381($\nu_{O\text{-}H\ alc}$), 2927, 2781, 2605, 1606, 1576, 1523.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 3.94 (t, *J*=5.1 Hz, 2 H, H_{ACH_2*}), 4.10 (t, *J*=5.4 Hz, 2 H, H_{BCH_2*}), 4.36 (br s, 2 H, N**H**$_2$), 6.78 (s, 1 H, $H_{B5,B6}$), 6.92 (s, 1 H, H_{B2}), 7.40 - 7.58 (m, 3 H, $H_{A4,A5,A6}$), 7.69 (s, 1 H, H_{A2}), 9.57 (br s, 2 H, **OH**$_{ar}$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 48.73 (C_{ACH_2*}), 49.86 (C_{BCH_2*}), 115.56 (C_{B2}), 117.70 (C_{B6}), 121.46 (C_{B5}), 122.19 (C_{B1}), 128.75 (C_{A4}), 128.84 (C_{A6}), 129.97 (C_{A5}), 130.40 (C_{A2}), 133.04 (C_{A1}), 134.45 (C_{A5}), 145.24 (C_{B3*}), 146.12 (C_{B4*}).
HRMS (ES$^+$): $[M+H]^+$ calculated for $C_{14}H_{15}NO_2Cl$: 264.0791 ; found 264.0791.

4-(((2,4-dichlorobenzyl)amino)methyl)benzene-1,2-diol hydrochloride **3j** was prepared as **3c** as white solid (29 mg, yield = 64%).
IR (UATR, cm^{-1}): 3047($\nu_{O\text{-}H\ alc}$), 2776, 1590, 1522.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 4.02 (br s, 2 H, H_{ACH_2*}), 4.15 (br s, 2 H, H_{BCH_2*}), 6.78 (d, *J*=7.8 Hz, 1 H, H_{B2}), 6.82 (d, *J*=7.8 Hz, 1 H, H_{A5}), 6.94 (s, 1 H, H_{A3}), 7.53 (d, *J*=7.8 Hz, 1 H, H_{B6}), 7.70 (s, 1 H, H_{A6}), 7.78 (d, *J*=7.8 Hz, 1 H, H_{B5}), 9.12 (br s, 1 H, **OH**$_{ar}$), 9.28 (br s, 1 H, **OH**$_{ar}$), 9.68 (br s, 2 H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 45.42 (C_{ACH_2*}), 50.02 (C_{BCH_2*}), 115.56 (C_{B2}), 117.80 (C_{B6}), 121.59 (C_{B5}), 121.92 (C_{B1}), 127.57 (C_{A6}), 128.94 (C_{A5}), 129.16 (C_{A1}), 133.20 (C_{A3}), 134.37 (C_{A2}), 134.61 (C_{A4}), 145.24 (C_{B3*}), 146.16(C_{B4*}).
HRMS (ES$^+$): $[M+H]^+$ calculated for $C_{14}H_{14}NO_2Cl_2$: 298.0402 ; found 298.0403.



4-(((benzo[*d*][1,3]dioxol-5-ylmethyl)amino)methyl)benzene-1,2-diol trifluoroacetate **3k** was prepared as **3a** as yellow oil (83 mg, yield = 58%).
IR (UATR, cm^{-1}): 3410($\nu_{O\text{-}H\ alc}$), 3037, 1610, 1502.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 3.89 (br s, 2 H, H_{ACH_2*}), 4.00 (br s, 2 H, H_{BCH_2*}), 6.05 (s, 2 H, O-C**H**$_2$-O), 6.75 (s, 2 H, $H_{B5,B6}$), 6.87 (s, 1 H, H_{B2}), 6.96 (s, 2 H, $H_{A5,A6}$), 7.13 (s, 1 H, H_{A2}), 9.33 (m, 4 H, **OH**$_{ar}$, N**H**$_2$).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 49.29 (C_{ACH_2*}), 49.43 (C_{BCH_2*}), 101.30 (O-**C**H_2-O), 108.27 (C_{A2}), 110.24 (C_{A5}), 115.51 (C_{B2}), 117.53 (C_{B5}), 121.33 (C_{A6}), 122.27 (C_{B1}), 124.12 (C_{B6}), 125.32 (C_{A1}), 145.25 (C_{A3*}), 146.07 (C_{A4*}), 147.30 (C_{B3*}), 147.66 (C_{B4*}).
HRMS (ES$^+$): $[M+H]^+$ calculated for $C_{15}H_{16}NO_4$: 274.1079 ; found 274.1075.



4-((phenylamino)methyl)benzene-1,2-diol hydrochloride **3l** was prepared as **3c** as white solid (255 mg, yield = 90%).
IR (UATR, cm^{-1}): 3227($\nu_{O\text{-}H\ alc}$), 2964, 2575, 1607, 1523.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 4.25 (s, 2 H, H_{BCH_2}), 4.51 (br s, 2H, N**H**$_2$), 6.68 (s, 2 H, $H_{B2,B6}$), 6.82 (s, 1 H, H_{B5}), 7.19 – 7.25 (br s, 3 H, $H_{A2,A4,A6}$), 7.30 - 7.43 (m, 2 H, $H_{A3,A5}$), 8.81 (br s, 2H, **OH**$_{ar}$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 53.25 (C_{BCH_2}), 115.52 (C_{B2}), 117.66 (C_{B6}), 121.46 (C_{B5}), 123.17 (C_{B1}), 129.64 ($C_{A2\text{-}6}$), 137.37 (C_{A1}), 145.20 (C_{B3*}), 145.91 (C_{B4*}).
HRMS (ES$^+$): $[M+H]^+$ calculated for $C_{13}H_{14}NO_2$: 216.1025 ; found 216.1016.

4-(((4-methoxyphenyl)amino)methyl)benzene-1,2-diol hydrochloride **3m** was prepared as **3c** as white solid (78 mg, yield = 71%).
IR (UATR, cm^{-1}): 2937, 1697, 1604, 1510.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 3.75 (s, 3 H, OC**H**$_3$), 4.25 (s, 2 H, H_{BCH_2}), 6.69 (s, 2 H, $H_{B2,B6}$), 6.83 (s, 1 H, H_{B5}), 6.99 (d, *J*=8.7 Hz, 2 H, $H_{B3,B5}$), 7.32 (d, *J*=8.7 Hz, 2 H, $H_{B2,B6}$), 8.60 - 9.64 (m, 2 H, N**H**$_2$), 10.53 - 11.61 (m, 2 H, **OH**$_{ar}$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 54.11 (C_{BCH_2}), 55.46 (O**C**H_3), 114.62 ($C_{A3,A5}$), 115.41 ($C_{A2,A6}$), 117.91 (C_{B6}), 121.71 (C_{B5}), 122.16 (C_{B1}), 124.56 (C_{B2}), 128,49 (C_{A1}), 145.1 (C_{B3*}), 145.9 (C_{B4*}), 158.7 (C_{A4}).
HRMS (ES$^+$): $[M+H]^+$ calculated for $C_{14}H_{16}NO_3$: 246.1130 ; found 216.1123.

4-(((3-methoxyphenyl)amino)methyl)benzene-1,2-diol hydrochloride **3n** was prepared as **3c** as white solid (37 mg, yield = 89%).
IR (UATR, cm^{-1}): 2927, 1695, 1600, 1500.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 3.70 (s, 3 H, OC**H**$_3$), 4.20 (s, 2 H, H_{BCH_2}), 6.54 - 6.73 (m, 5 H, $H_{A2;A4,A6,B5,B6}$), 6.80 (d, *J*=1.0 Hz, 1 H, H_{B2}), 7.12 - 7.24 (m, 1 H, H_{A5}), 8.22 - 9.59 (m, 4 H, **OH**$_{ar}$, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 52.31 (C_{BCH_2}), 55.29 (O**C**H_3), 115.39 ($C_{A2,A5,B2}$), 117.32 (C_{B6}), 121.00 (C_{B5}), 130.26 ($C_{A4,A6}$), 145.05 ($C_{A1,B1,B3*}$), 145.61 (C_{B4*}), 159.81 (C_{A3}).
HRMS (ES$^+$): $[M+H]^+$ calculated for $C_{14}H_{16}NO_3$: 246.1130 ; found 216.1131.

4-(((4-hydroxyphenyl)amino)methyl)benzene-1,2-diol hydrochloride **3o** was prepared as **3c** as blue solid (50 mg, yield = 46%).
IR (UATR, cm^{-1}): 3059($\nu_{O\text{-}H\ alc}$), 1606, 1530, 1515.

^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 4.23 (s, 2 H, H_{BCH_2}), 6.66 - 6.74 (m, 2 H, $H_{B5,B6}$), 6.79 - 6.87 (m, 3 H, $H_{A3,A5,B2}$), 7.22 (d, *J*=8.6 Hz, 2 H, $H_{A2,A6}$), 8.72 - 9.50 (m, 2 H, **OH**$_{ar}$), 9.92 (br s, 1 H, **OH**$_{ar}$), 10.99 (br s, 2 H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 54.36 (C_{BCH_2}), 115.39 ($C_{A3,A5}$), 115.89 ($C_{A2,A6}$), 117.91 (C_{B2}), 121.73 (C_{B6}), 122.15 (C_{B1}), 124.48 (C_{B5}), 126.82 (C_{A1}), 145.06 (C_{B3*}), 146.01 (C_{B4*}), 157.47 (C_{A4}).
HRMS (ES$^+$): $[M+H]^+$ calculated for $C_{13}H_{14}NO_3$: 232.0974 ; found 232.0973.

4-(((3-hydroxyphenyl)amino)methyl)benzene-1,2-diol hydrochloride **3p** was prepared as **3c** as brown oil (52 mg, yield = 79%).
IR (UATR, cm^{-1}): 3063($\nu_{O\text{-}H\ alc}$), 1605, 1525.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 4.23 (s, 2 H, H_{BCH_2}), 6.63 - 6.88 (m, 6 H, $H_{A2,A4,A6,B2,B5,B6}$), 7.14 - 7.25 (m, 1 H, H_{A5}), 7.70 - 12.00 (m, 5H, **OH**$_{ar}$, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 53.57 (C_{BCH_2}), 109.52 (C_{A2}), 112.89 (C_{B2}), 114.79 (C_{A5}), 115.57 (C_{B6}), 117.73 (C_{A4}), 121.57 (C_{B5}), 123.05 (C_{B1}), 130.56 (C_{A6}), 138.07 (C_{A1}), 145.24 (C_{B3*}), 146.03 (C_{B4*}), 158.33 (C_{A3}).
HRMS (ES$^+$): $[M+H]^+$ calculated for $C_{13}H_{14}NO_3$: 232.0974 ; found 232.0972.

3-((3,4-dihydroxybenzyl)amino)-5-hydroxybenzoic acid hydrochloride **3q** was prepared as **3c** as yellow solid (250 mg, quant).
IR (UATR, cm^{-1}): 2956, 1694, 1602.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 3.80 (br. s., 1 H, N**H**$_2$), 4.06 - 4.34 (m, 2 H, H_{BCH_2}), 6.69 (br. s., 2 H, $H_{B2,B5}$), 6.78 - 6.97 (m, 2 H, $H_{A4,B6}$), 7.06 - 7.40 (m, 2 H, $H_{A2,A6}$), 8.03 (br s, 3 H, **OH**$_{ar}$), 10.99 (br s, 1 H, CO_2**H**).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 52.31 (C_{BCH_2}), 115.34 ($C_{A6,B2}$), 117.33 ($C_{A4,B5}$), 121.10 ($C_{A2,B6}$), 131.37 (C_{A3}), 132.78 (C_{B1}), 135.46 (C_{A1}), 144.96 (C_{B3*}), 145.64 (C_{B4*}), 158.11 (C_{A5}), 166.36 (**C**O_2H).
HRMS (ES$^-$): $[M-H]^+$ calculated for $C_{14}H_{12}NO_5$: 274.0715 ; found 274.0717.

5-((3,4-dihydroxybenzyl)amino)-2-hydroxybenzoic acid hydrochloride **3r** was prepared as **3c** as pink solid (75 mg, quant).
IR (UATR, cm^{-1}): 2923, 1683, 1606, 1524.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 4.24 (s, 2 H, H_{BCH_2}), 6.69 (m, 2 H, $H_{B5,B6}$), 6.82 (br s, 1 H, H_{B2}), 6.99 (dd, *J*=8.9, 1 H, H_{A5}), 7.39 (m, 1 H, H_{A6}), 7.63 (br s, 1 H, H_{A2}), 9.05 (br s, 3 H, CO_2**H**, N**H**$_2$), 11.27 (br s, 3 H, **OH**$_{ar}$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 54.00 (C_{BCH_2}), 114.09 (C_{A4}), 115.90 (C_{B2}), 117.80 (C_{B6}), 118.90 (C_{B5}), 121.89 (C_{A6}), 123.35 (C_{B1}), 123.87 (C_{A5}), 128.91 (C_{A1}), 129.68 (C_{A2}), 145.55 (C_{B3*}), 146.25 (C_{B4*}), 160.04 (C_{A3}), 171.26 (**C**O_2H).
HRMS (ES$^+$): $[M+H]^+$ calculated for $C_{14}H_{14}NO_5$: 276.0872 ; found 276.0869.

4-(((3,5-dihydroxyphenyl)amino)methyl)benzene-1,2-diol hydrochloride **3s** was prepared as **3c** as red solid (189 mg, quant).
IR (UATR, cm^{-1}): 3048($\nu_{O\text{-}H\ alc}$), 1590, 1520.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 4.18 (s, 2 H, H_{BCH_2}), 6.12 - 6.29 (m, 3 H, $H_{B2,B5,B6}$), 6.67 - 6.74 (m, 2 H, $H_{A2,A6}$), 6.84 (s, 1 H, H_{A4}), 8.17 - 11.27 (m, 6 H, **OH**$_{ar}$, N**H**$_2$).

^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 53.88 (C_{BCH_2}), 101.27 (C_{A4}), 102.40 (C_{B2}), 115.35 ($C_{A2,A6}$), 117.78 (C_{B5}), 121.58 (C_{B6}), 122.19 (C_{B1}), 137.27 (C_{A1}), 144.96 (C_{B3*}), 145.92 (C_{B4*}), 158.96 ($C_{A3,A5}$).
HRMS (ES^+): $[M+H]^+$ calculated for $C_{13}H_{14}NO_4$: 248.0923 ; found 248.0921.

4-((3,4-dihydroxybenzyl)amino)benzene-1,2-diol hydrochloride **3t** was prepared as **3c** as yellow solid (280 mg, yield = 75%).
IR (UATR, cm^{-1}): 3256($\nu_{O\text{-}H\ alc}$), 1605, 1524.
^{1}H NMR (400 MHz, DMSO-d_6) δ ppm: 4.18 (s, 2 H, H_{BCH_2}), 6.67 (dd, *J*=8.3, 2.4 Hz, 1 H, H_{B6}), 6.68 (dd, *J*=8.1, 1.8 Hz, 1 H, H_{A6}), 6.71 (d, *J*=8.1 Hz, 1 H, H_{A5}), 6.78 (d, *J*=8.3 Hz, 1 H, H_{B5}), 6.83 (d, *J*=1.8 Hz, 1 H, H_{A2}), 6.86 (d, *J*=2.5 Hz, 1 H, H_{B2}), 9.47 (br s, 4 H, **OH**$_{ar}$,), 10.91 (br. s., 2 H, N**H**$_2$).
^{13}C NMR (101 MHz, DMSO-d_6) δ ppm: 54.56 (C_{BCH_2}), 110.96 (C_{B2}), 114.09 (C_{A2}), 115.43 (C_{B6}), 115.68 (C_{A6}), 117.99 (C_{B5}), 121.81 (C_{A5}), 122.09 (C_{B1}), 126.78 (C_{A1}), 145.06 (C_{B3*}), 145.80 (C_{A3*}), 145.82 (C_{B4*}), 146.06 (C_{A4*}).
HRMS (ES^+): $[M+H]^+$ calculated for $C_{13}H_{14}NO_4$: 248.0923 ; found 248.0918.

References

1. Di Costanzo L, Ilies M, Thorn KJ, Christianson DW. Inhibition of human arginase I by substrate and product analogues. Archives of Biochemistry and Biophysics. 2010 Apr;496(2):101–8.

2. Himo F. Recent Trends in Quantum Chemical Modeling of Enzymatic Reactions. J Am Chem Soc. 2017 May 24;139(20):6780–6.

3. Mortier J, Prévost JRC, Sydow D, Teuchert S, Omieczynski C, Bermudez M, et al. Arginase Structure and Inhibition: Catalytic Site Plasticity Reveals New Modulation Possibilities. Sci Rep. 2017 Dec;7(1):13616.

4. Siegbahn PEM. A quantum chemical study of the mechanism of manganese catalase. Theoretical Chemistry Accounts: Theory, Computation, and Modeling (Theoretica Chimica Acta). 2001 Jan 19;105(3):197–206.

5. Gaussian 09, Revision A.02, Frisch MJ, Trucks GW, Schlegel HB, Scuseria GE, Robb MA, et al. Gaussian, Inc., Wallingford CT [Internet]. 2016 [cited 2019 Nov 25]. Available from: https://gaussian.com/g09citation/

6. Becke AD. Density-functional thermochemistry. III. The role of exact exchange. The Journal of Chemical Physics. 1993 Apr;98(7):5648–52.

7. Jung D, Biggs H, Erikson J, Ledyard PU. New Colorimetric reaction for end-point, continuous-flow, and kinetic measurement of urea. Clin Chem. 1975 Jul;21(8):1136–40.

8. Zawada RJX, Kwan P, Olszewski KL, Llinas M, Huang S-G. Quantitative determination of urea concentrations in cell culture medium. Biochem Cell Biol. 2009 Jun;87(3):541–4.

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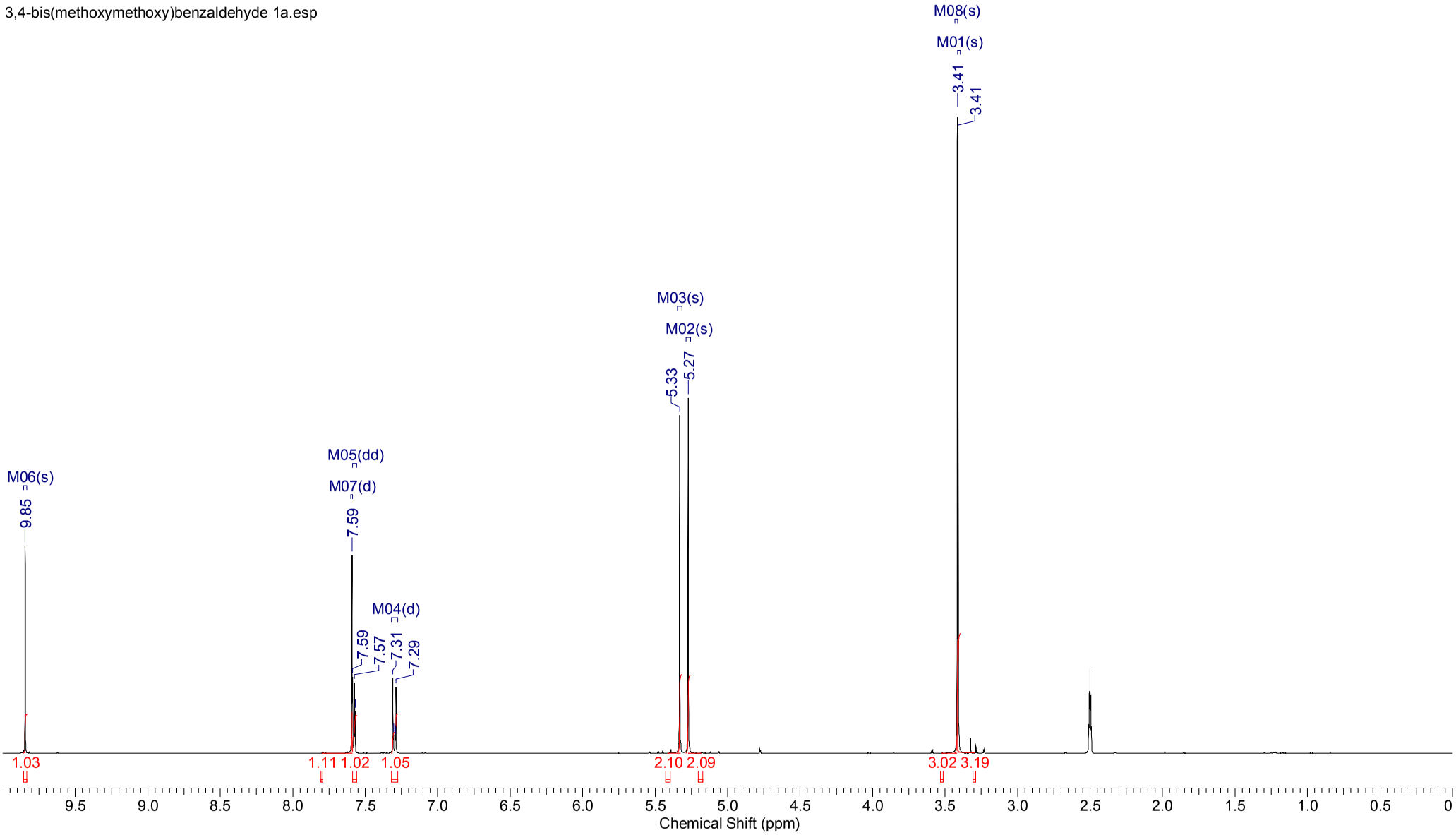
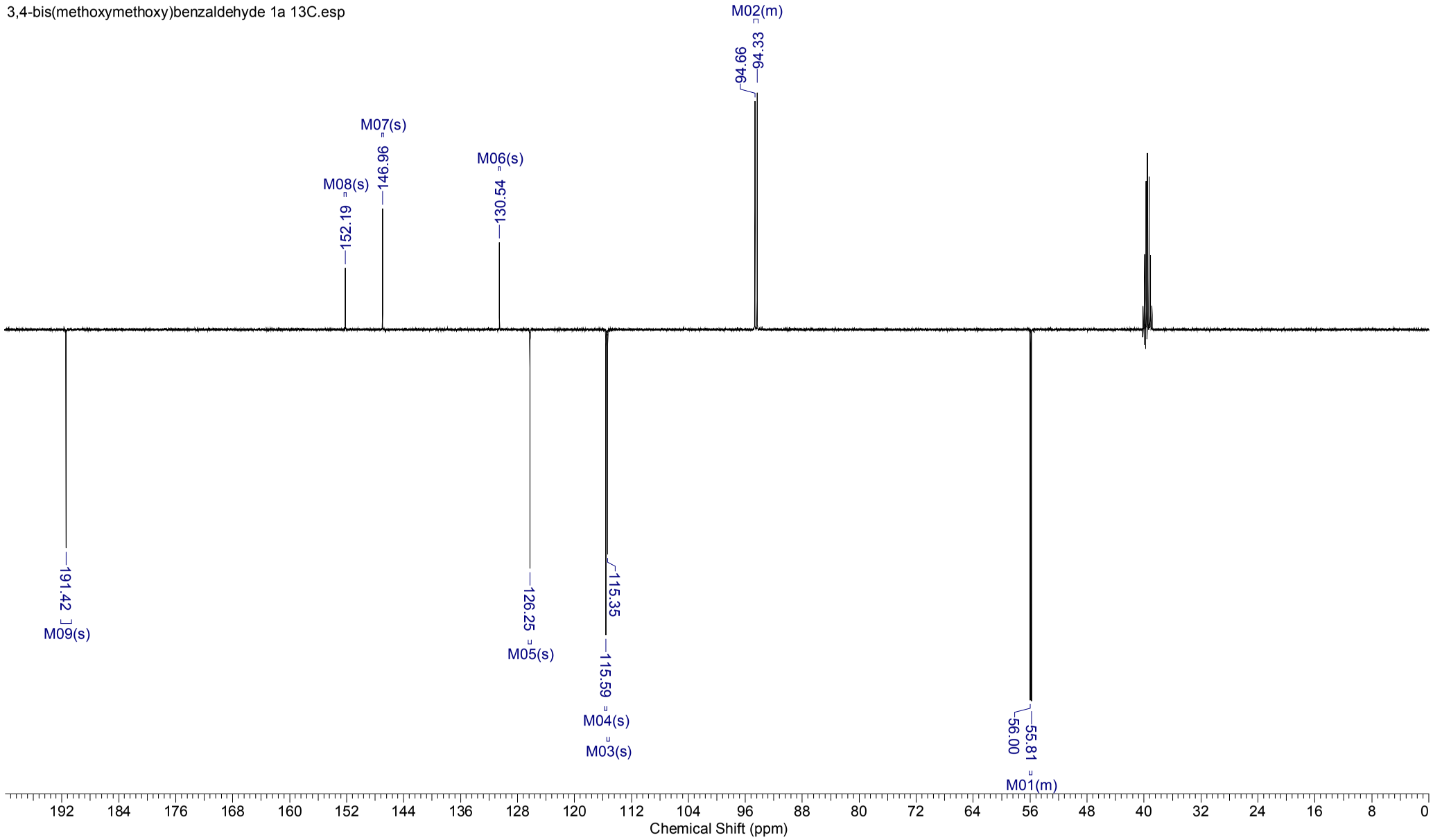
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.146		

3,4-bis(methoxymethoxy)benzaldehyde 1a.esp



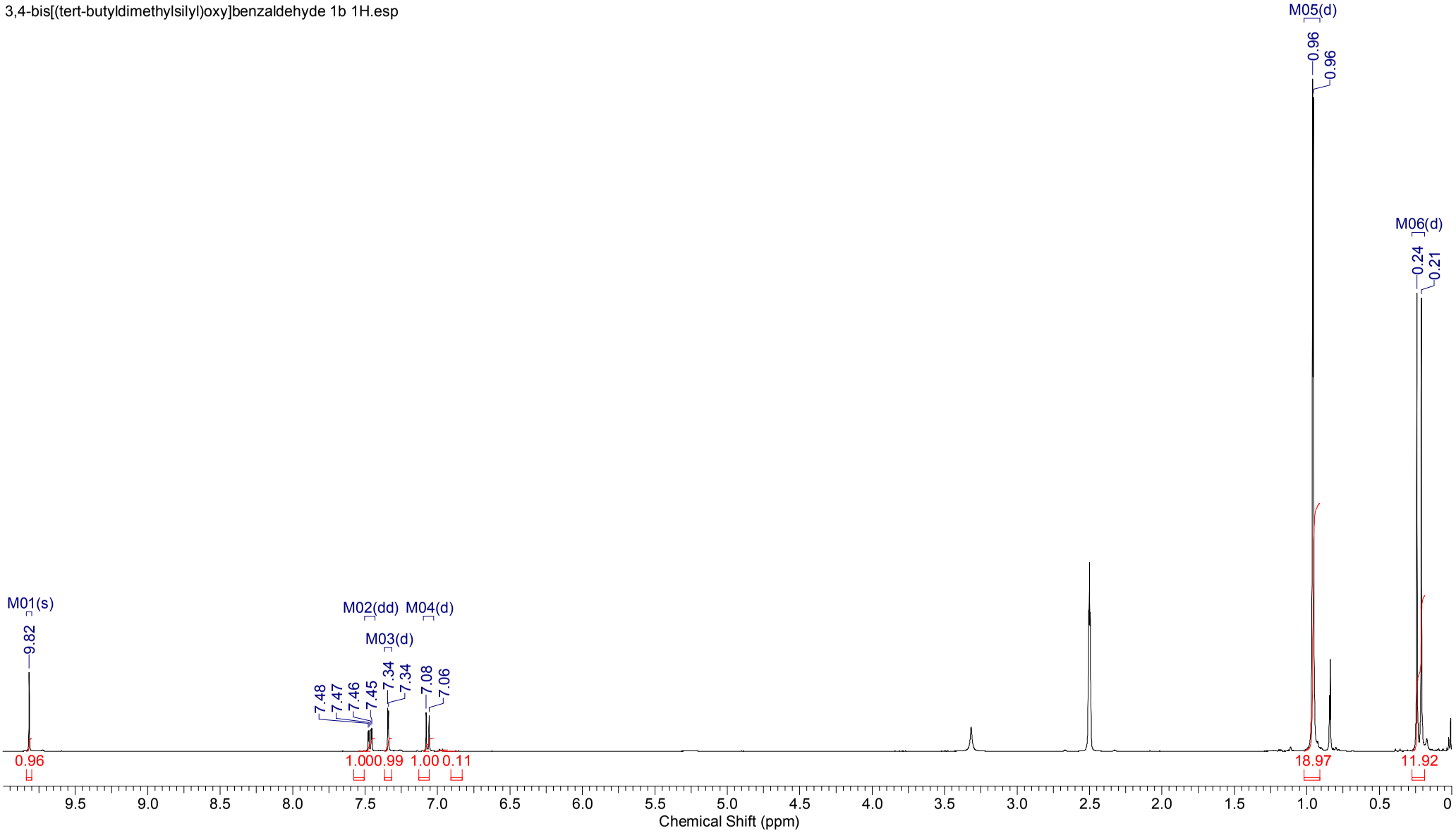
Acquisition Time (sec)	1.3631	***Date***	14 Dec 2018 20:18:24			***Date Stamp***	14 Dec 2018 20:18:24
File Name	C:\USERS\JMULLE14\DOWNLOADS\JM271F2_2\JM271F2\2\FID					***Frequency (MHz)***	100.61
Nucleus	13C	***Number of Transients***	1024	***Origin***	spect	***Original Points Count***	32768
Owner	nmr	***Points Count***	32768	***Pulse Sequence***	jmod	***Receiver Gain***	198.06
SW(cyclical) (Hz)	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10012.3350	***Spectrum Type***	APT
Sweep Width (Hz)	24037.73	***Temperature (degree C)***	25.155				

3,4-bis(methoxymethoxy)benzaldehyde 1a 13C.esp



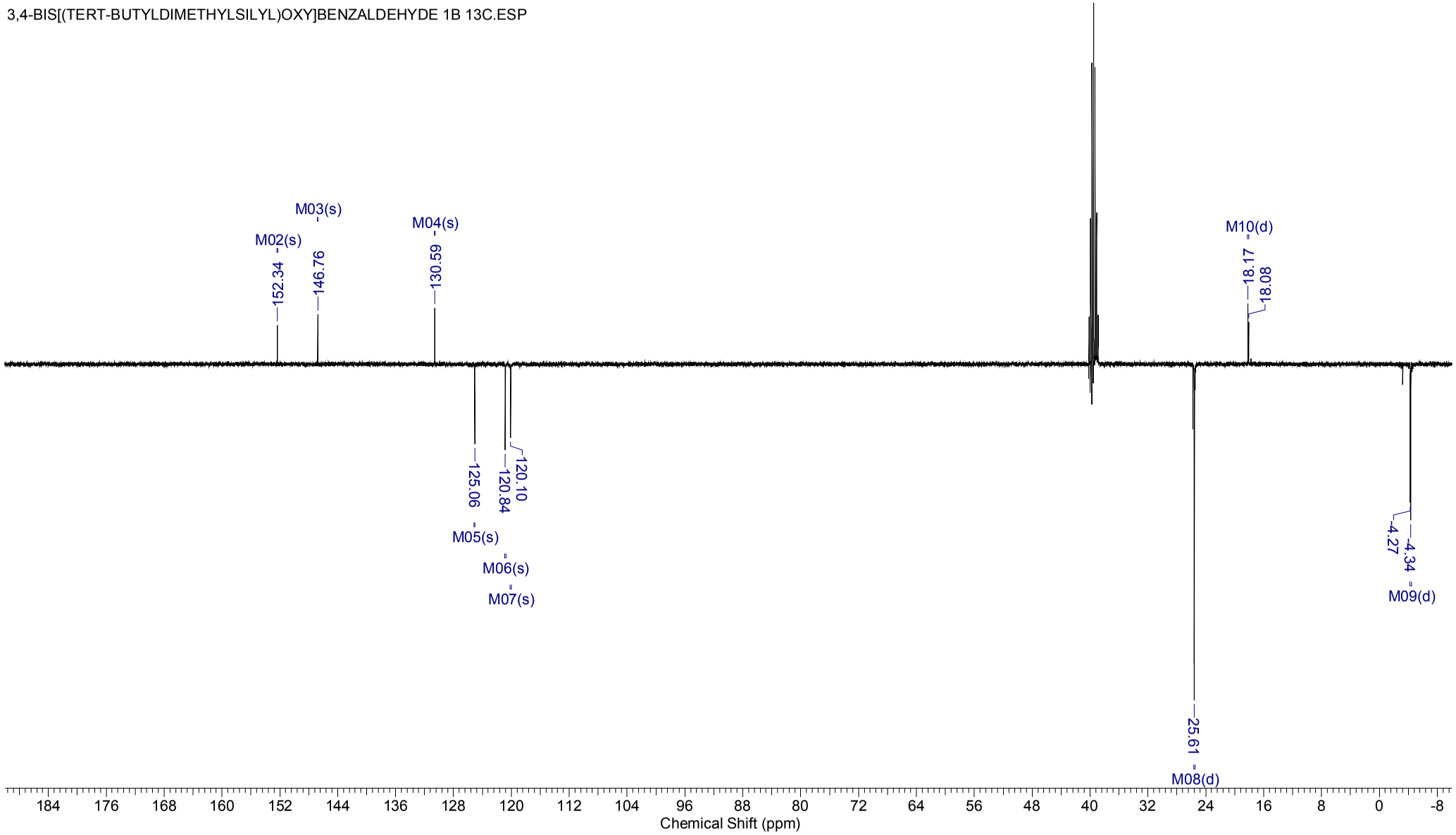
Acquisition Time (sec)	4.0894	***Date***	19 Oct 2018 15:56:16			***Date Stamp***	19 Oct 2018 15:56:16
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM223F2_1\JM_223F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	63.65	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.6387
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.149		

3,4-bis[(tert-butyldimethylsilyl)oxy]benzaldehyde 1b 1H.esp



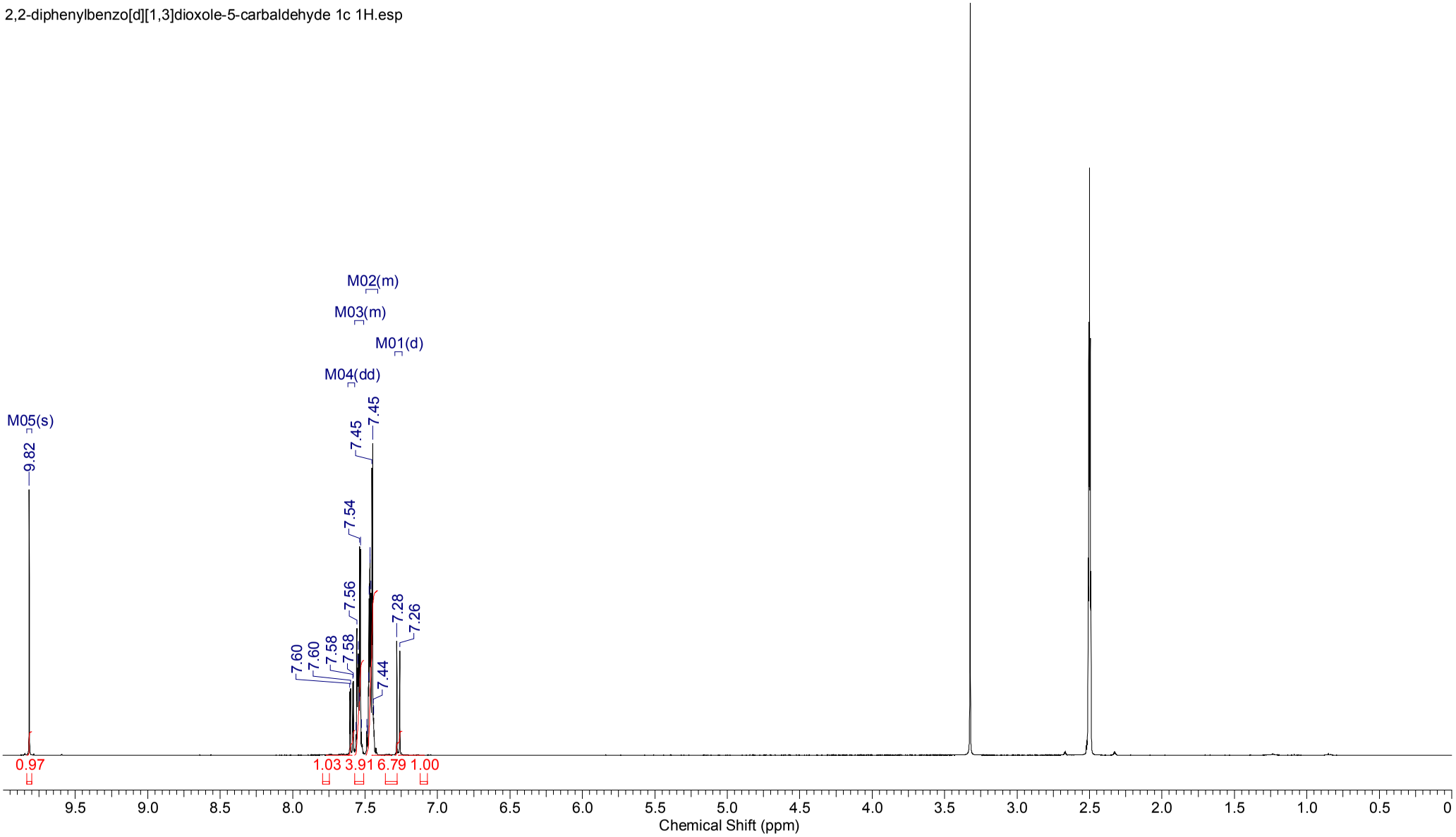
Acquisition Time (sec)	1.3631	***Date***	19 Oct 2018 18:38:24			***Date Stamp***	19 Oct 2018 18:38:24
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM223F2_2\JM223F2\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	1024	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10010.8594
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.146		

3,4-BIS[(TERT-BUTYLDIMETHYLSILYL)OXY]BENZALDEHYDE 1B 13C.ESP



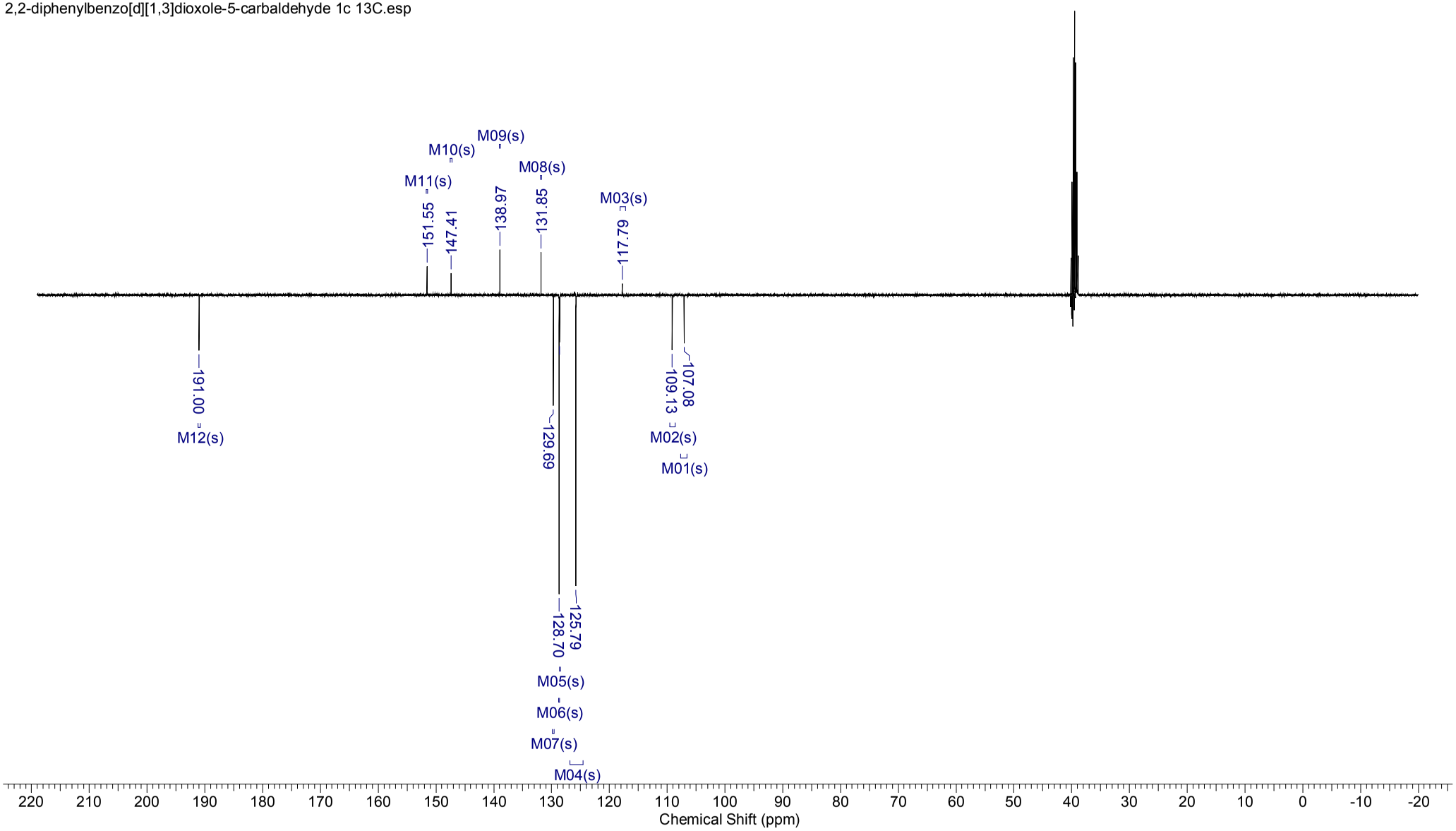
Acquisition Time (sec)	4.0894	***Date***	25 May 2018 08:09:04			***Date Stamp***	25 May 2018 08:09:04
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\RMN\JM134F2_1\JM134F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	112.05	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.151		

2,2-diphenylbenzo[d][1,3]dioxole-5-carbaldehyde 1c 1H.esp



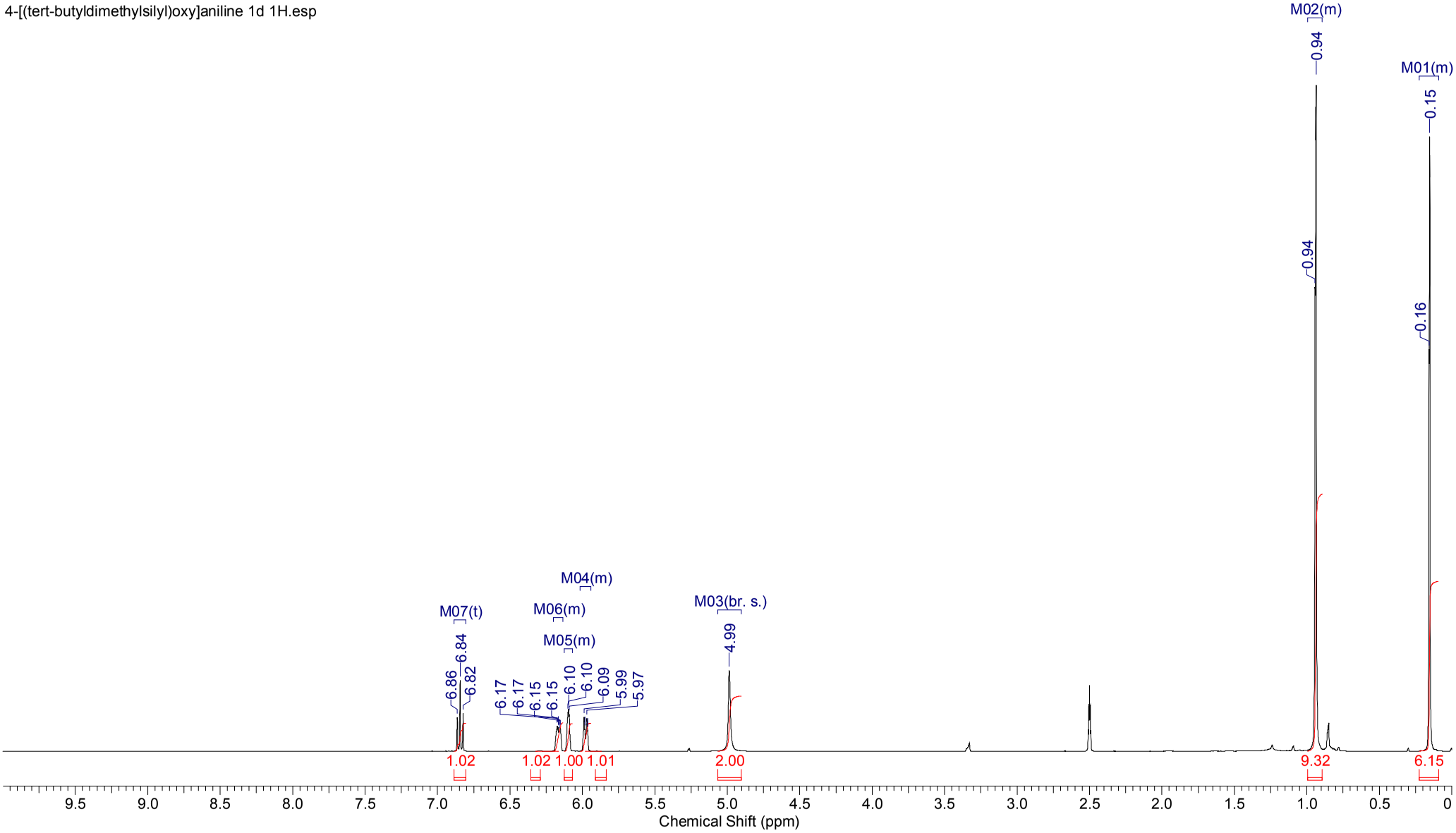
Acquisition Time (sec)	1.3631	***Date***	26 Jun 2018 05:41:52			***Date Stamp***	26 Jun 2018 05:41:52
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\RMN\JM134F2_12\JM134F2\12\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10014.5361
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150		

2,2-diphenylbenzo[d][1,3]dioxole-5-carbaldehyde 1c 13C.esp



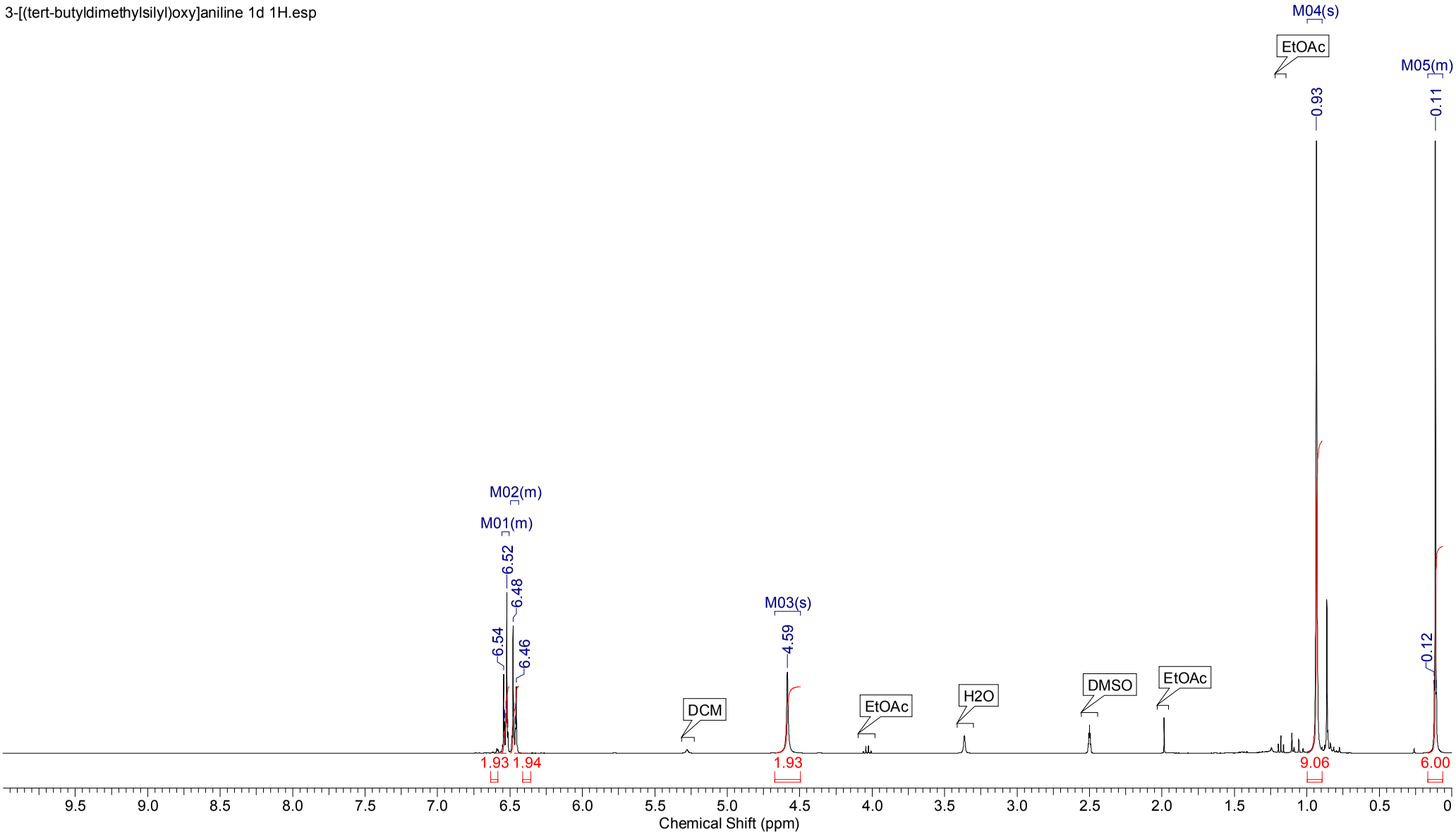
Acquisition Time (sec)	4.0894	***Date***	09 May 2019 15:41:20			***Date Stamp***	09 May 2019 15:41:20
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD016F2_1\CD016F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	21.66	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3943
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.143		

4-[(tert-butyldimethylsilyl)oxy]aniline 1d 1H.esp



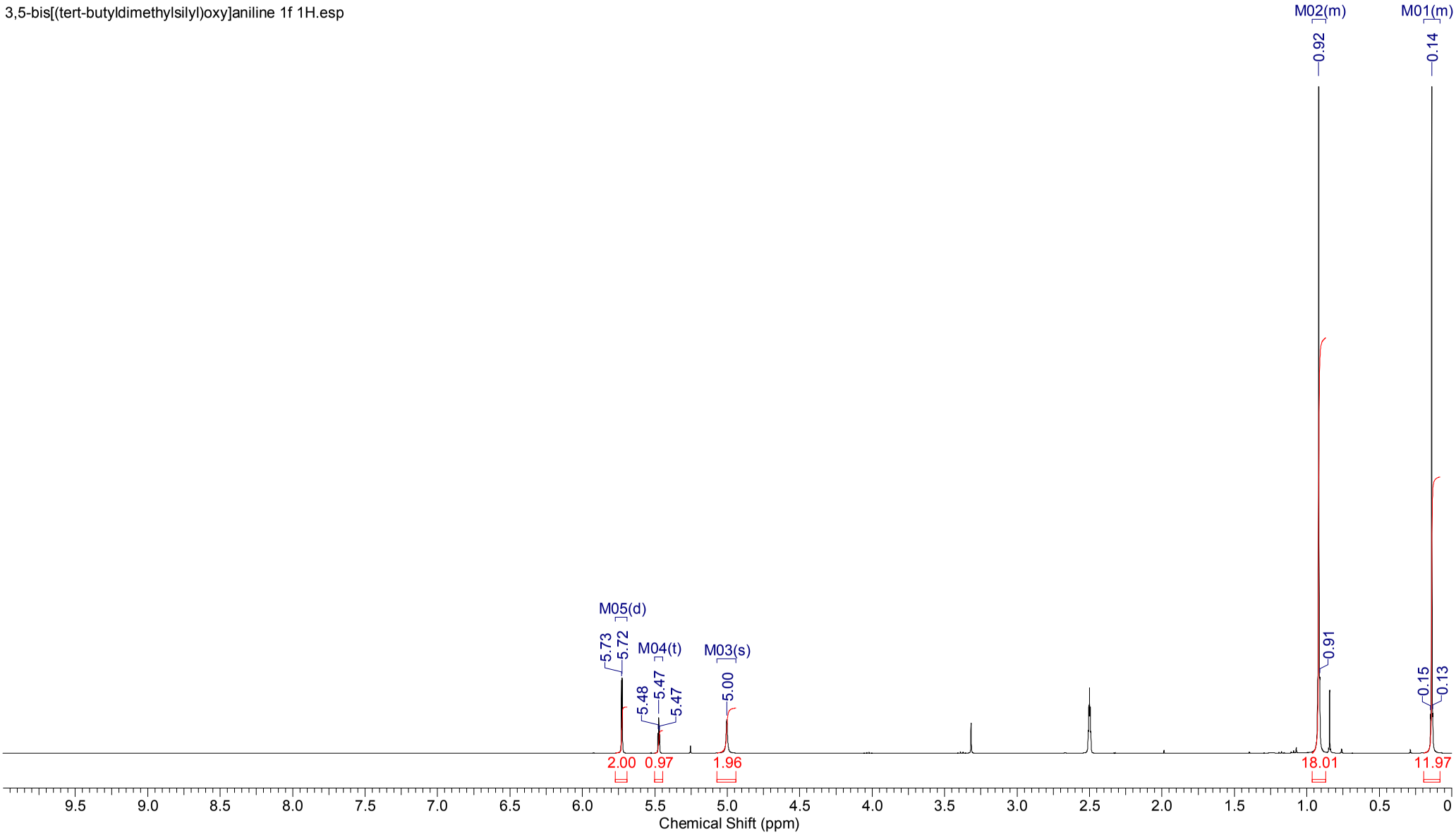
Acquisition Time (sec)	4.0894	***Date***	02 May 2019 09:21:36			***Date Stamp***	02 May 2019 09:21:36
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD012F2_1\CD012F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	10.87	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.152		

3-[(tert-butyldimethylsilyl)oxy]aniline 1d 1H.esp



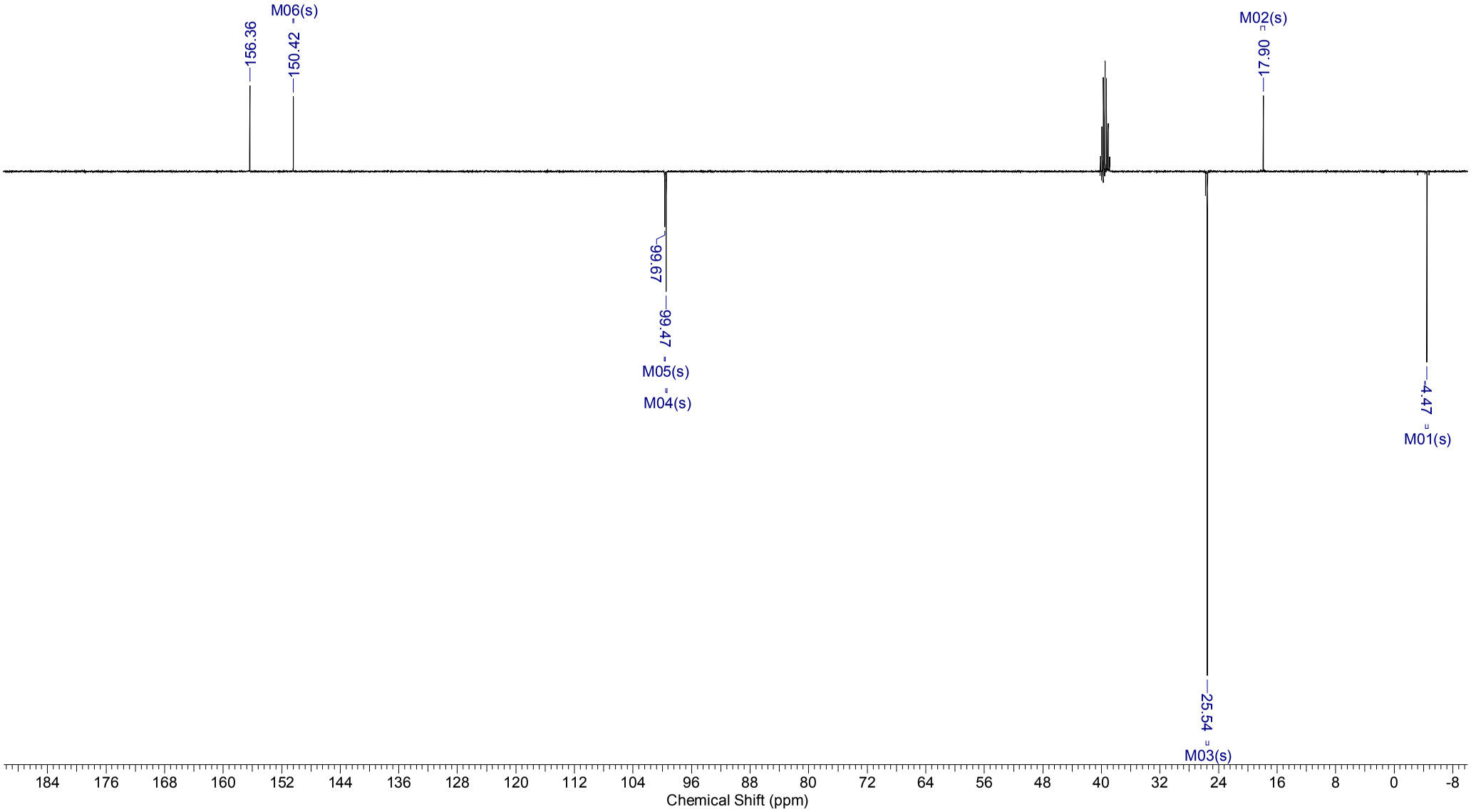
Acquisition Time (sec)	4.0894	***Date***	03 Sep 2019 08:43:12			***Date Stamp***	03 Sep 2019 08:43:12
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM360F2_1\JM360F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	30.70	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.151		

3,5-bis[(tert-butyldimethylsilyl)oxy]aniline 1f 1H.esp



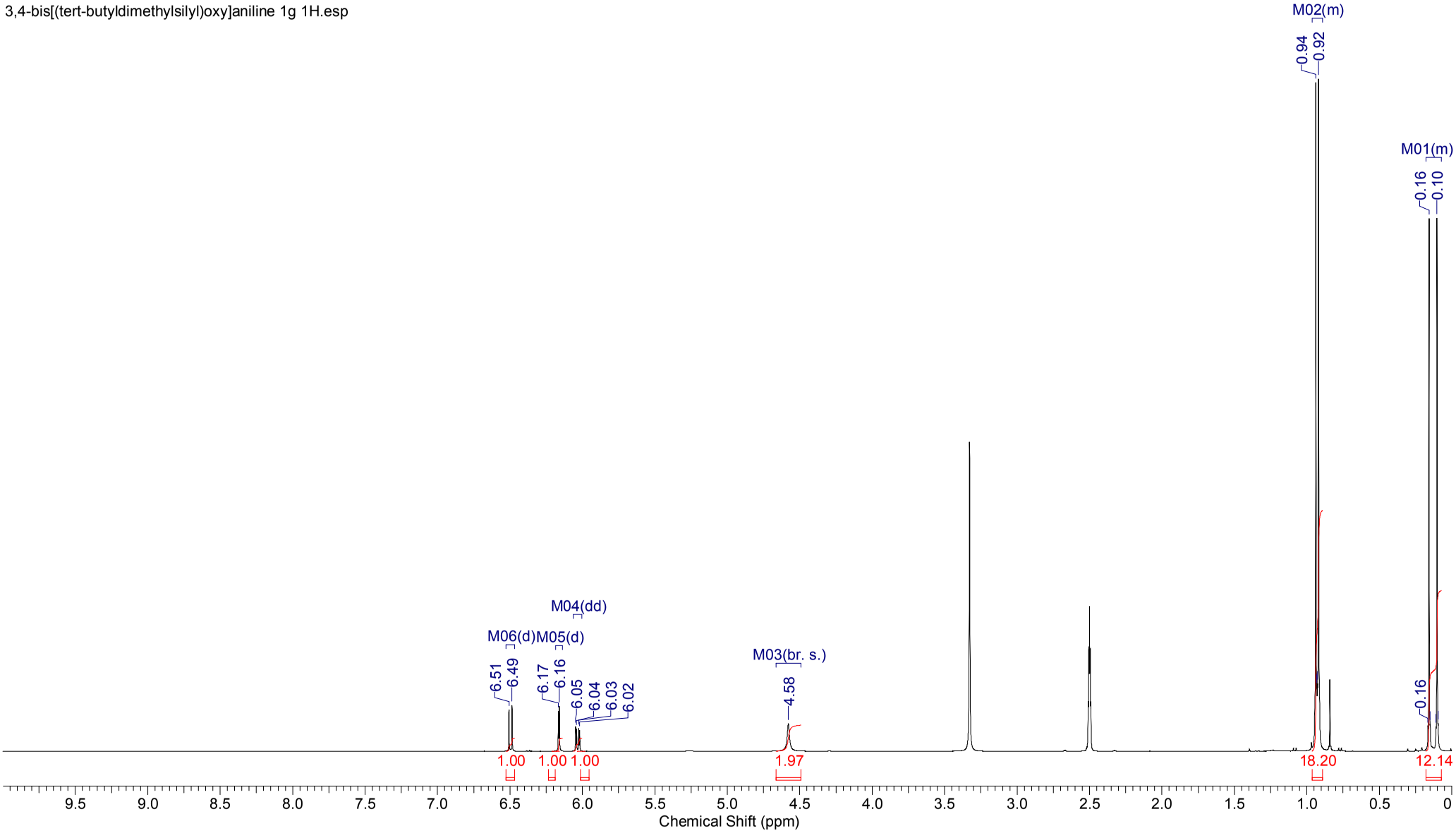
Acquisition Time (sec)	1.3631	***Date***	04 Sep 2019 18:38:24			***Date Stamp***	04 Sep 2019 18:38:24
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM360F2_3\JM360F2\3\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	1024	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10010.8584
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.147		

3,5-bis[(tert-butyldimethylsilyl)oxy]aniline 1f 13C.esp



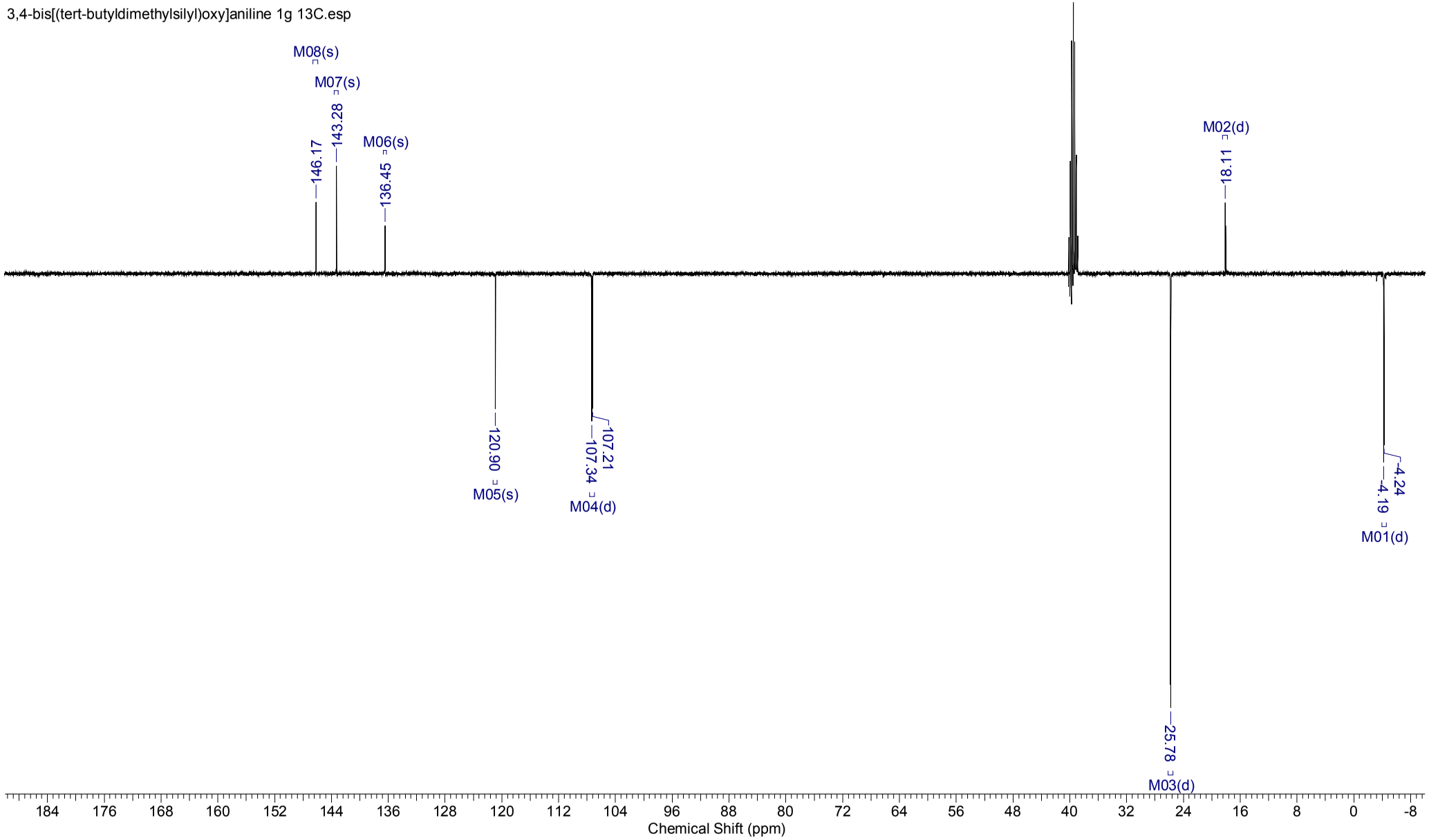
Acquisition Time (sec)	4.0894	***Date***	27 Jun 2019 11:31:44			***Date Stamp***	27 Jun 2019 11:31:44
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM352F2_1\JM352F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	63.65	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.446		

3,4-bis[(tert-butyldimethylsilyl)oxy]aniline 1g 1H.esp



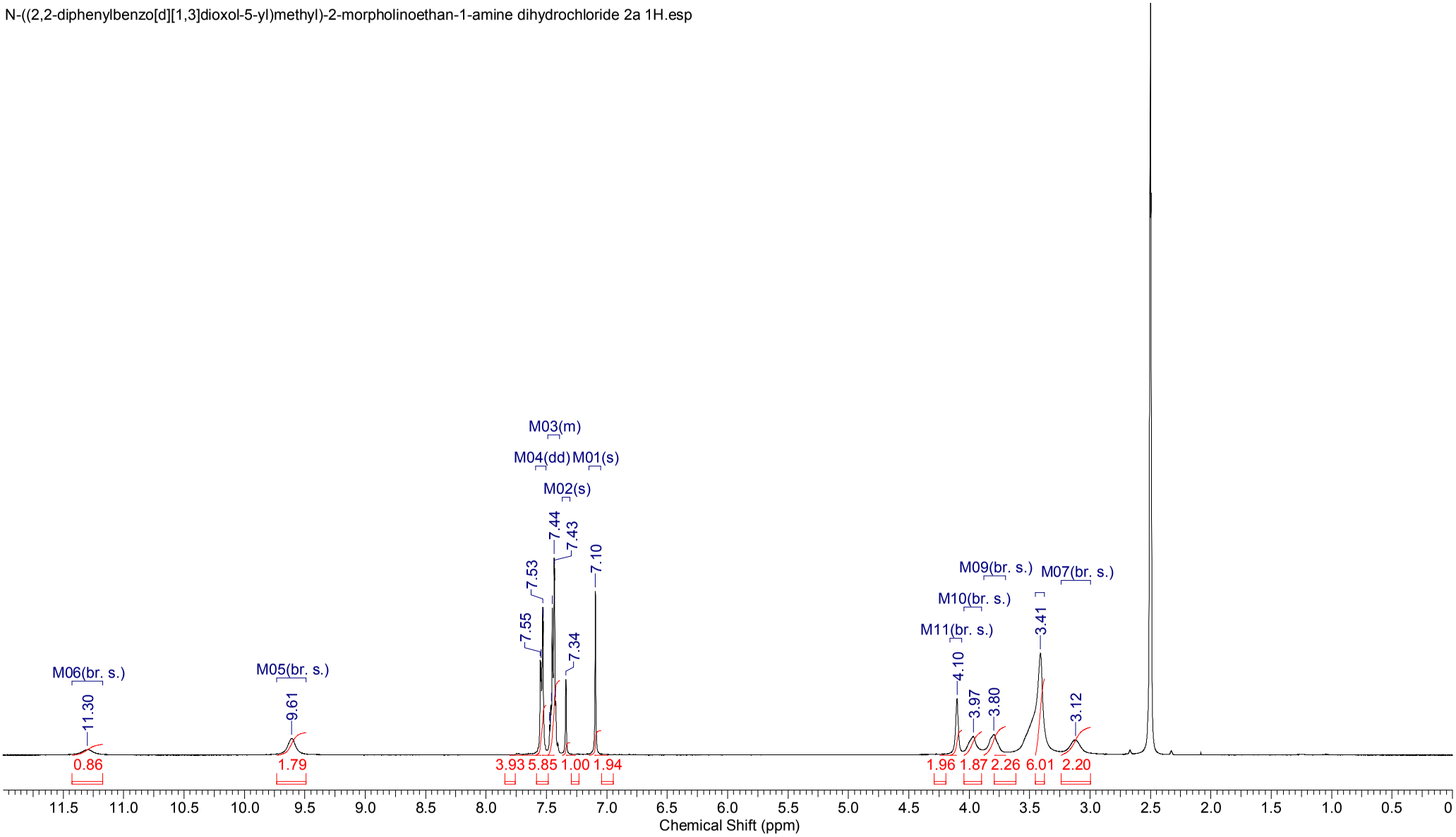
Acquisition Time (sec)	1.3631	***Date***	01 Jul 2019 18:40:32			***Date Stamp***	01 Jul 2019 18:40:32		
File Name	C:\USERS\JASON\DOWNLOADS\JM352F2\3\FID			***Frequency (MHz)***	100.61	***Nucleus***	13C	***Number of Transients***	1024
Origin	spect	***Original Points Count***	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10011.6016	***Spectrum Type***	APT
Sweep Width (Hz)	24037.73	***Temperature (degree C)***	25.803						

3,4-bis[(tert-butyldimethylsilyl)oxy]aniline 1g 13C.esp



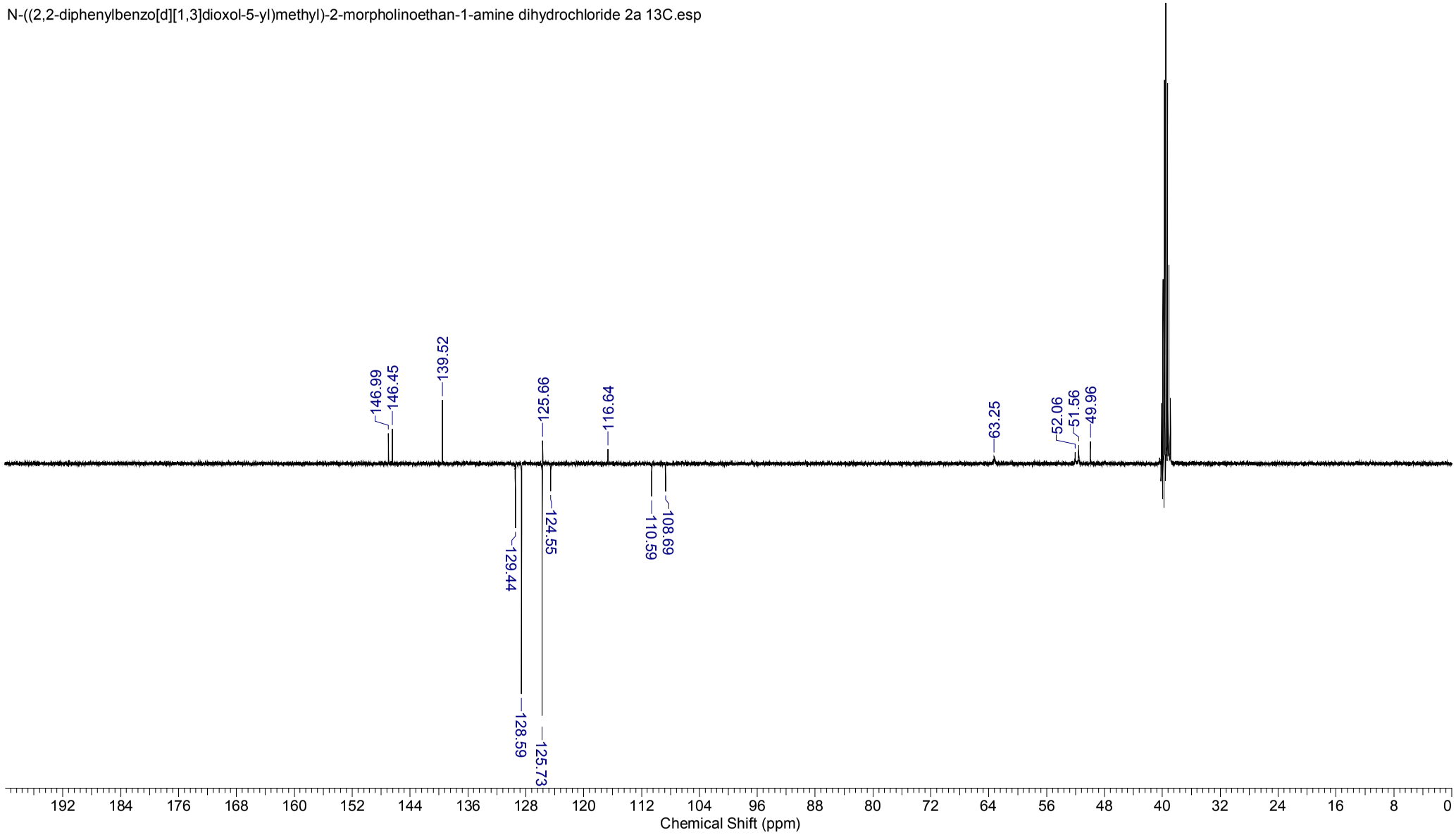
Acquisition Time (sec)	4.0894	***Date***	28 Jun 2018 16:09:04			***Date Stamp***	28 Jun 2018 16:09:04
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\RMN\JM151F1_3\JM151F1\3\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	87.87	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.149		

N-((2,2-diphenylbenzo[d][1,3]dioxol-5-yl)methyl)-2-morpholinoethan-1-amine dihydrochloride 2a 1H.esp



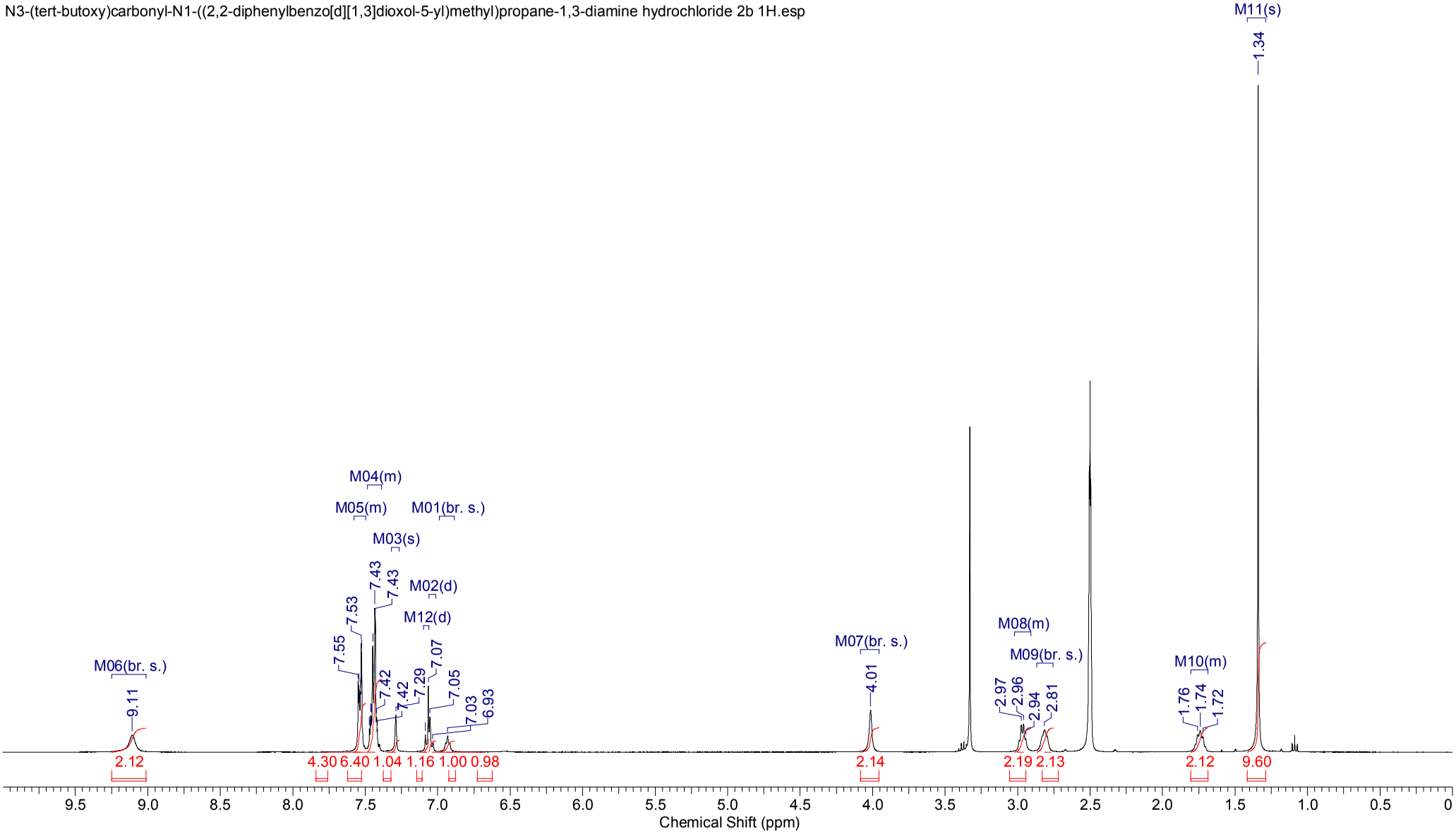
Acquisition Time (sec)	1.3631	***Date***	28 Jun 2018 20:10:08			***Date Stamp***	28 Jun 2018 20:10:08
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\RMN\JM151F1_4\JM151F1\4\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10012.3350
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.148		

N-((2,2-diphenylbenzo[d][1,3]dioxol-5-yl)methyl)-2-morpholinoethan-1-amine dihydrochloride 2a 13C.esp



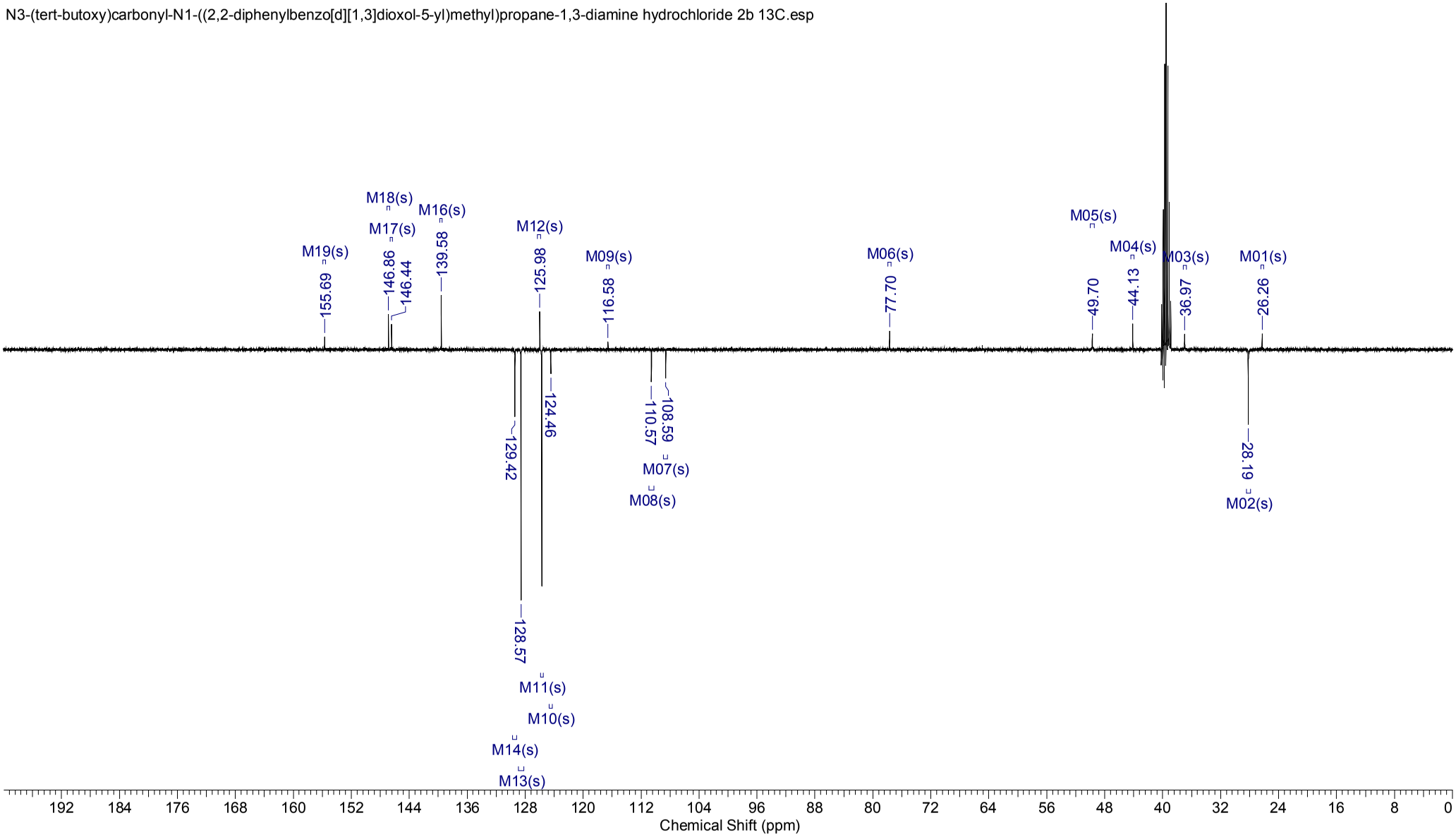
Acquisition Time (sec)	4.0894	***Date***	29 Jun 2018 15:37:04			***Date Stamp***	29 Jun 2018 15:37:04
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\RMN\JM155F2_1\JM155F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	87.87	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.151		

N3-(tert-butoxy)carbonyl-N1-((2,2-diphenylbenzo[d][1,3]dioxol-5-yl)methyl)propane-1,3-diamine hydrochloride 2b 1H.esp



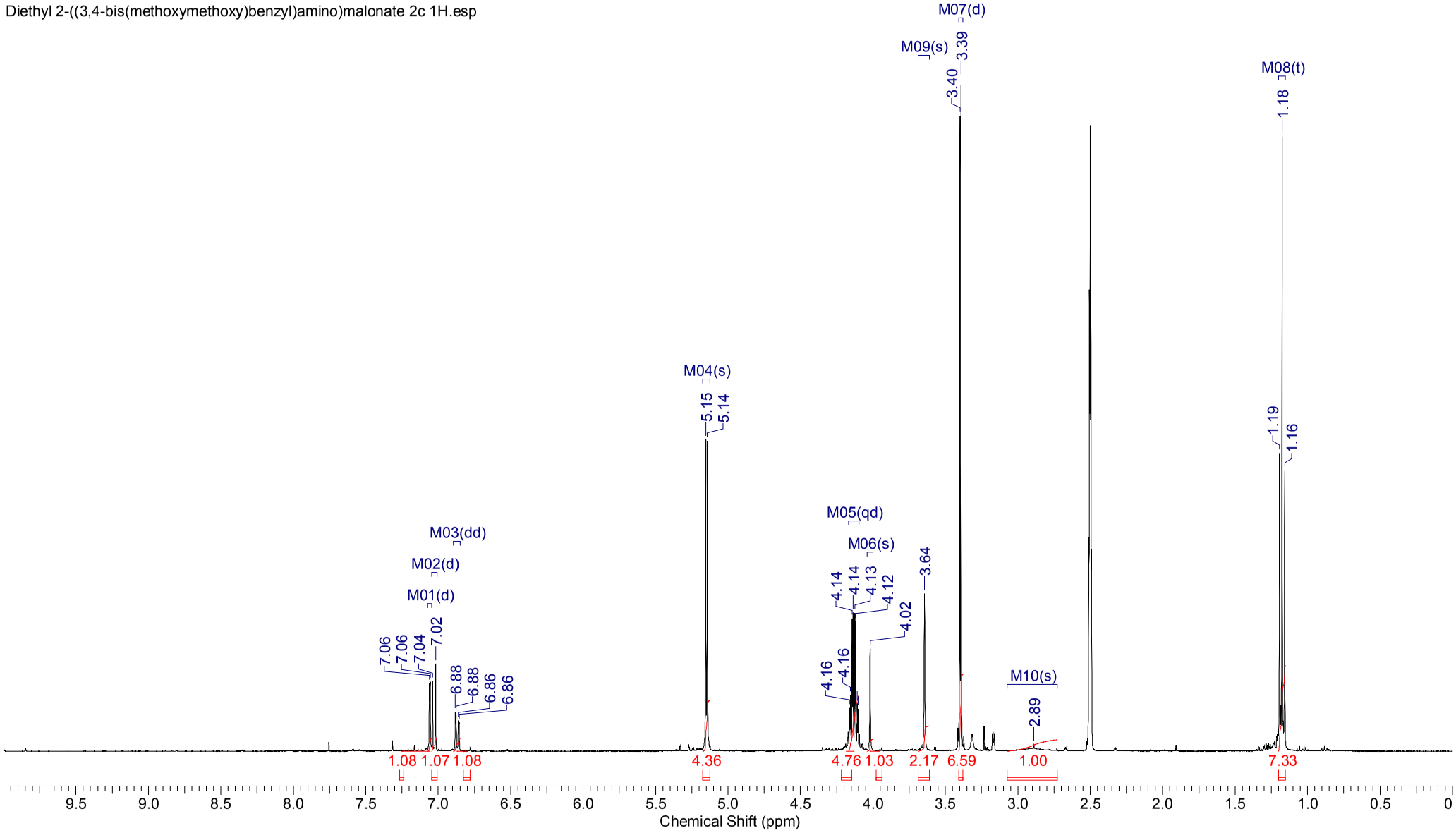
Acquisition Time (sec)	1.3631	***Date***	30 Jun 2018 19:21:04			***Date Stamp***	30 Jun 2018 19:21:04
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\RMN\JM155F2_2\JM155F2\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10012.3350
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.149		

N3-(tert-butoxy)carbonyl-N1-((2,2-diphenylbenzo[d][1,3]dioxol-5-yl)methyl)propane-1,3-diamine hydrochloride 2b 13C.esp



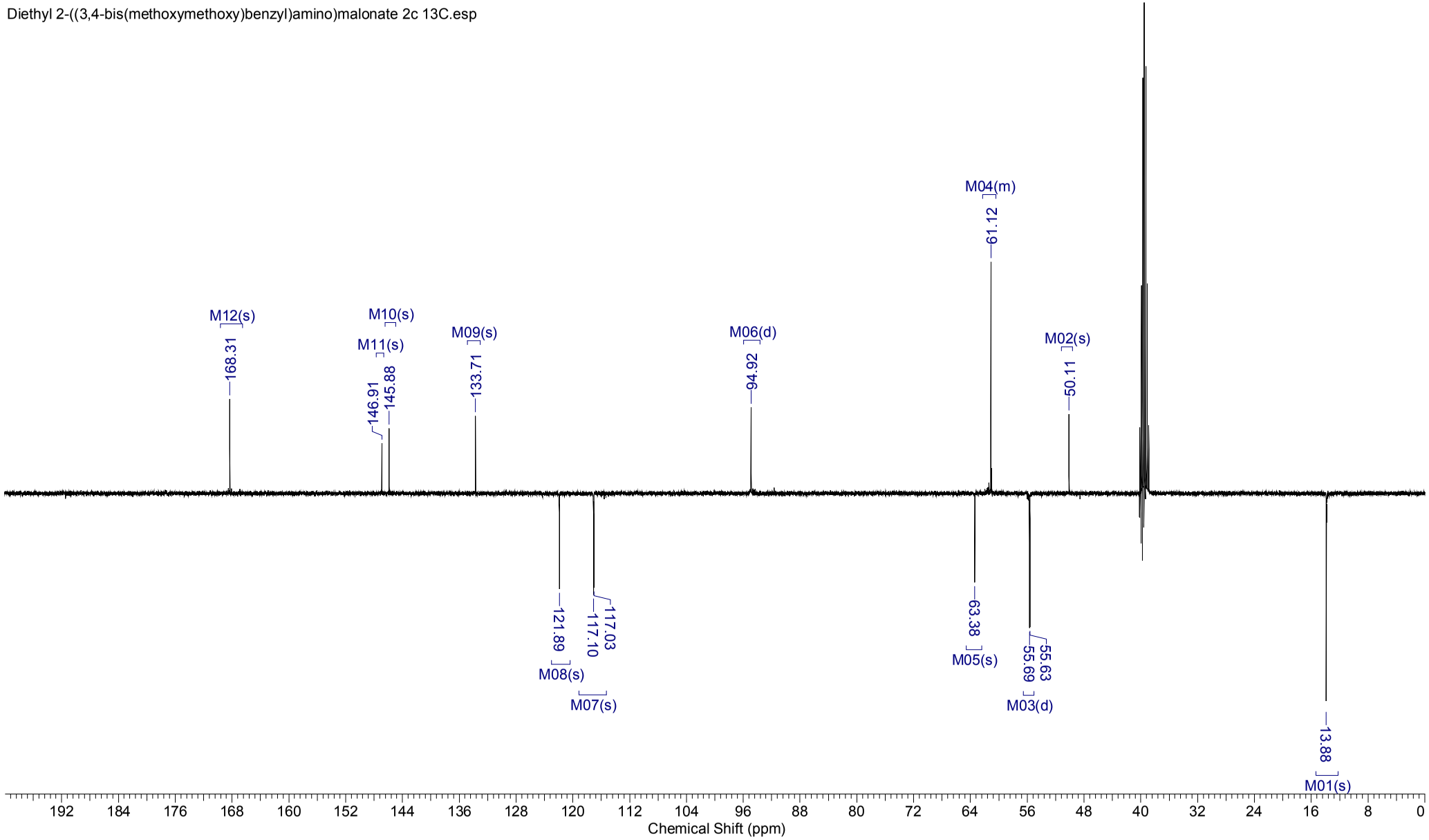
Acquisition Time (sec)	4.0894	***Date***	11 Jan 2019 09:00:00			***Date Stamp***	11 Jan 2019 09:00:00
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM279F3_1\JM279F3\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	87.87	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.155		

Diethyl 2-((3,4-bis(methoxymethoxy)benzyl)amino)malonate 2c 1H.esp



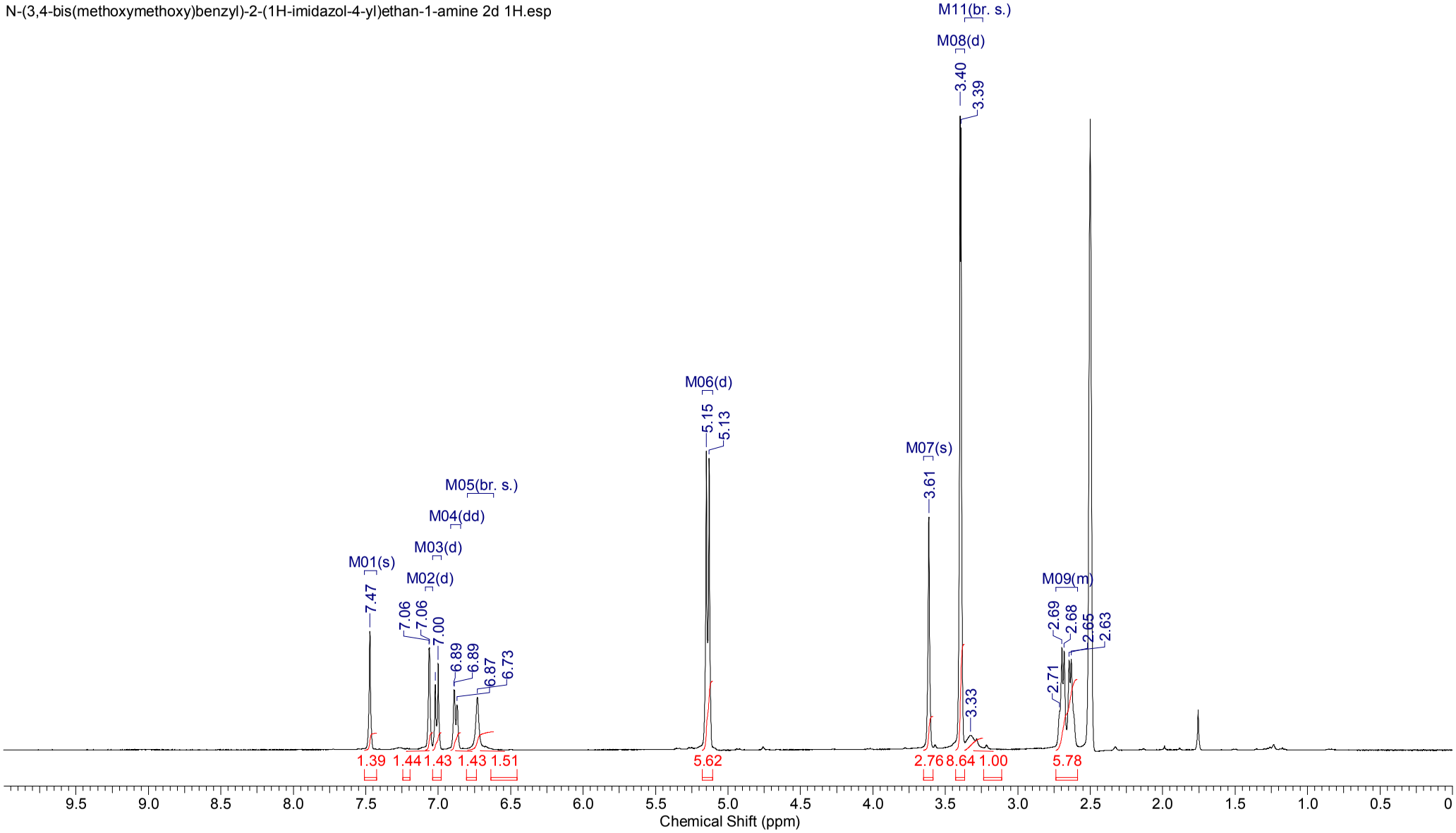
Acquisition Time (sec)	1.3631	***Date***	02 Feb 2019 17:21:20			***Date Stamp***	02 Feb 2019 17:21:20		
File Name	C:\USERS\JASON\DOWNLOADS\NOUVEAU DOSSIER\JM279F3_2\JM279F3\2\FID					***Frequency (MHz)***	100.61	***Nucleus***	13C
Number of Transients	2048	***Origin***	spect	***Original Points Count***	32768	***Owner***	nmr	***Points Count***	32768
Pulse Sequence	jmod	***Receiver Gain***	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10011.6016
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.148				

Diethyl 2-((3,4-bis(methoxymethoxy)benzyl)amino)malonate 2c 13C.esp



Acquisition Time (sec)	4.0894	***Date***	21 Jan 2019 11:14:24			***Date Stamp***	21 Jan 2019 11:14:24
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM285F4_1\JM285F4\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	78.49	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.146		

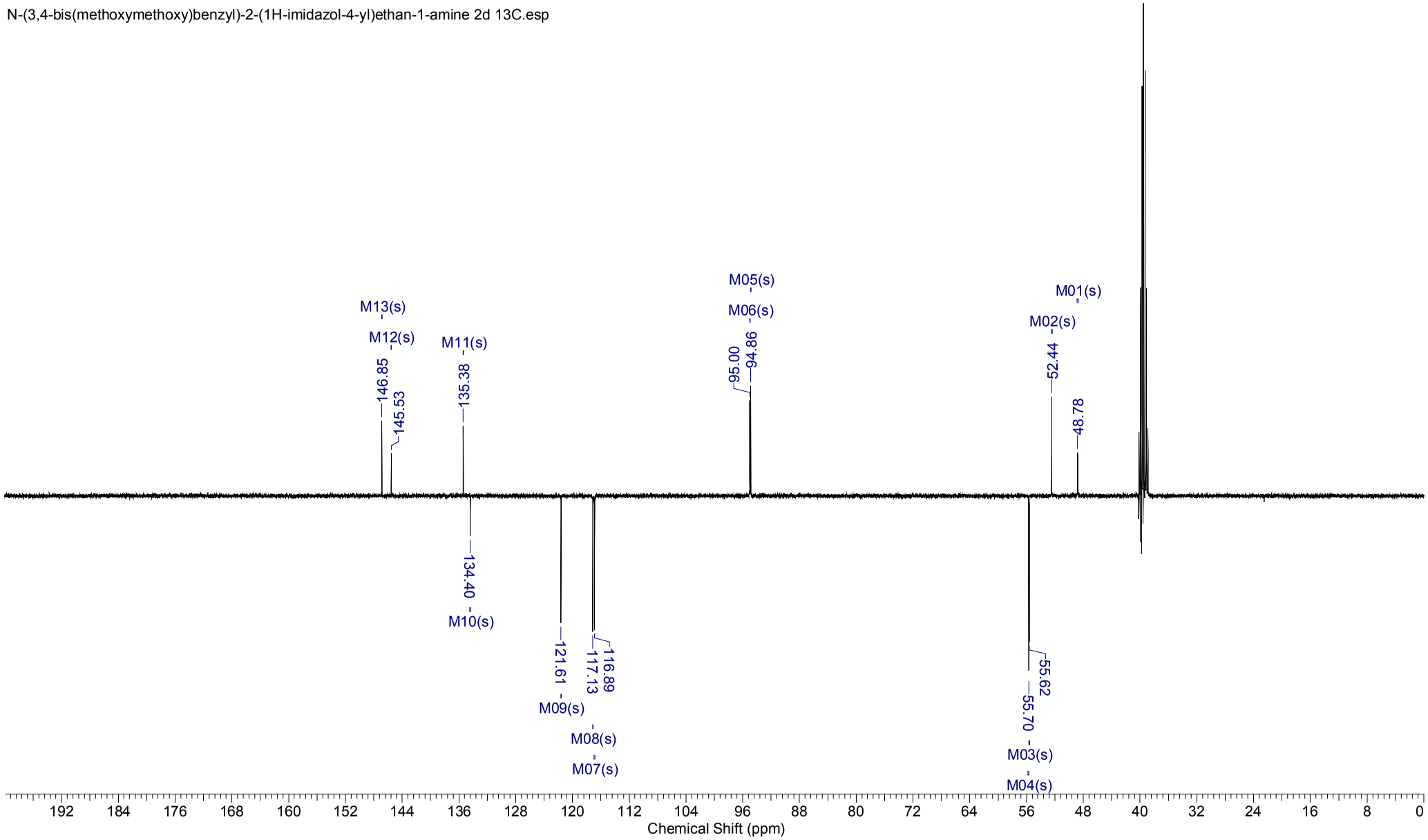
N-(3,4-bis(methoxymethoxy)benzyl)-2-(1H-imidazol-4-yl)ethan-1-amine 2d 1H.esp



Acquisition Time (sec)	1.3631	***Date***	02 Feb 2019 14:11:28			***Date Stamp***	02 Feb 2019 14:11:28
File Name	C:\USERS\JASON\DOWNLOADS\NOUVEAU DOSSIER\JM285F4_3\JM285F4\3\FID					***Frequency (MHz)***	100.61
Number of Transients	2048	***Origin***	spect	***Original Points Count***	32768	***Owner***	nmr
Pulse Sequence	jmod	***Receiver Gain***	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.149		

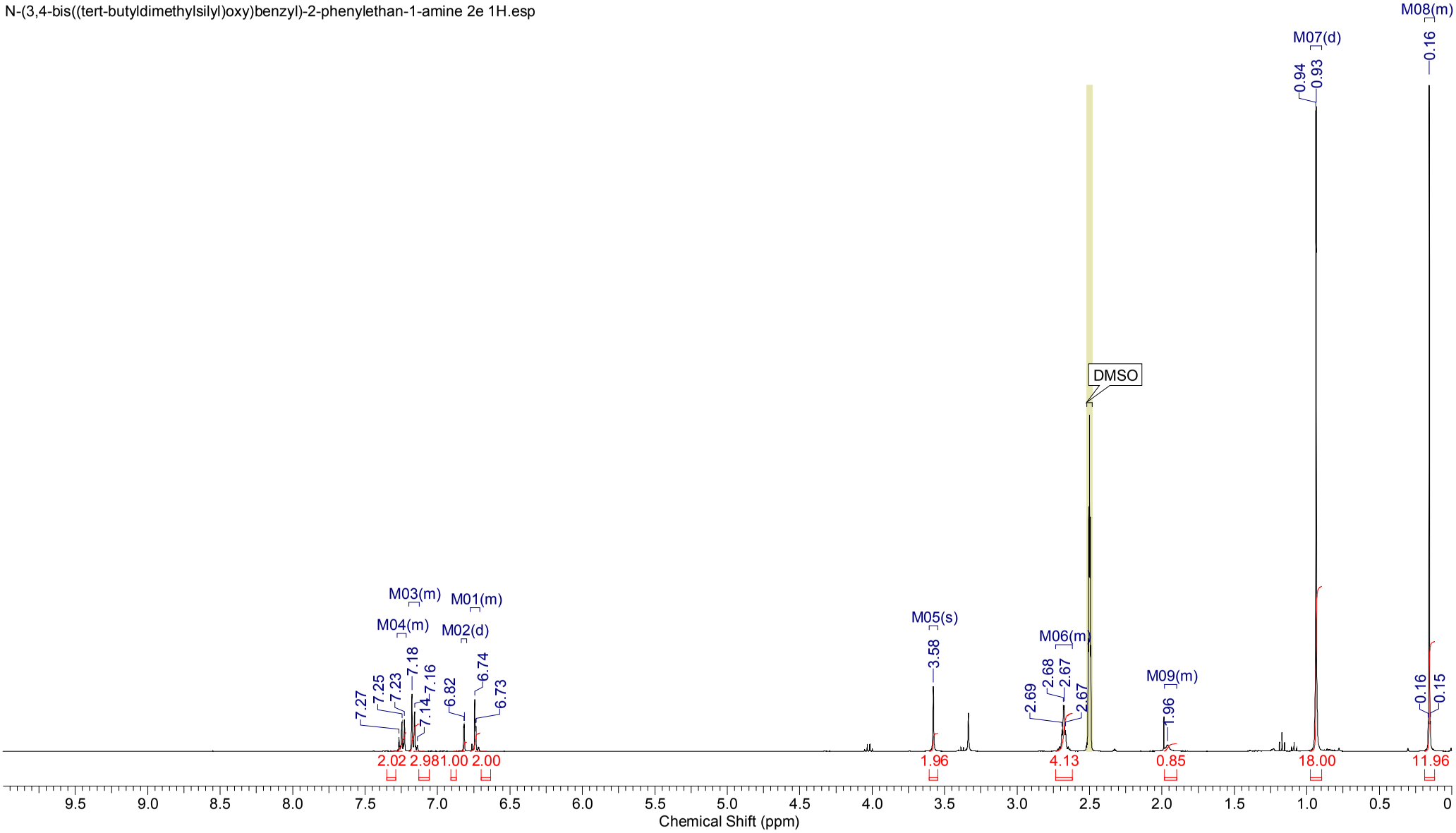
Nucleus	13C		
Points Count	32768		
Spectrum Offset (Hz)	10011.6016		

N-(3,4-bis(methoxymethoxy)benzyl)-2-(1H-imidazol-4-yl)ethan-1-amine 2d 13C.esp



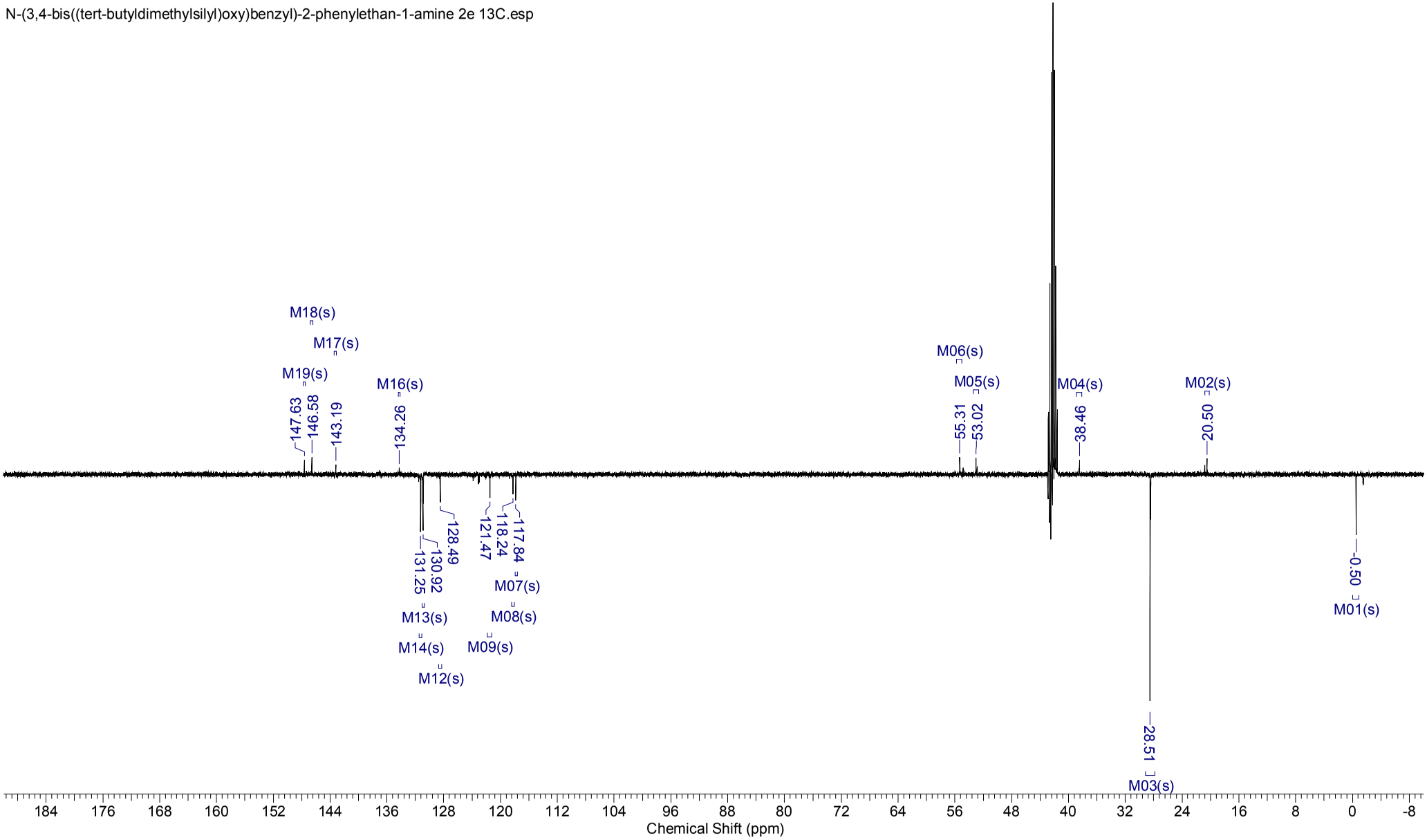
Acquisition Time (sec)	4.0894	***Date***	29 Nov 2018 15:30:24			***Date Stamp***	29 Nov 2018 15:30:24
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM258F2_1\JM258F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	78.49	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	20.656		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-2-phenylethan-1-amine 2e 1H.esp



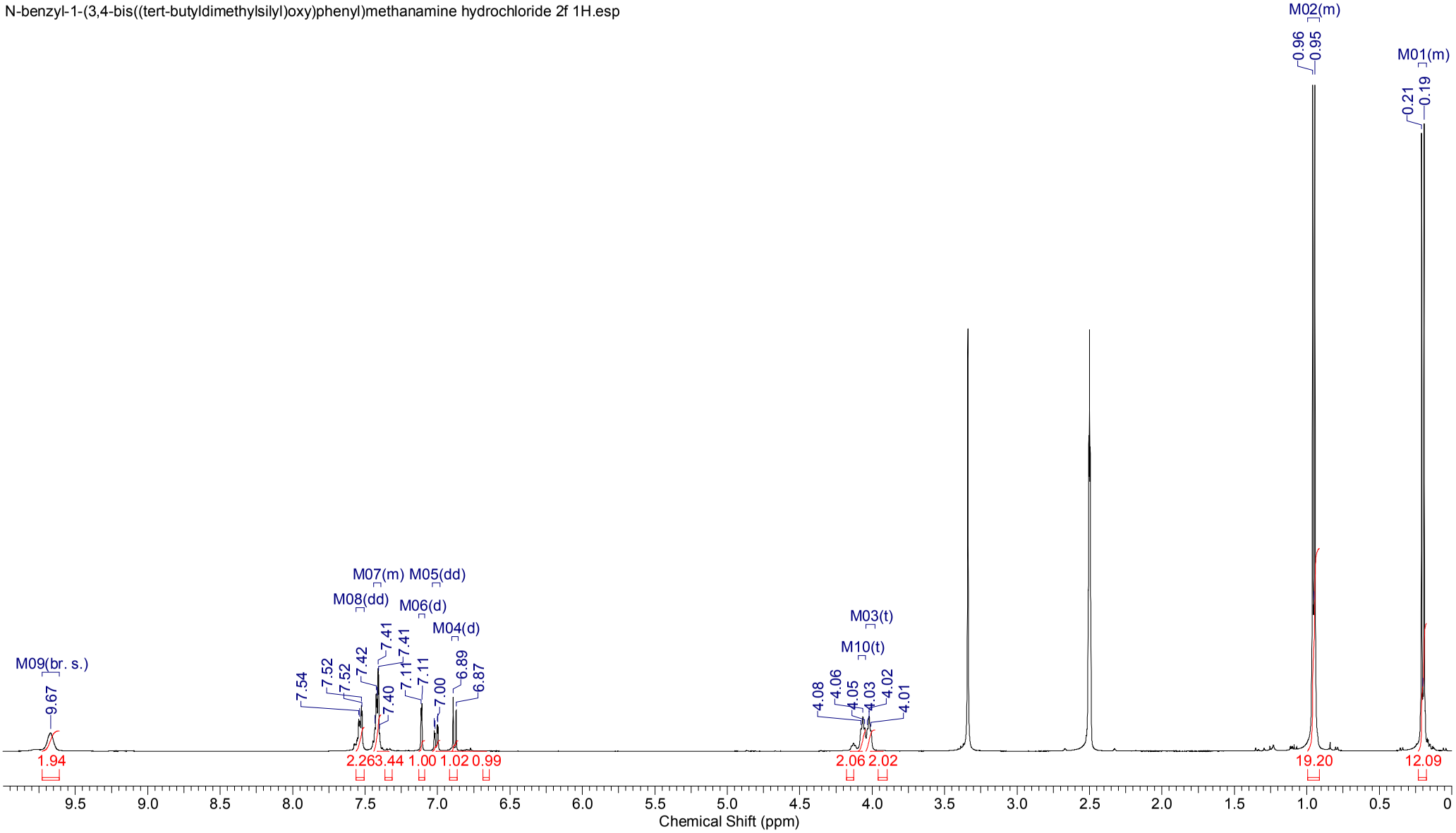
Acquisition Time (sec)	1.3631	***Date***	02 Feb 2019 04:35:28			***Date Stamp***	02 Feb 2019 04:35:28		
File Name	C:\USERS\JASON\DOWNLOADS\NOUVEAU DOSSIER\JM258F2_2\JM258F2\2\FID					***Frequency (MHz)***	100.61	***Nucleus***	13C
Number of Transients	2048	***Origin***	spect	***Original Points Count***	32768	***Owner***	nmr	***Points Count***	32768
Pulse Sequence	jmod	***Receiver Gain***	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10285.3633
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.149				

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-2-phenylethan-1-amine 2e 13C.esp



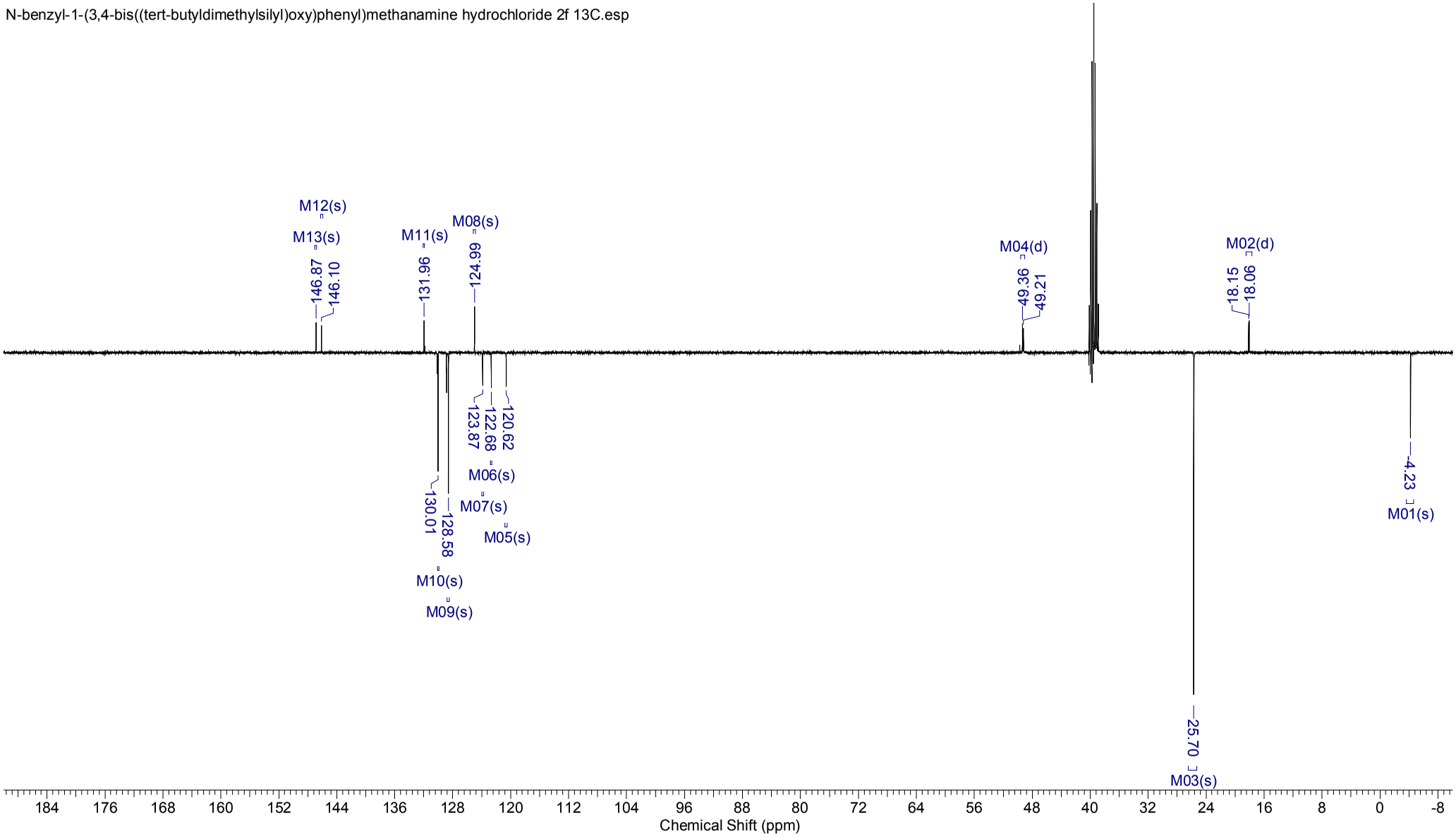
Acquisition Time (sec)	4.0894	***Date***	20 Jun 2019 07:02:56			***Date Stamp***	20 Jun 2019 07:02:56
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM345F3_1\JM345F3\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	71.53	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.159		

N-benzyl-1-(3,4-bis((tert-butyldimethylsilyl)oxy)phenyl)methanamine hydrochloride 2f 1H.esp



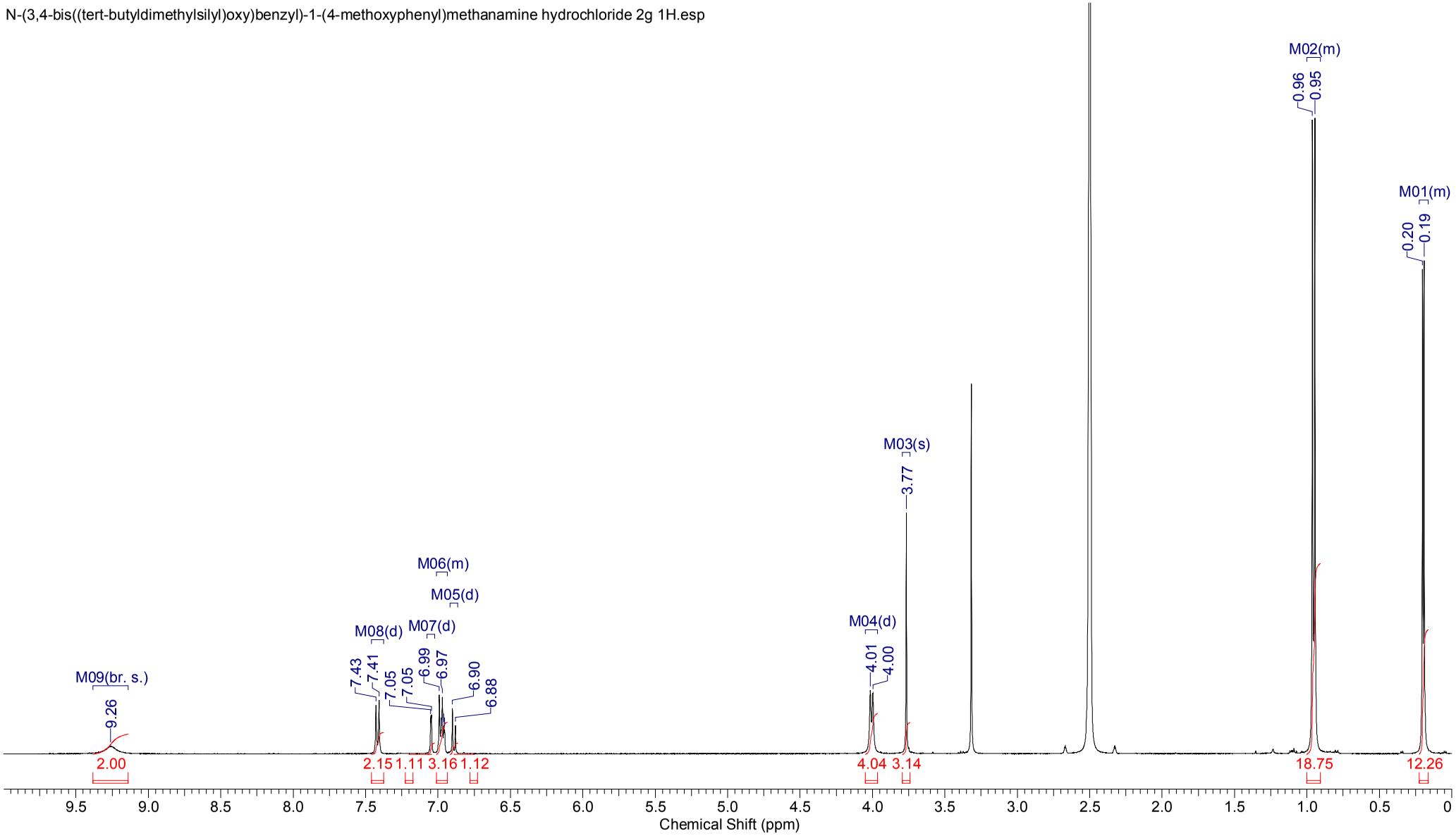
Acquisition Time (sec)	1.3631	***Date***	22 Jun 2019 12:22:56			***Date Stamp***	22 Jun 2019 12:22:56
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM345F3_2\JM345F3\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10011.6016
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.151		

N-benzyl-1-(3,4-bis((tert-butyldimethylsilyl)oxy)phenyl)methanamine hydrochloride 2f 13C.esp



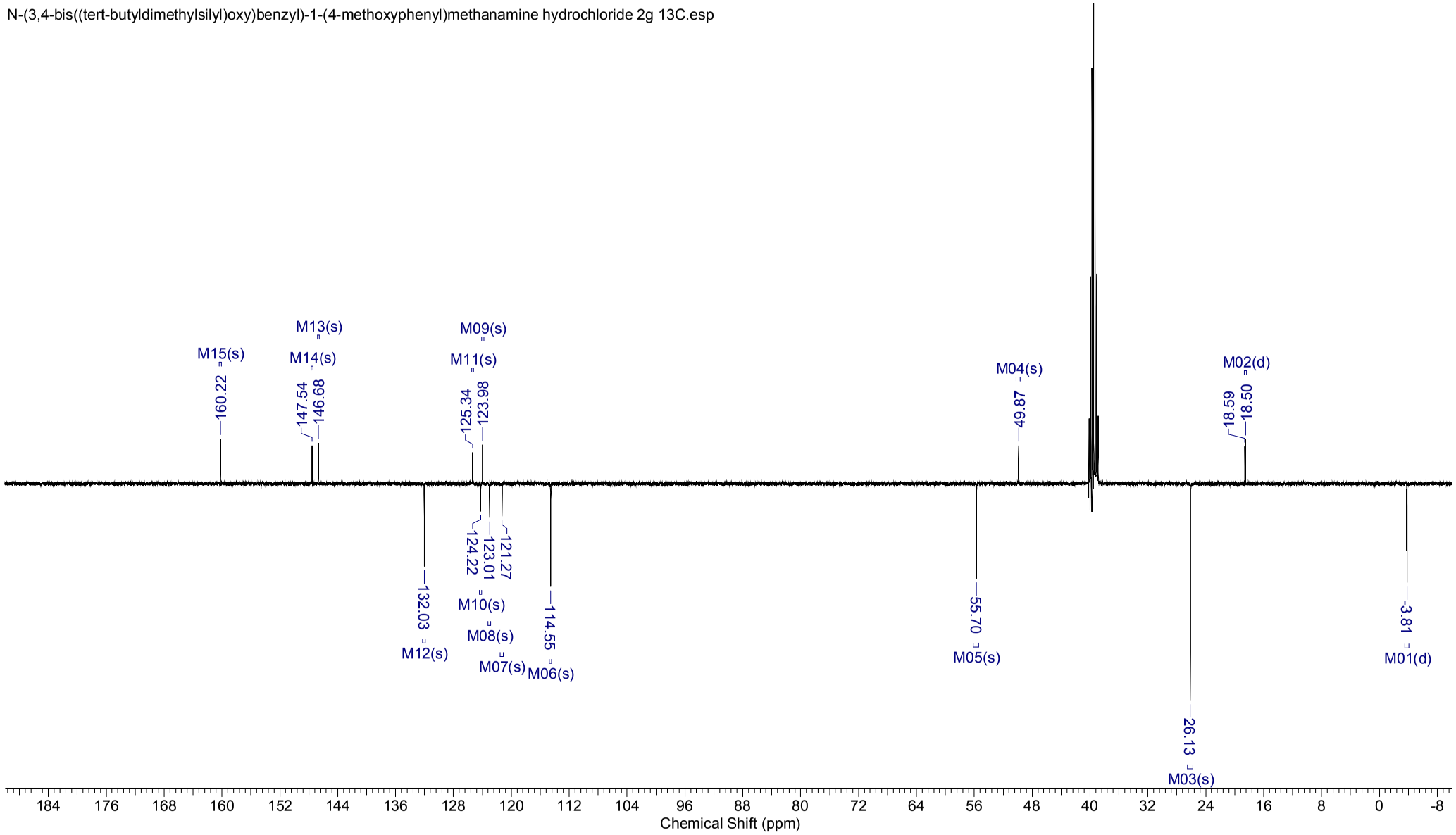
Acquisition Time (sec)	4.0894	***Date***	20 May 2019 23:00:48			***Date Stamp***	20 May 2019 23:00:48
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD020F3_1\CD020F3\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	112.05	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.149		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-1-(4-methoxyphenyl)methanamine hydrochloride 2g 1H.esp



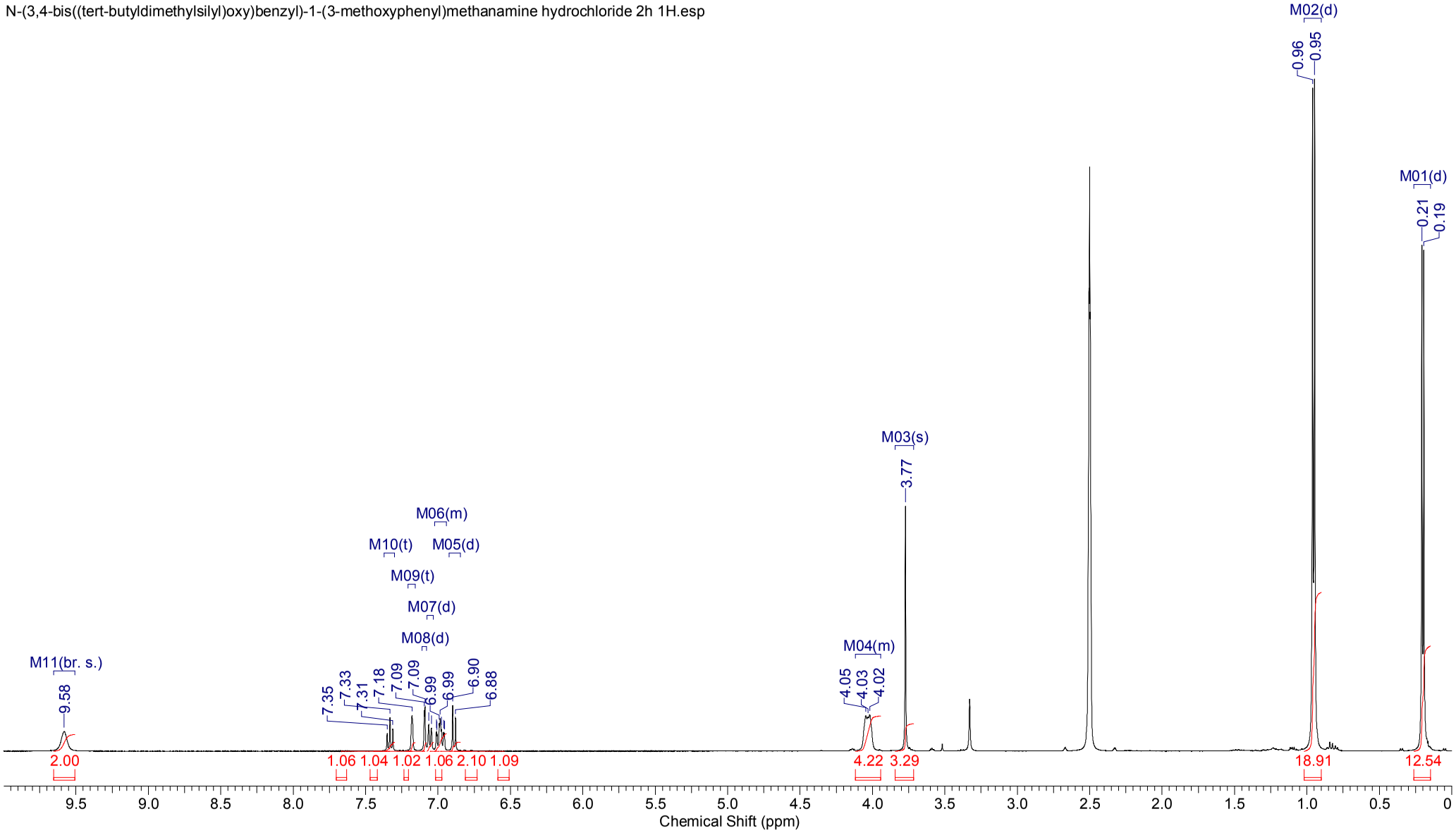
Acquisition Time (sec)	1.3631	***Date***	16 Jun 2019 01:19:28			***Date Stamp***	16 Jun 2019 01:19:28
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD020F3_2\CB020F3\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10064.4209
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.149		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-1-(4-methoxyphenyl)methanamine hydrochloride 2g 13C.esp



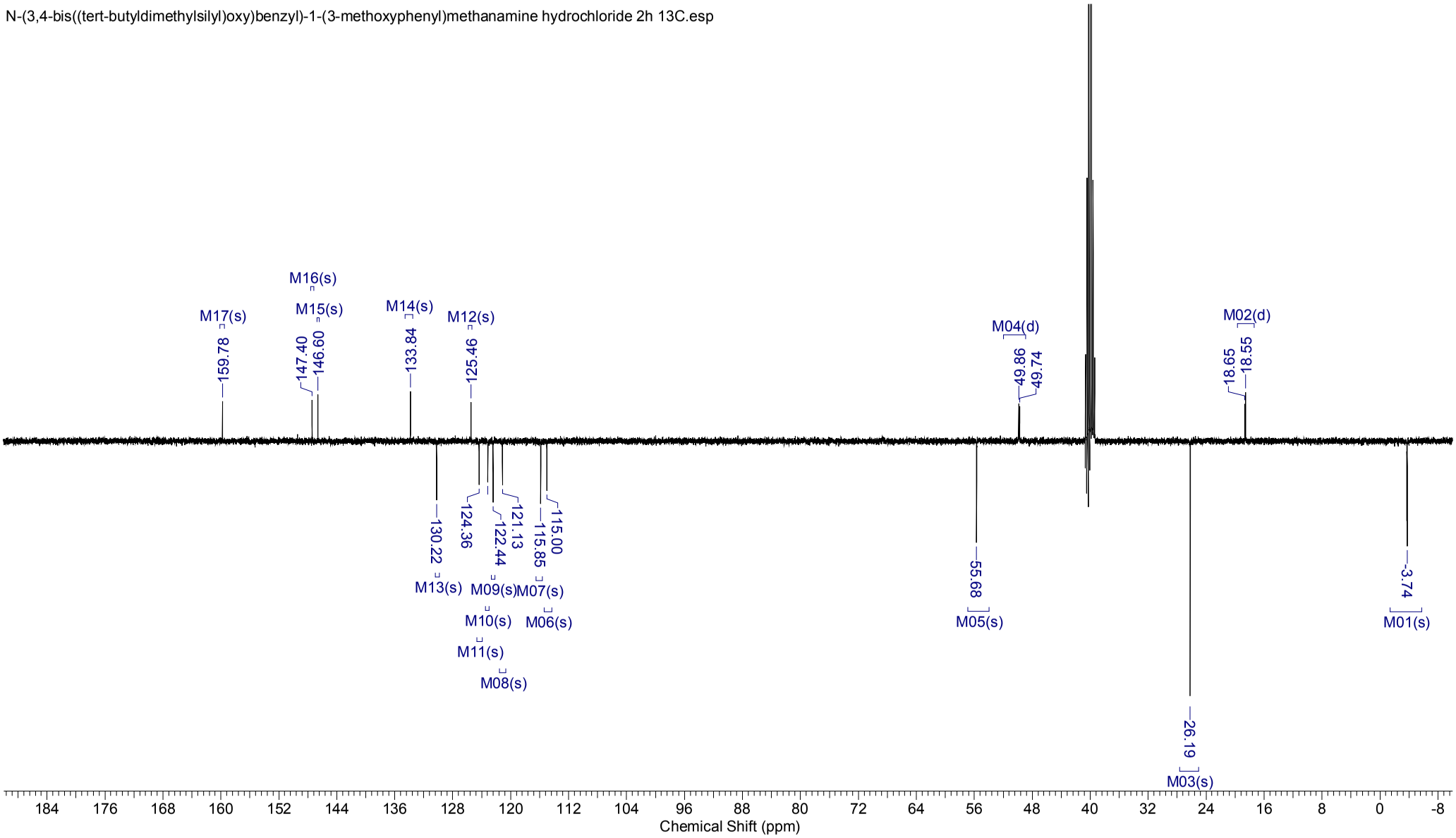
Acquisition Time (sec)	4.0894	***Date***	20 May 2019 21:18:24			***Date Stamp***	20 May 2019 21:18:24
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD023F3_1\CD023F3\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	87.87	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.6387
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.150		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-1-(3-methoxyphenyl)methanamine hydrochloride 2h 1H.esp



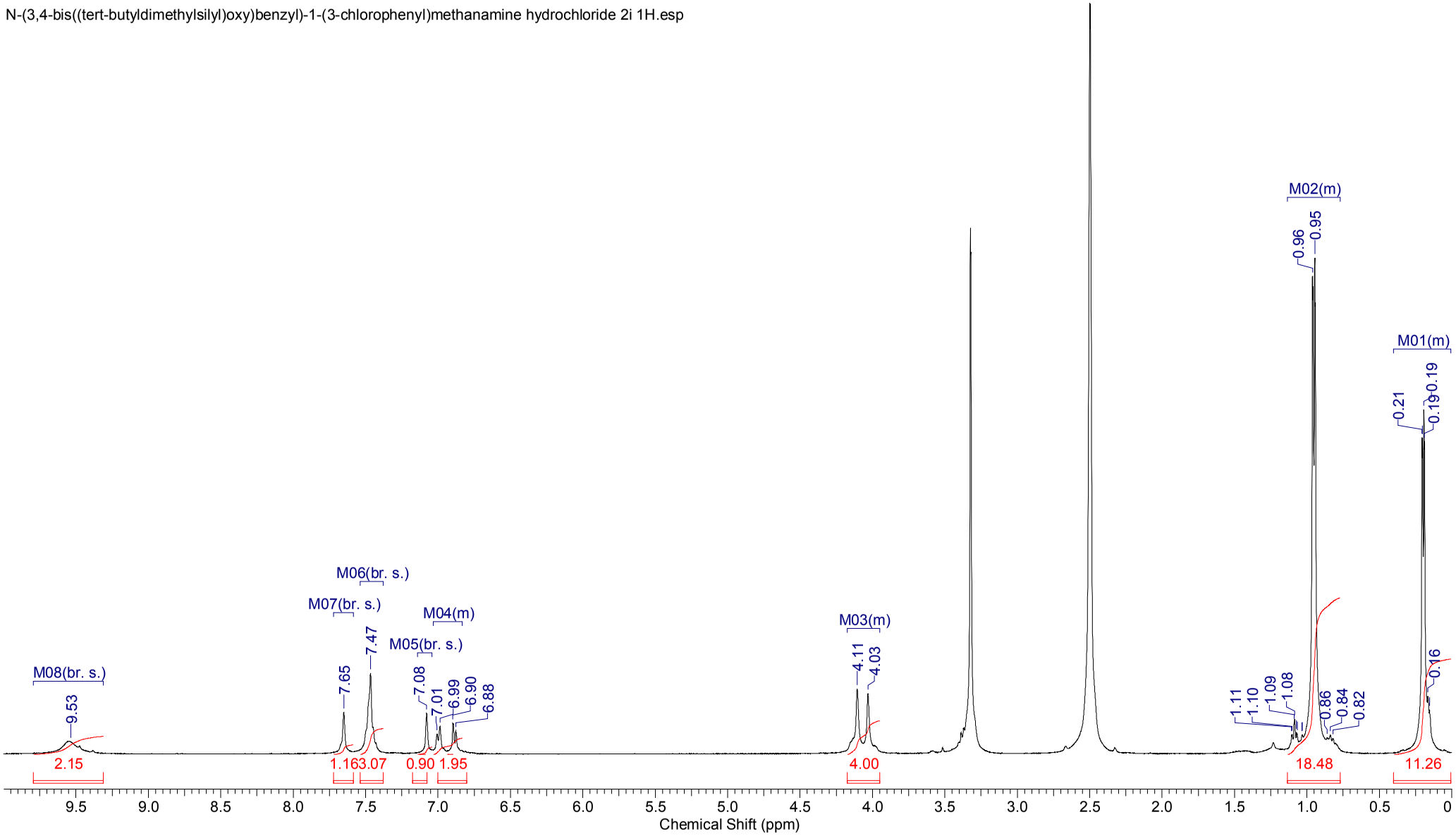
Acquisition Time (sec)	1.3631	***Date***	20 May 2019 22:52:16			***Date Stamp***	20 May 2019 22:52:16
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD023F3_2\CD023F3\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	1024	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10061.2783
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.151		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-1-(3-methoxyphenyl)methanamine hydrochloride 2h 13C.esp



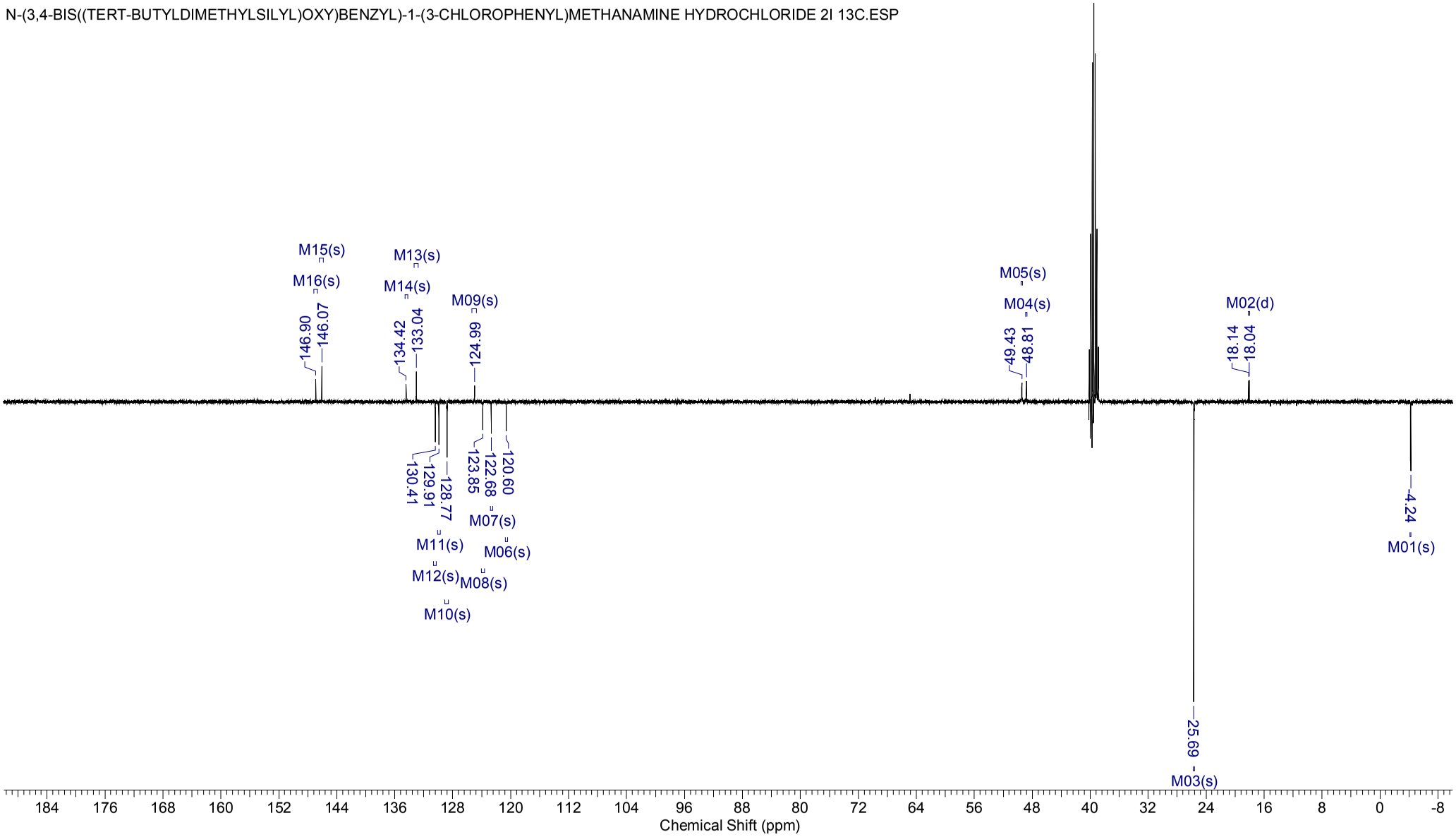
Acquisition Time (sec)	4.0894	***Date***	04 Jun 2019 08:56:00			***Date Stamp***	04 Jun 2019 08:56:00
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD028-F3_1\CD028-F3\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	87.87	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2466.6604
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.150		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-1-(3-chlorophenyl)methanamine hydrochloride 2i 1H.esp



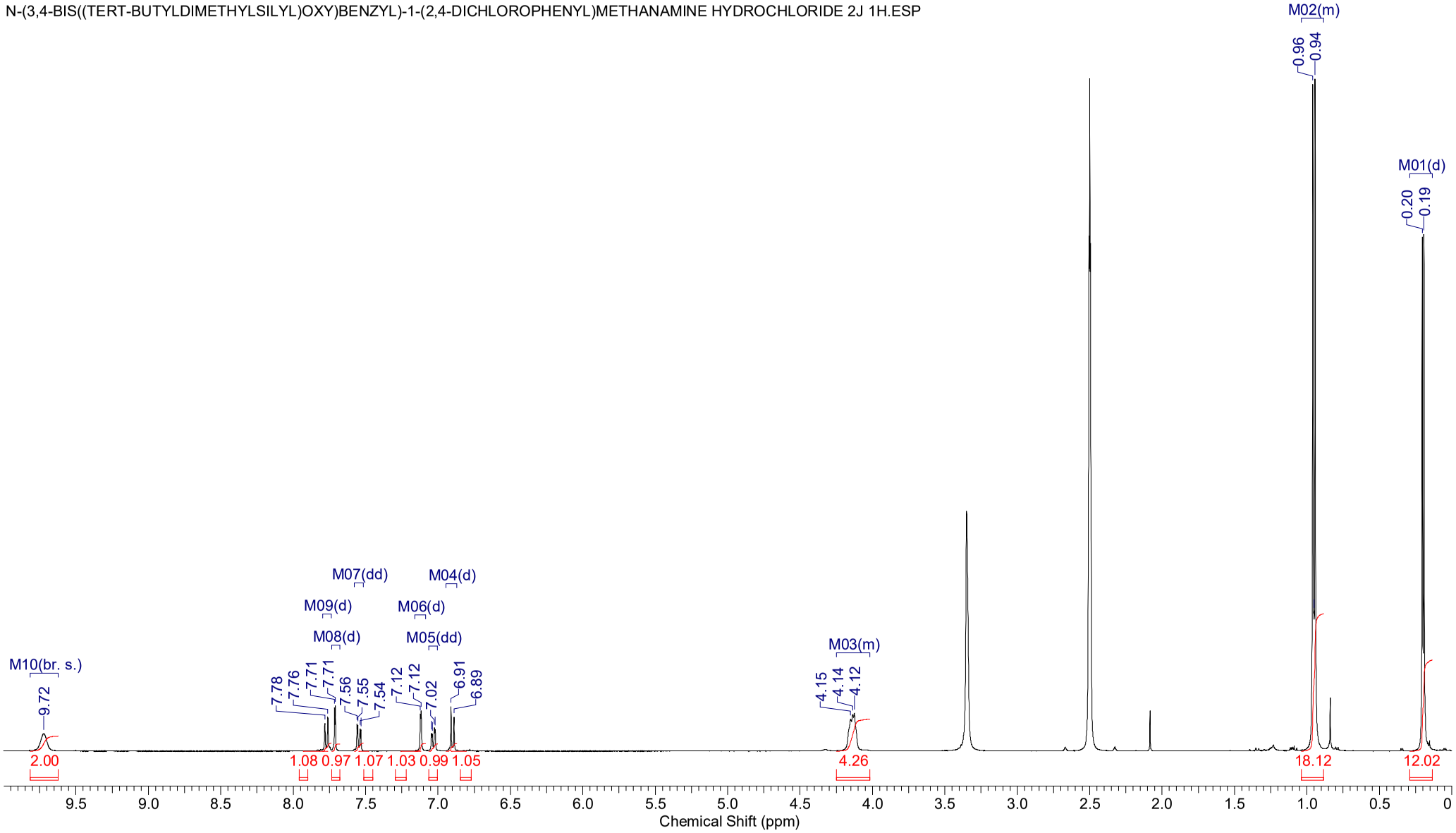
Acquisition Time (sec)	1.3631	***Date***	11 Nov 2019 14:11:28			***Date Stamp***	11 Nov 2019 14:11:28
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD028_11\CD028\11\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10010.8682
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.147		

N-(3,4-BIS((TERT-BUTYLDIMETHYLSILYL)OXY)BENZYL)-1-(3-CHLOROPHENYL)METHANAMINE HYDROCHLORIDE 2I 13C.ESP



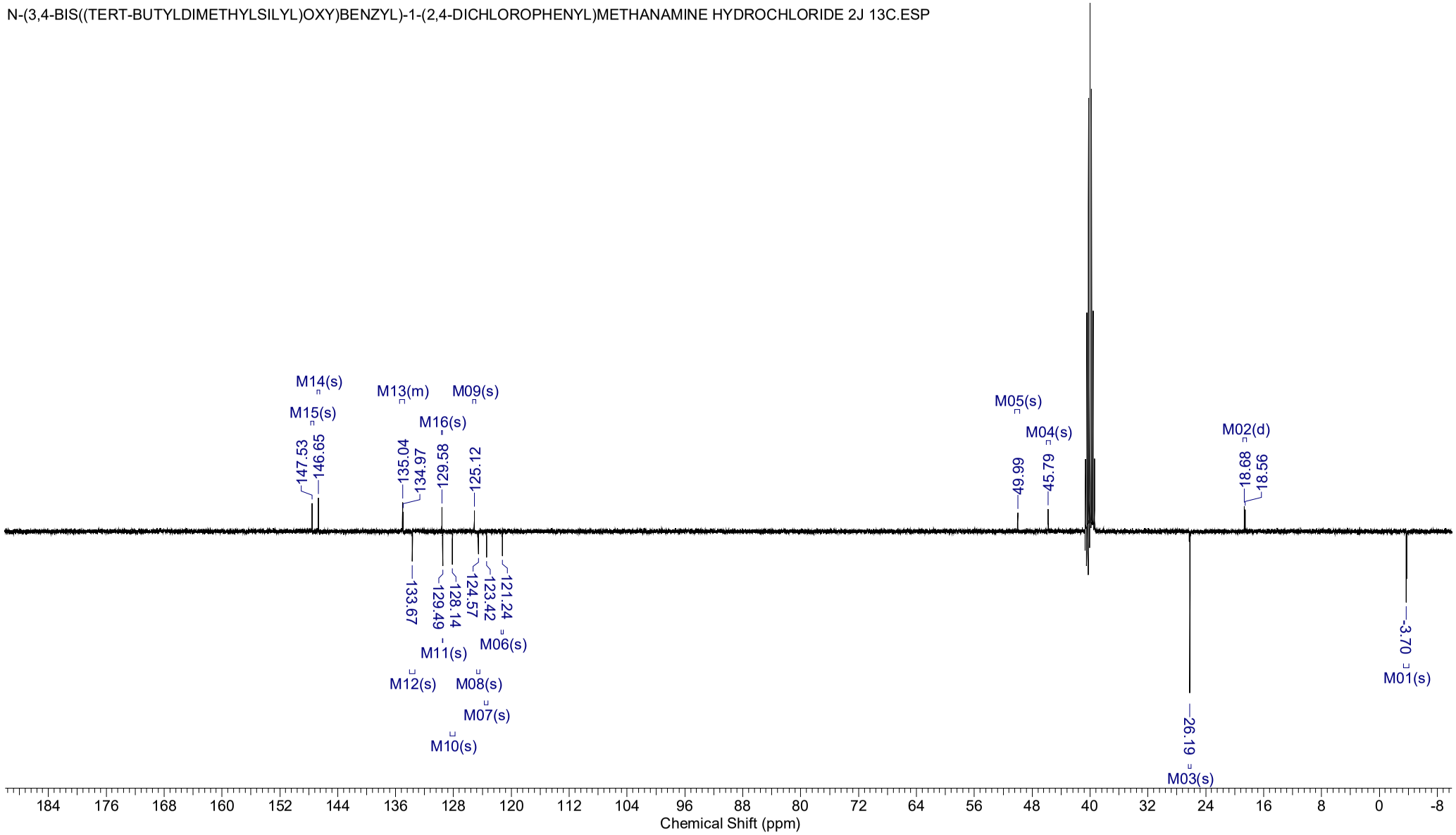
Acquisition Time (sec)	4.0894	***Date***	05 Jun 2019 17:00:16			***Date Stamp***	05 Jun 2019 17:00:16
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD029F4_1\CD029F4\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	78.49	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.149		

N-(3,4-BIS((TERT-BUTYLDIMETHYLSILYL)OXY)BENZYL)-1-(2,4-DICHLOROPHENYL)METHANAMINE HYDROCHLORIDE 2J 1H.ESP



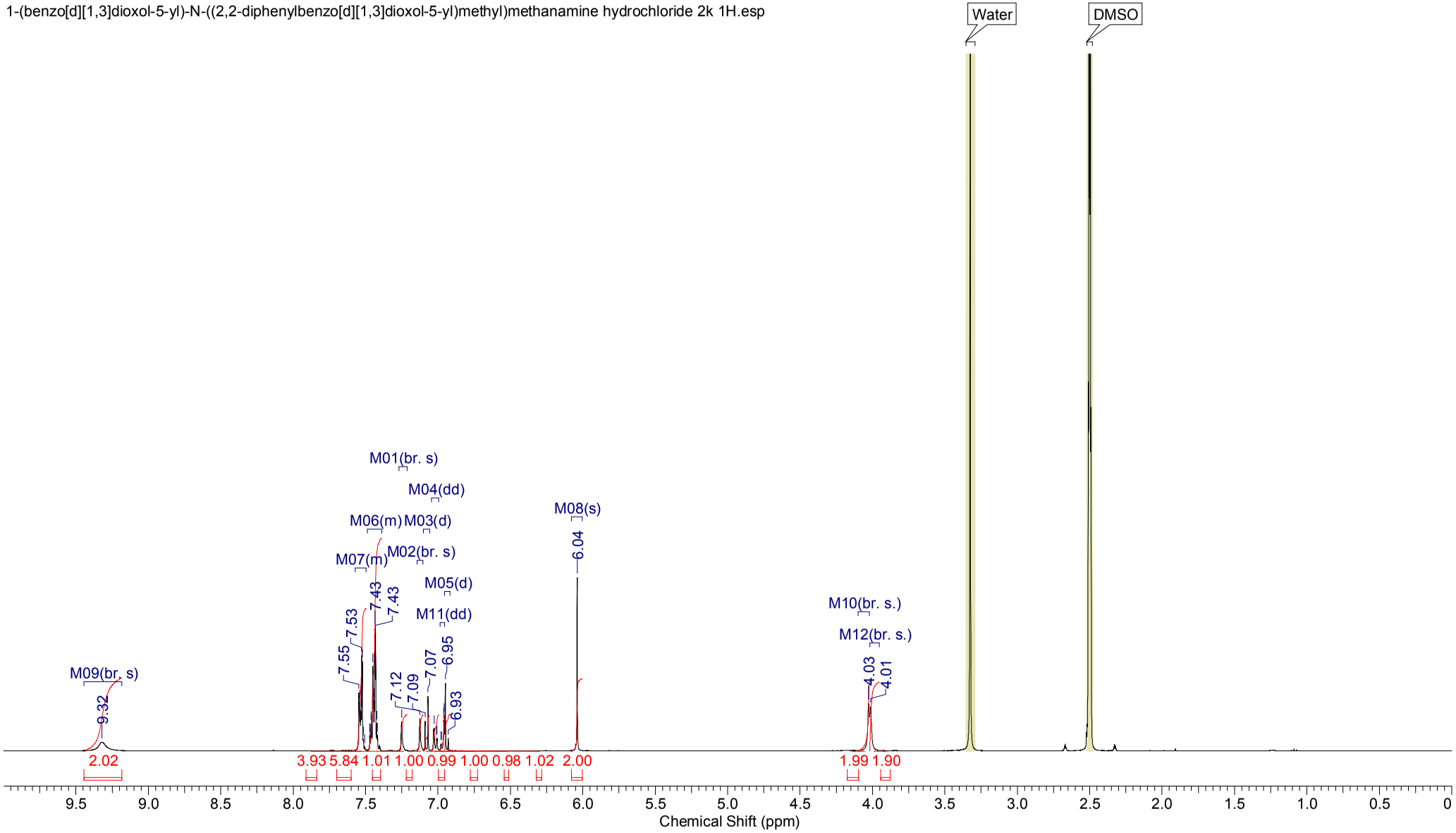
Acquisition Time (sec)	1.3631	***Date***	07 Jun 2019 06:11:44			***Date Stamp***	07 Jun 2019 06:11:44
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD029F4_2\CD029F4\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	1024	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10061.2783
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.147		

N-(3,4-BIS((TERT-BUTYLDIMETHYLSILYL)OXY)BENZYL)-1-(2,4-DICHLOROPHENYL)METHANAMINE HYDROCHLORIDE 2J 13C.ESP



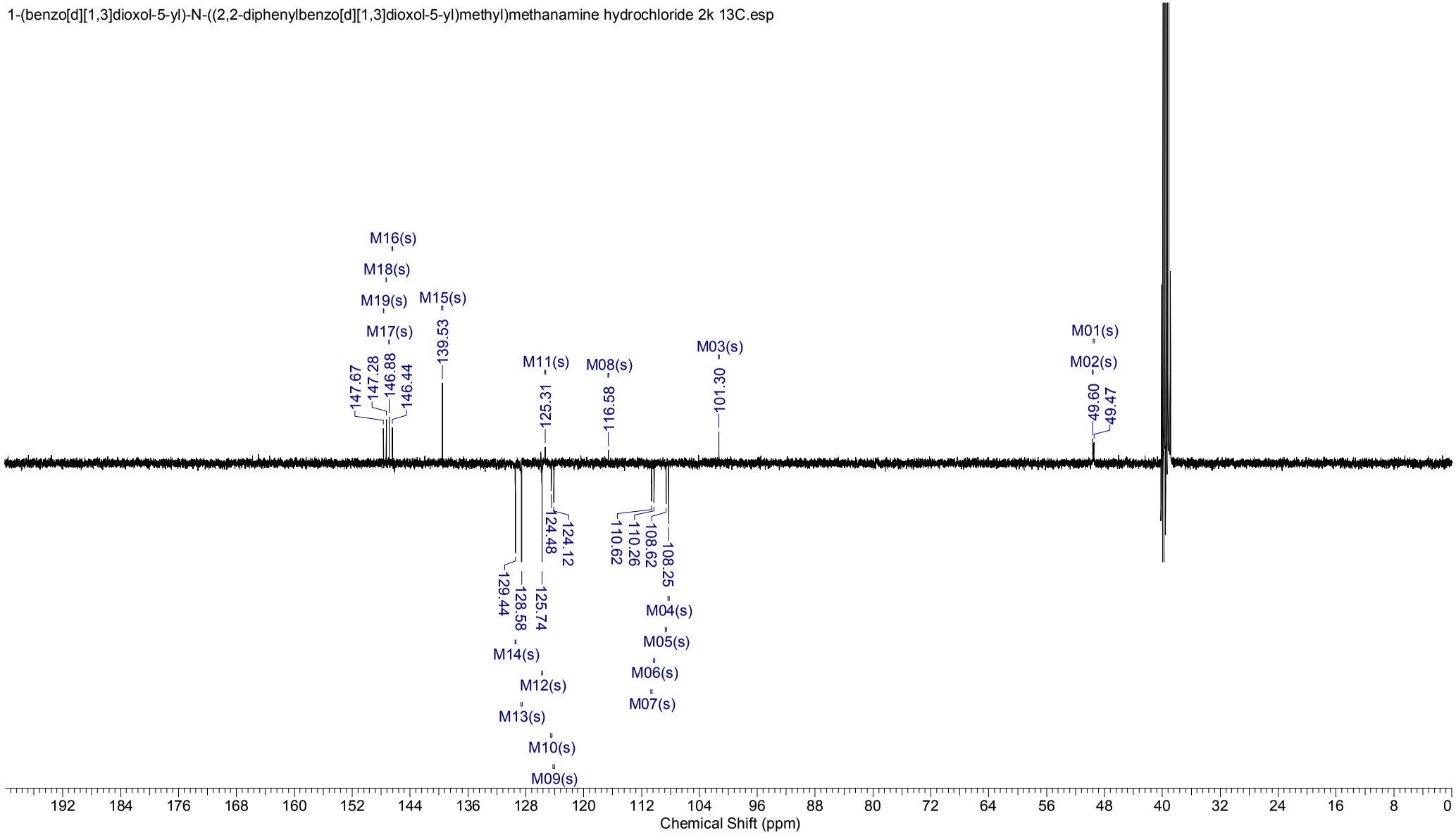
Acquisition Time (sec)	4.0894	***Date***	25 Jun 2018 14:35:12			***Date Stamp***	25 Jun 2018 14:35:12
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\RMN\JM153F1_11\JM153F1\11\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	112.05	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.148		

1-(benzo[d][1,3]dioxol-5-yl)-N-((2,2-diphenylbenzo[d][1,3]dioxol-5-yl)methyl)methanamine hydrochloride 2k 1H.esp



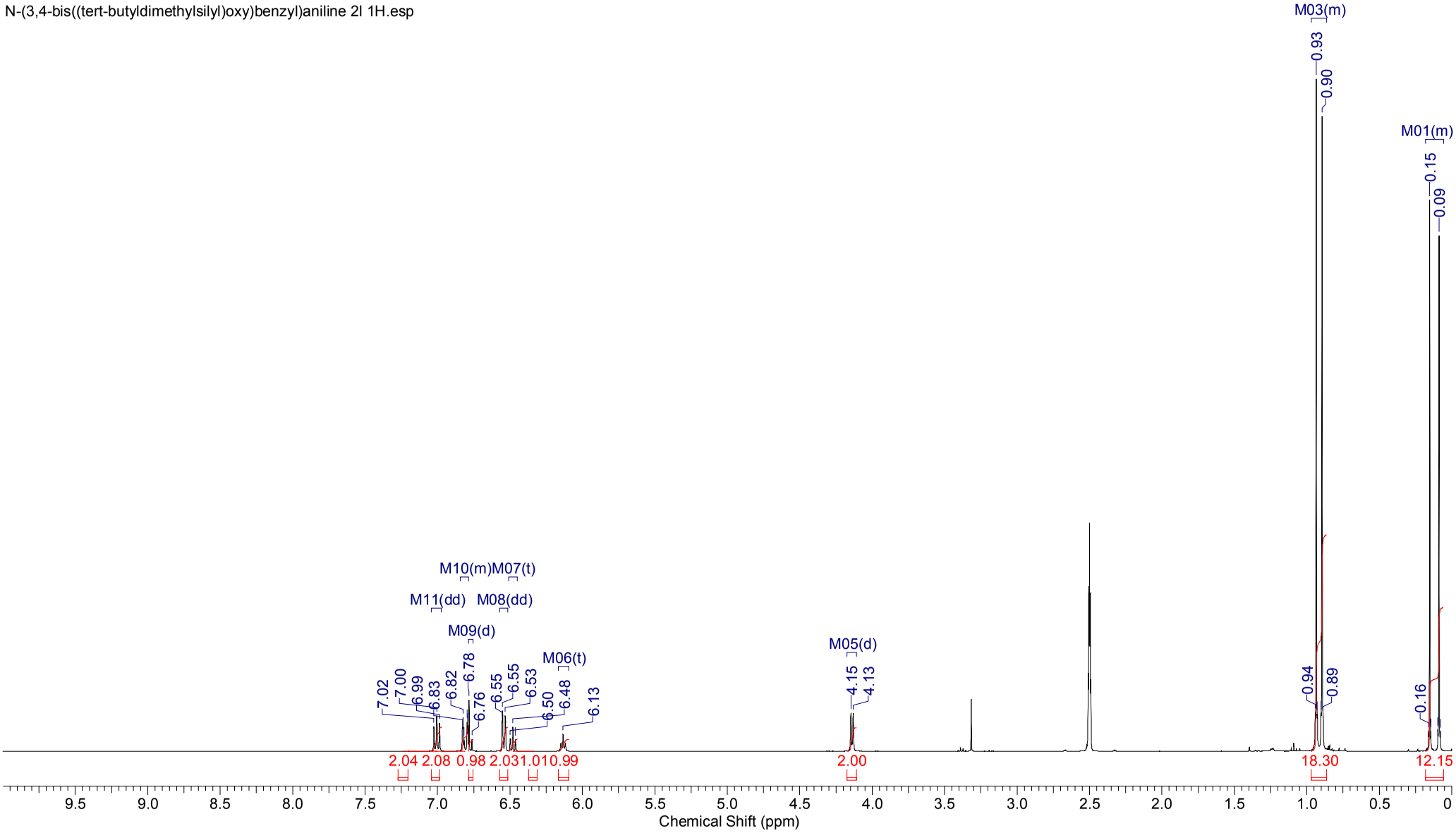
Acquisition Time (sec)	1.3631	***Date***	25 Jun 2018 20:10:08			***Date Stamp***	25 Jun 2018 20:10:08
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\RMN\JM153F1_12\JM153F1\12\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10012.3350
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150		

1-(benzo[d][1,3]dioxol-5-yl)-N-((2,2-diphenylbenzo[d][1,3]dioxol-5-yl)methyl)methanamine hydrochloride 2k 13C.esp



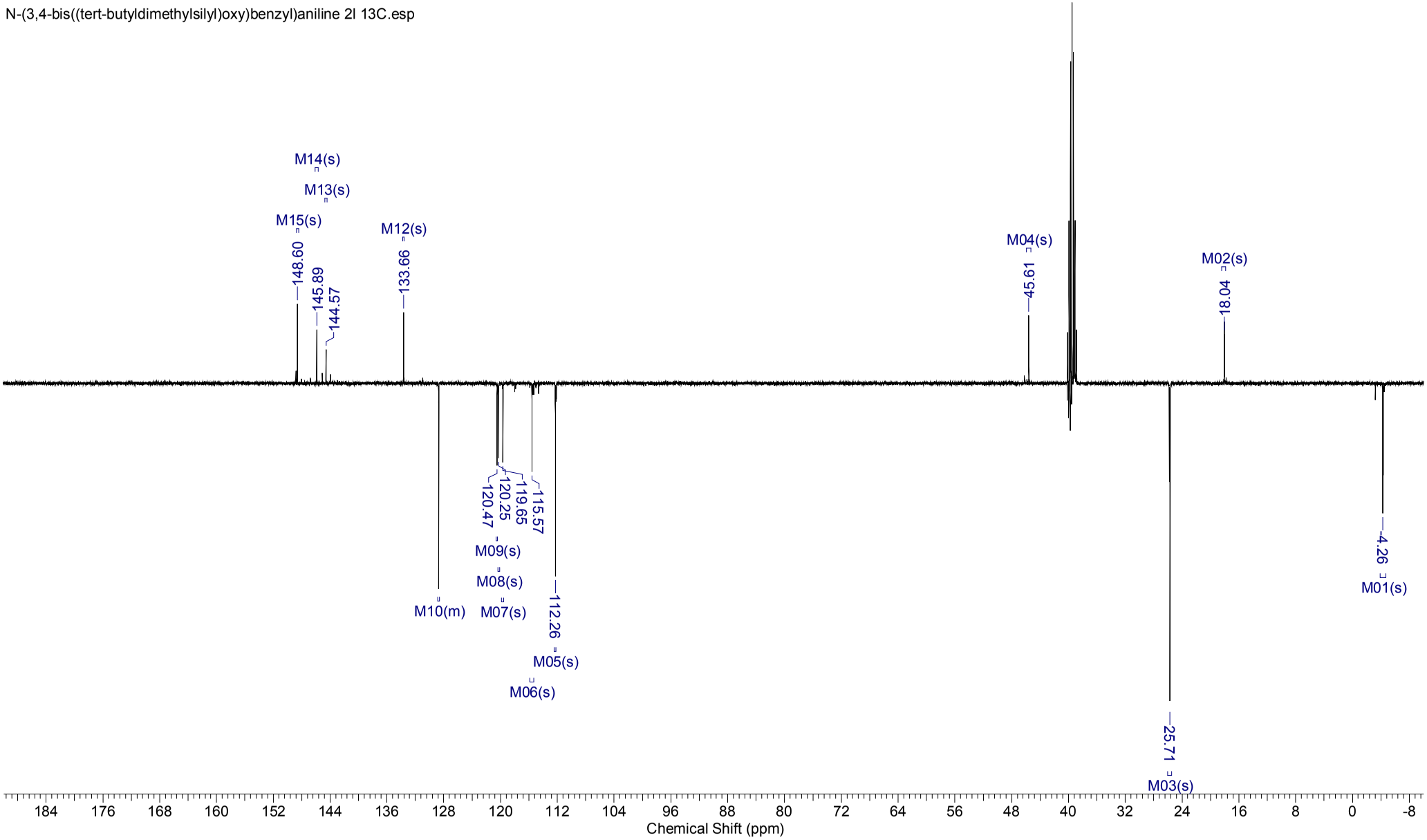
Acquisition Time (sec)	4.0894	***Date***	04 Dec 2018 20:05:36			***Date Stamp***	04 Dec 2018 20:05:36
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM262F2_1\JM262F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	71.53	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.150		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)aniline 2l 1H.esp



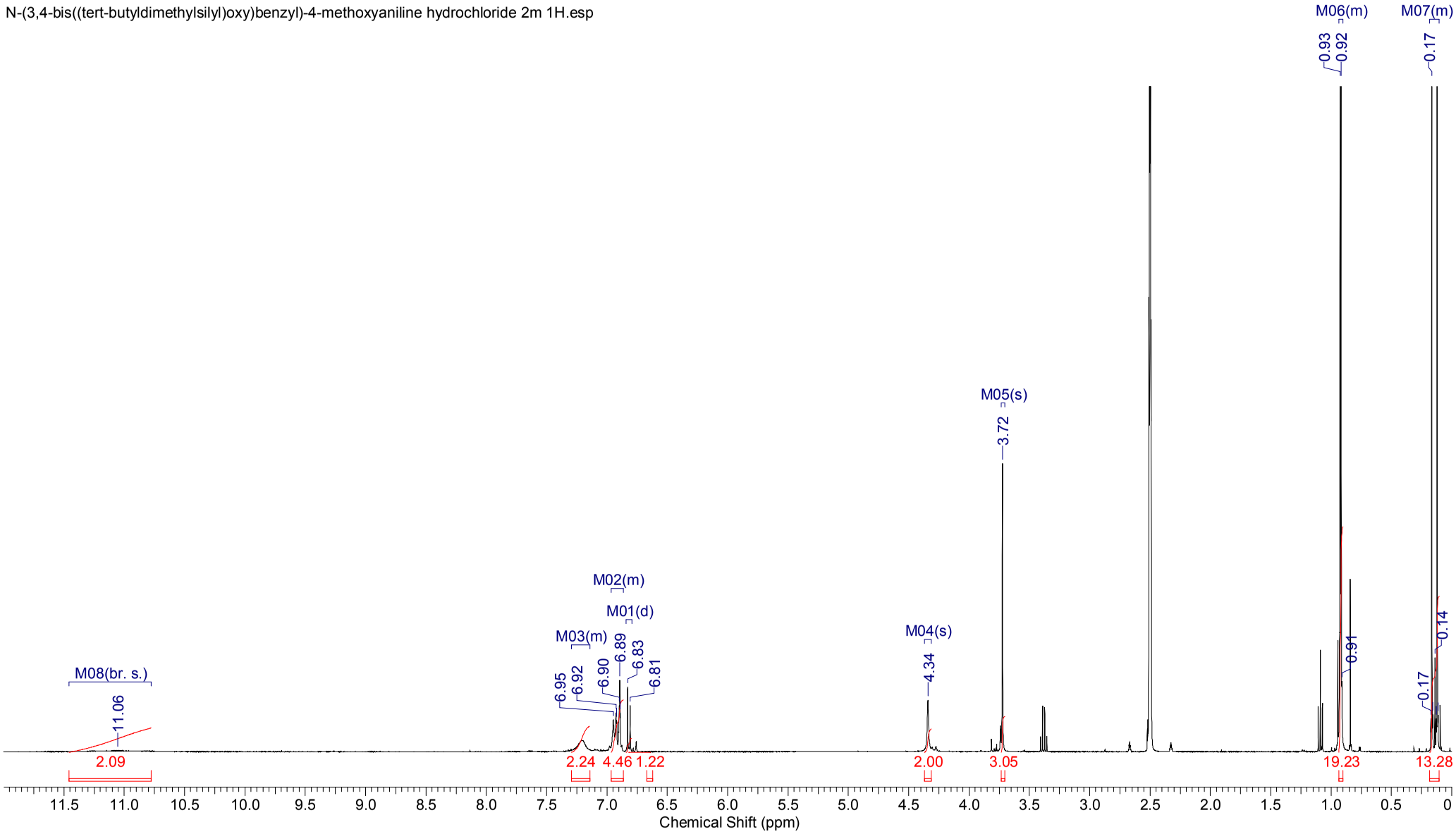
Acquisition Time (sec)	1.3631	***Date***	02 Feb 2019 07:47:28			***Date Stamp***	02 Feb 2019 07:47:28		
File Name	C:\USERS\JASON\DOWNLOADS\NOUVEAU DOSSIER\JM262F2_2\JM262F2\2\FID					***Frequency (MHz)***	100.61	***Nucleus***	13C
Number of Transients	2048	***Origin***	spect	***Original Points Count***	32768	***Owner***	nmr	***Points Count***	32768
Pulse Sequence	jmod	***Receiver Gain***	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10011.5928
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.151				

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)aniline 2l 13C.esp



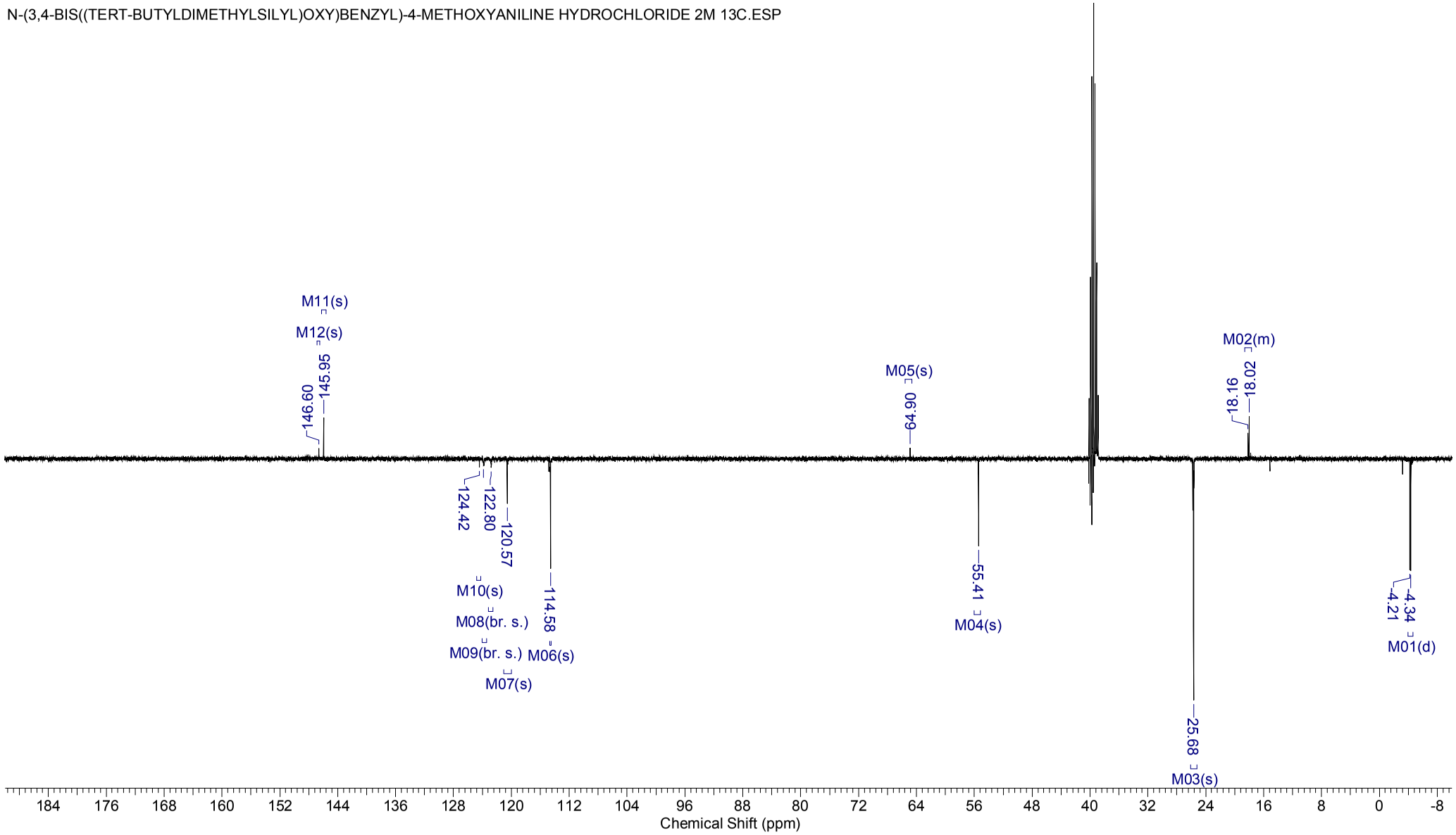
Acquisition Time (sec)	4.0894	***Date***	16 Feb 2019 02:10:24			***Date Stamp***	16 Feb 2019 02:10:24
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM304F3_1\JM304F3\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	98.20	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.149		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-4-methoxyaniline hydrochloride 2m 1H.esp



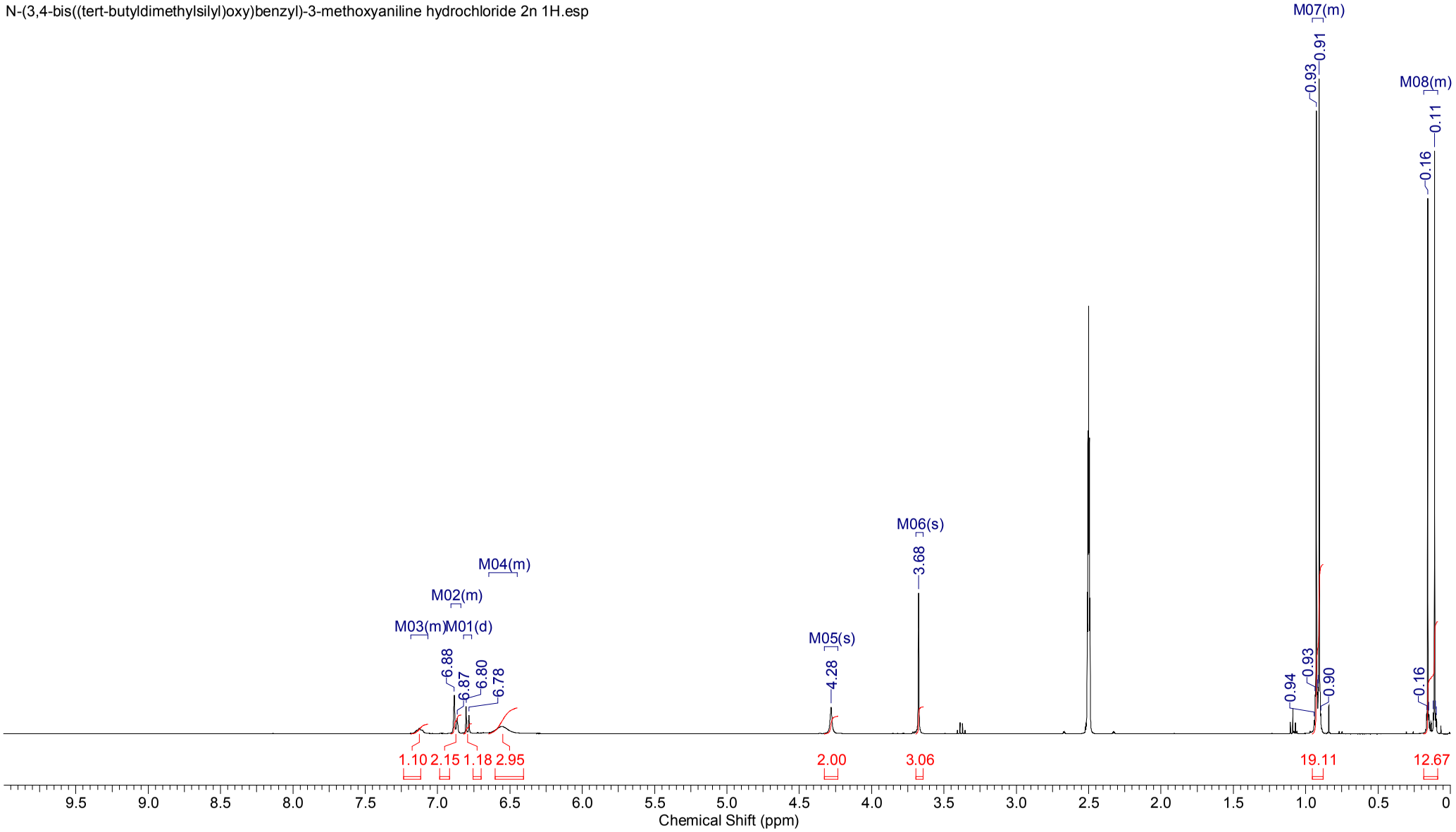
Acquisition Time (sec)	1.3631	***Date***	12 Nov 2019 02:57:20			***Date Stamp***	12 Nov 2019 02:57:20
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM306_11\JM306\11\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10011.6016
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150		

N-(3,4-BIS((TERT-BUTYLDIMETHYLSILYL)OXY)BENZYL)-4-METHOXYANILINE HYDROCHLORIDE 2M 13C.ESP



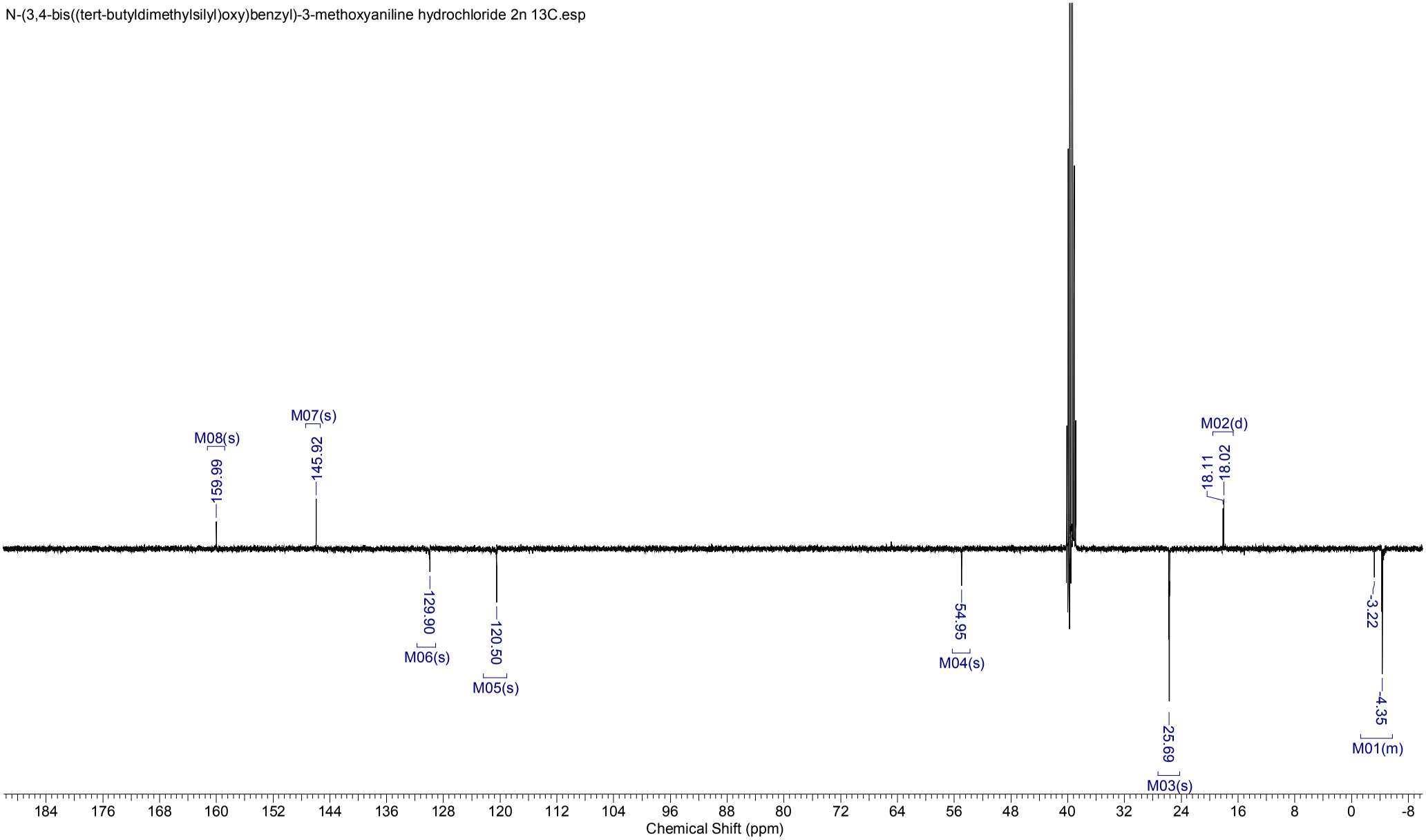
Acquisition Time (sec)	4.0894	***Date***	16 Feb 2019 02:18:56			***Date Stamp***	16 Feb 2019 02:18:56
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM305F3_1\JM305F3\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	87.87	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.147		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-3-methoxyaniline hydrochloride 2n 1H.esp



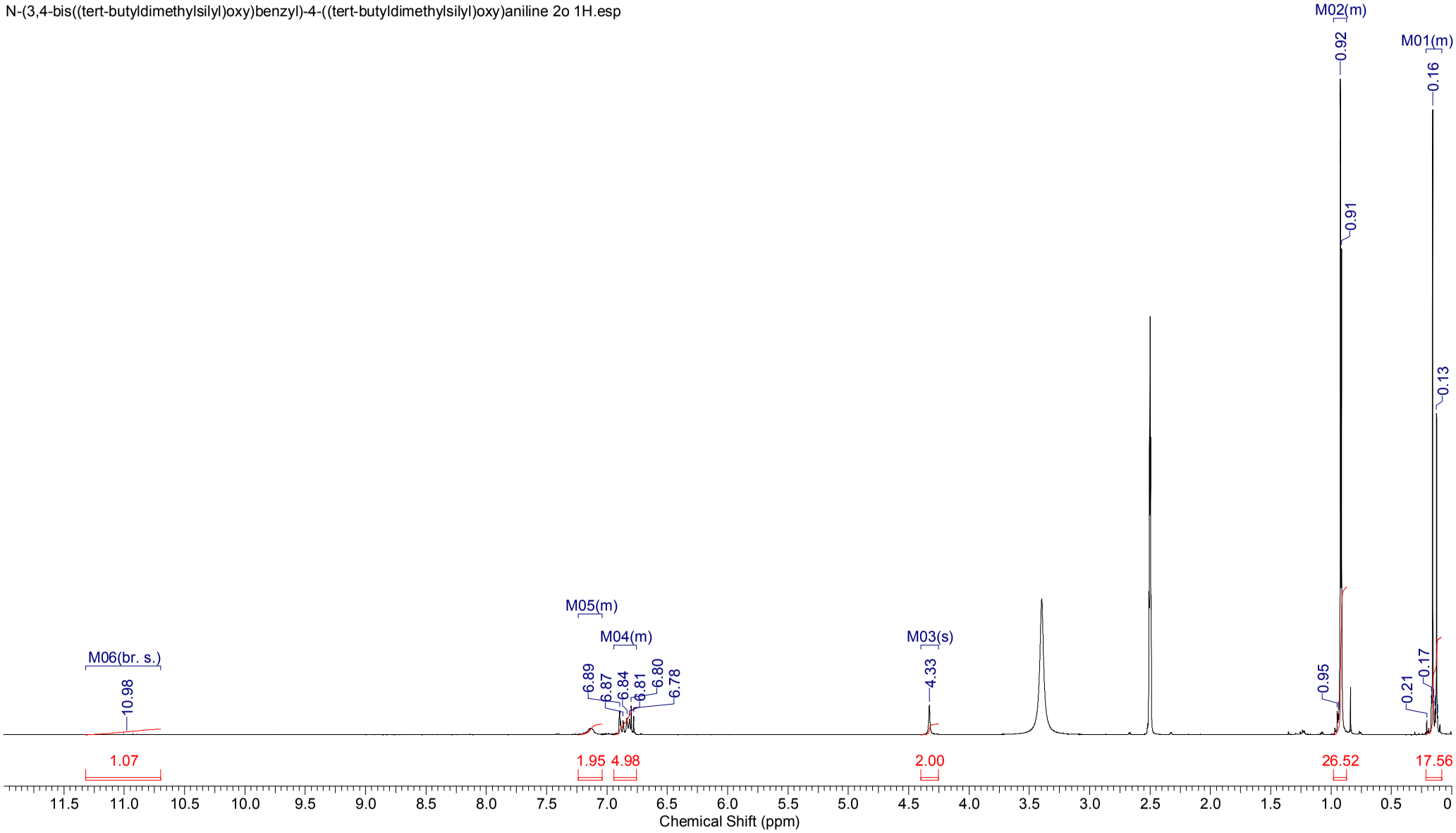
Acquisition Time (sec)	1.3631	***Date***	20 Feb 2019 05:43:44			***Date Stamp***	20 Feb 2019 05:43:44	
File Name	D:\JM305F3_2\JM305F3\2\FID			***Frequency (MHz)***	100.61	***Nucleus***	13C	***Number of Transients*** 2048
Origin	spect	***Original Points Count***	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence*** jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10010.1260	
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150			

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-3-methoxyaniline hydrochloride 2n 13C.esp



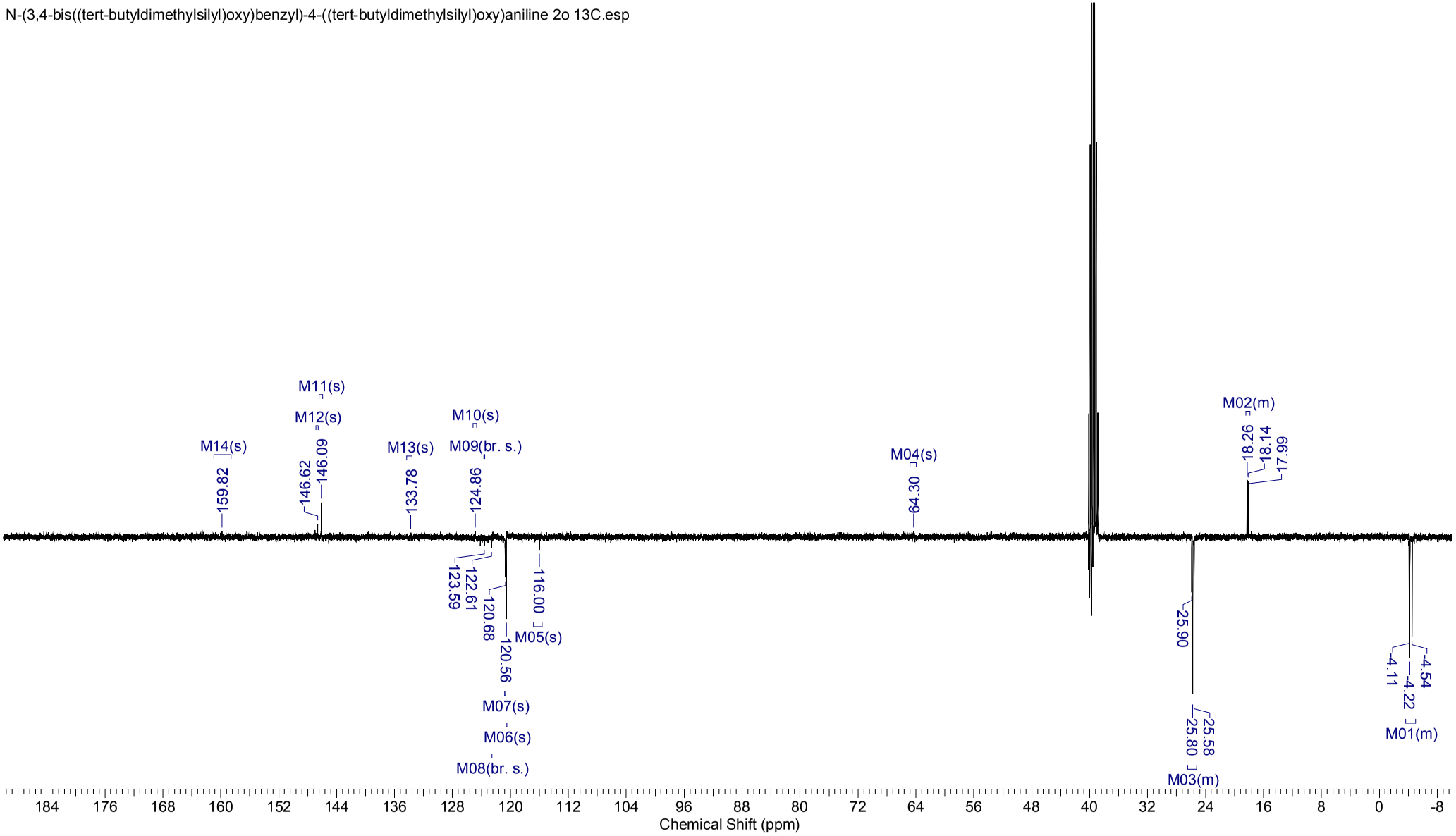
Acquisition Time (sec)	4.0894	***Date***	21 May 2019 02:27:44			***Date Stamp***	21 May 2019 02:27:44
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD015F4_1\CD015F4\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	78.49	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.149		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-4-((tert-butyldimethylsilyl)oxy)aniline 2o 1H.esp



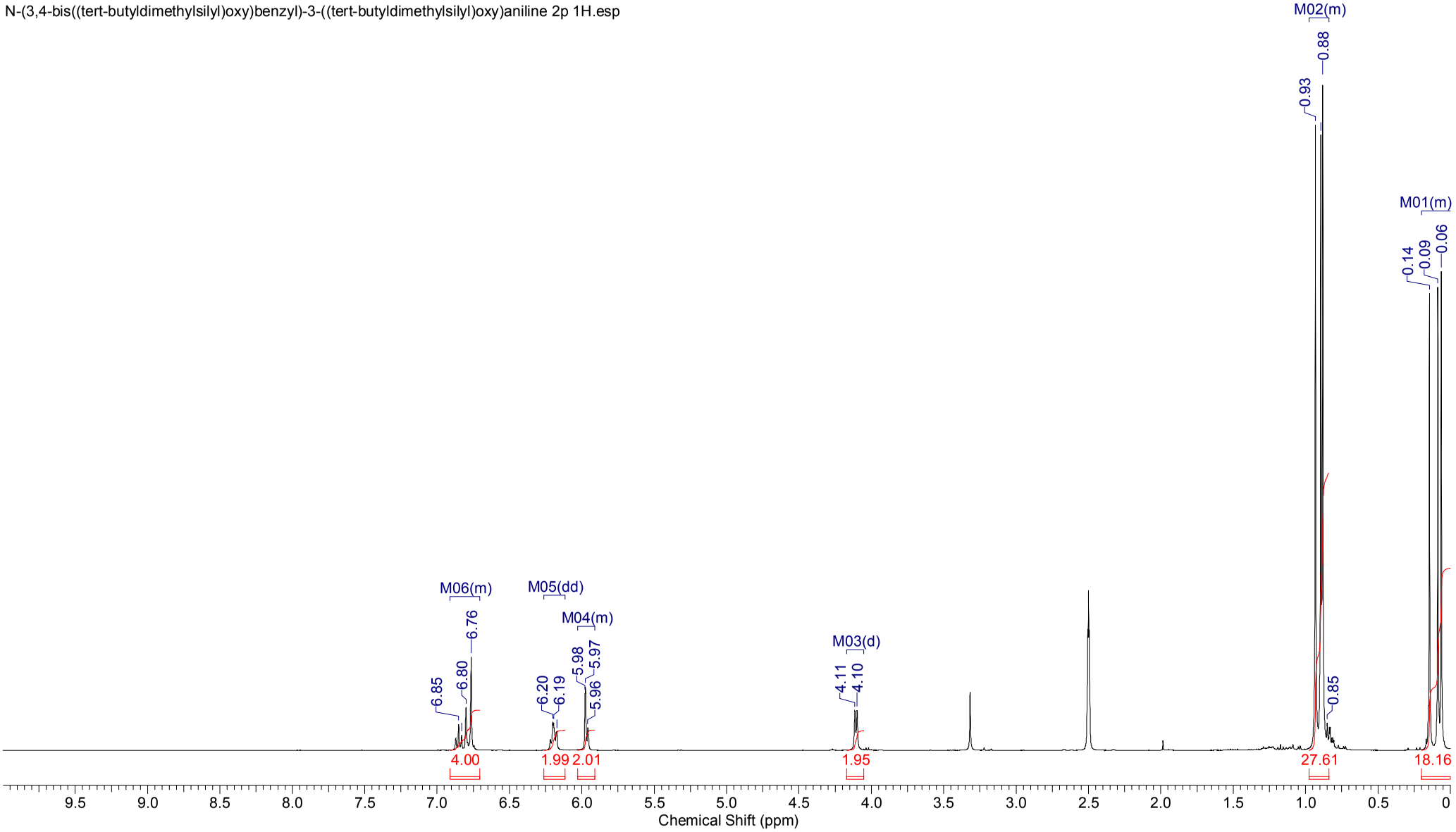
Acquisition Time (sec)	1.3631	***Date***	22 Jun 2019 06:01:04			***Date Stamp***	22 Jun 2019 06:01:04
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD015F4_2\CD015F4\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10024.0732
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.147		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-4-((tert-butyldimethylsilyl)oxy)aniline 2o 13C.esp



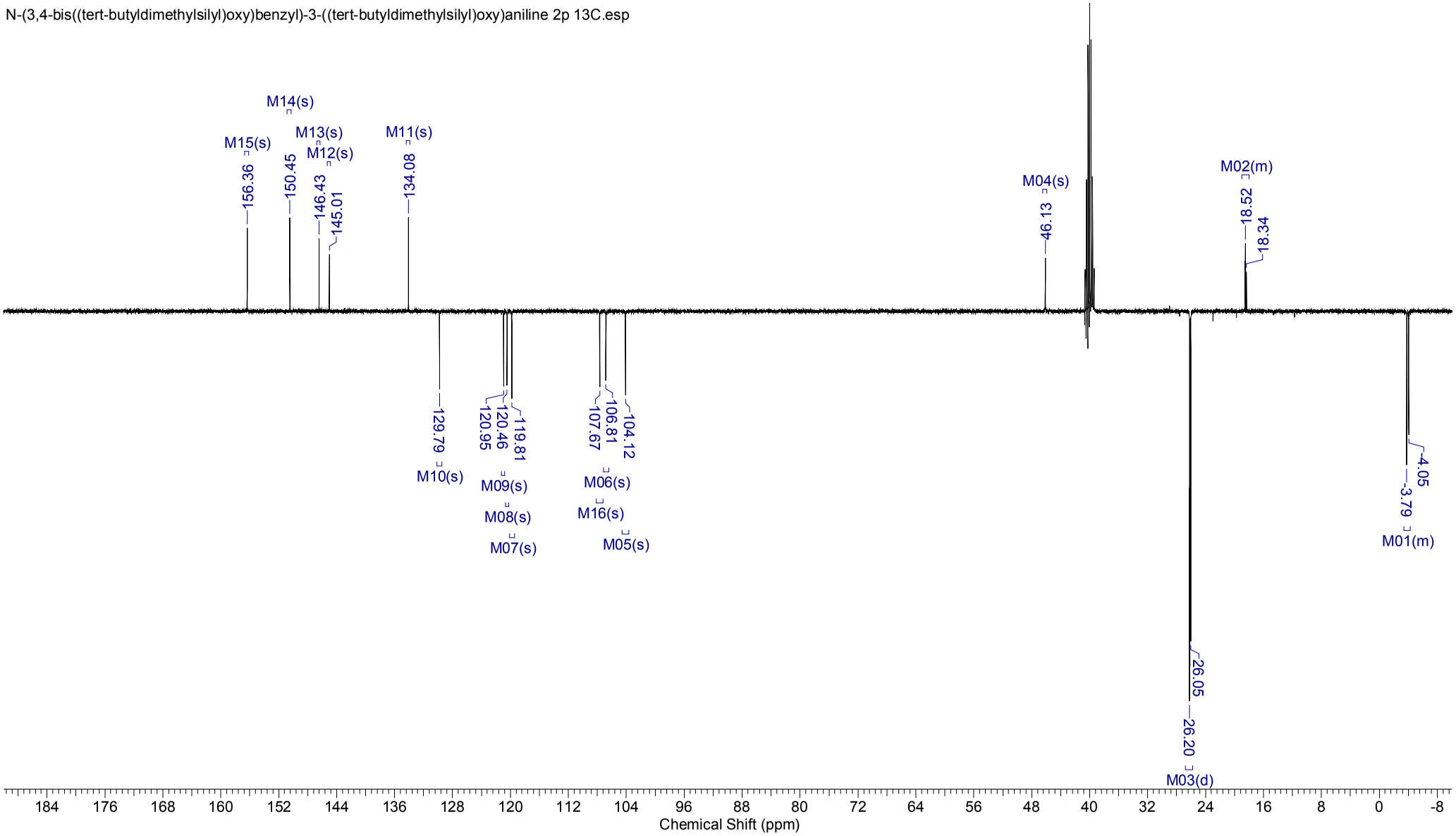
Acquisition Time (sec)	4.0894	***Date***	21 May 2019 00:43:12			***Date Stamp***	21 May 2019 00:43:12
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD018F3_1\CD018F3\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	30.70	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.149		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-3-((tert-butyldimethylsilyl)oxy)aniline 2p 1H.esp



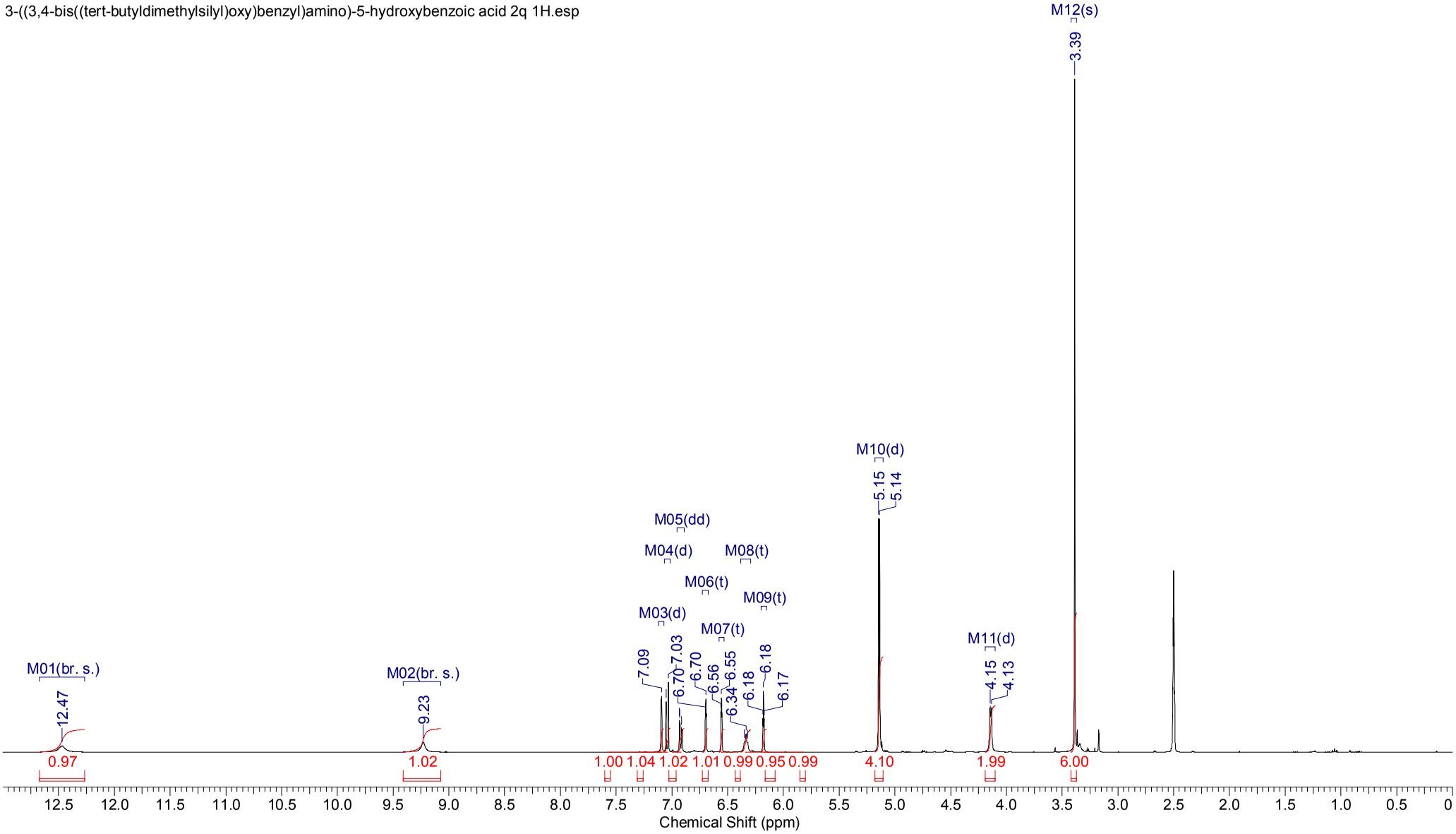
Acquisition Time (sec)	1.3631	***Date***	21 May 2019 02:17:04			***Date Stamp***	21 May 2019 02:17:04
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\CD018F3_2\CD018F3\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	1024	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10061.2783
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-3-((tert-butyldimethylsilyl)oxy)aniline 2p 13C.esp



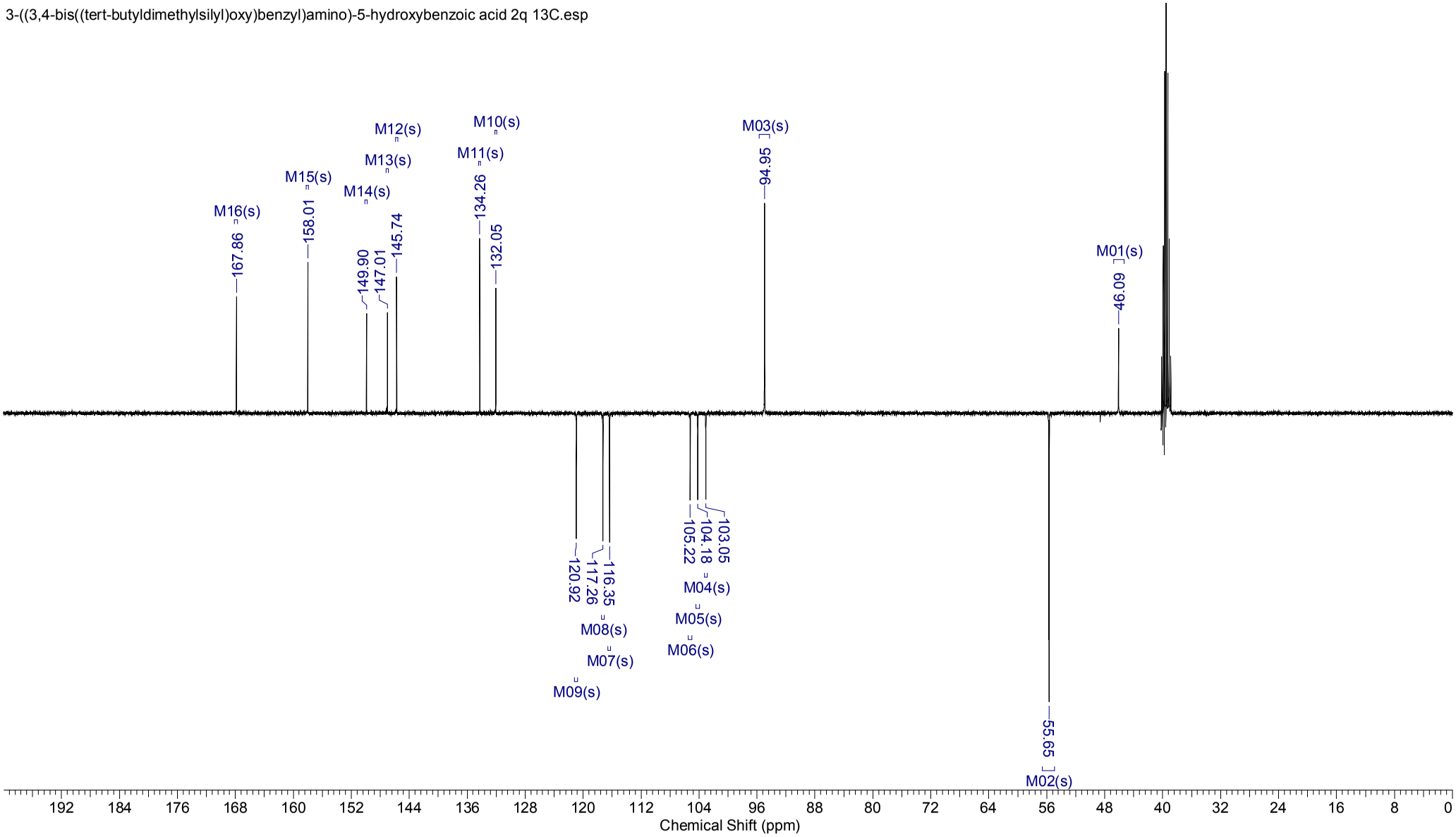
Acquisition Time (sec)	4.0894	***Date***	04 Sep 2019 08:09:04			***Date Stamp***	04 Sep 2019 08:09:04
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM363F2_1\JM363F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	63.65	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.150		

3-((3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)amino)-5-hydroxybenzoic acid 2q 1H.esp



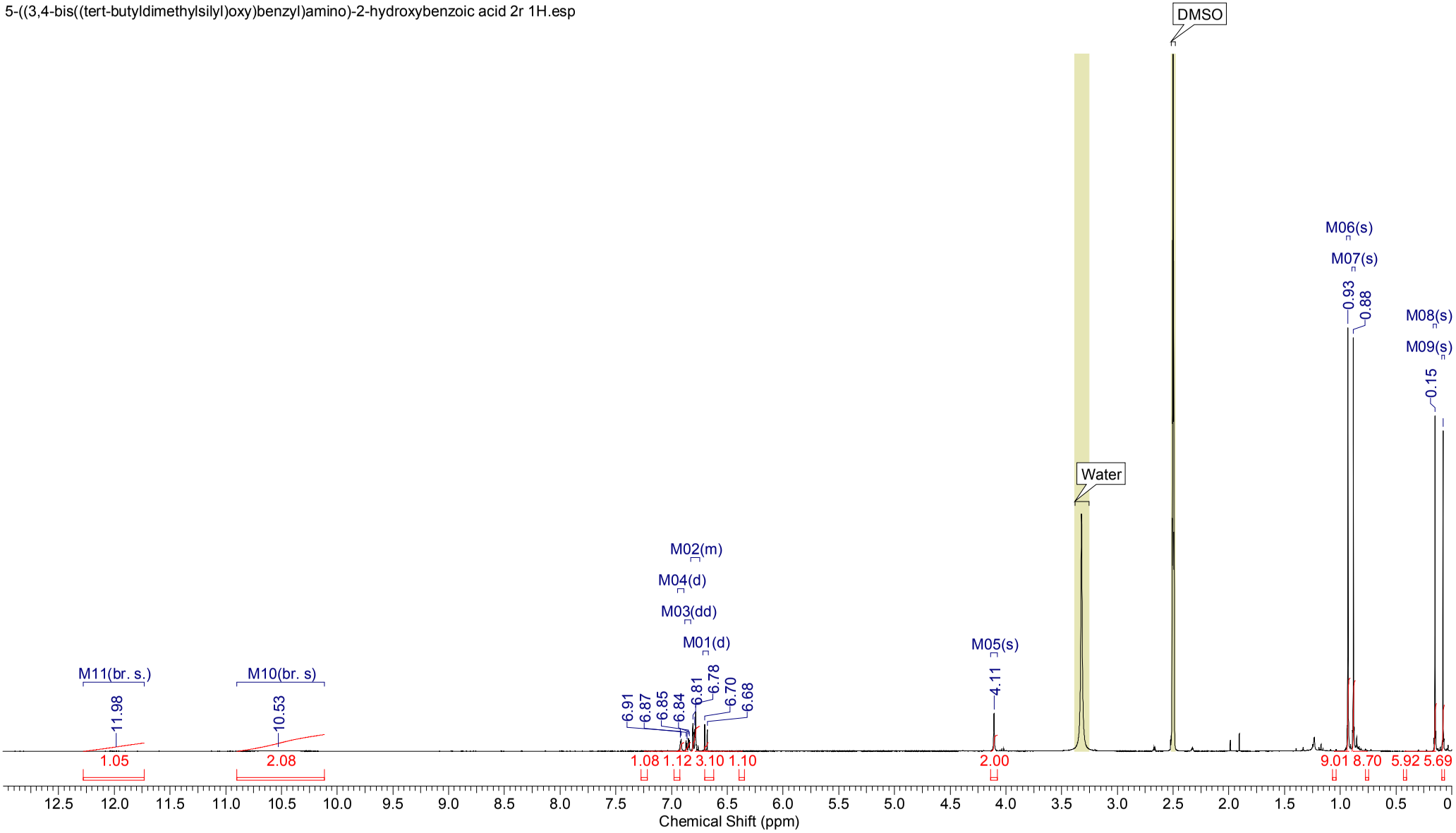
Acquisition Time (sec)	1.3631	***Date***	04 Sep 2019 21:50:24			***Date Stamp***	04 Sep 2019 21:50:24
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM363F2_2\JM363F2\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10013.8027
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.147		

3-((3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)amino)-5-hydroxybenzoic acid 2q 13C.esp



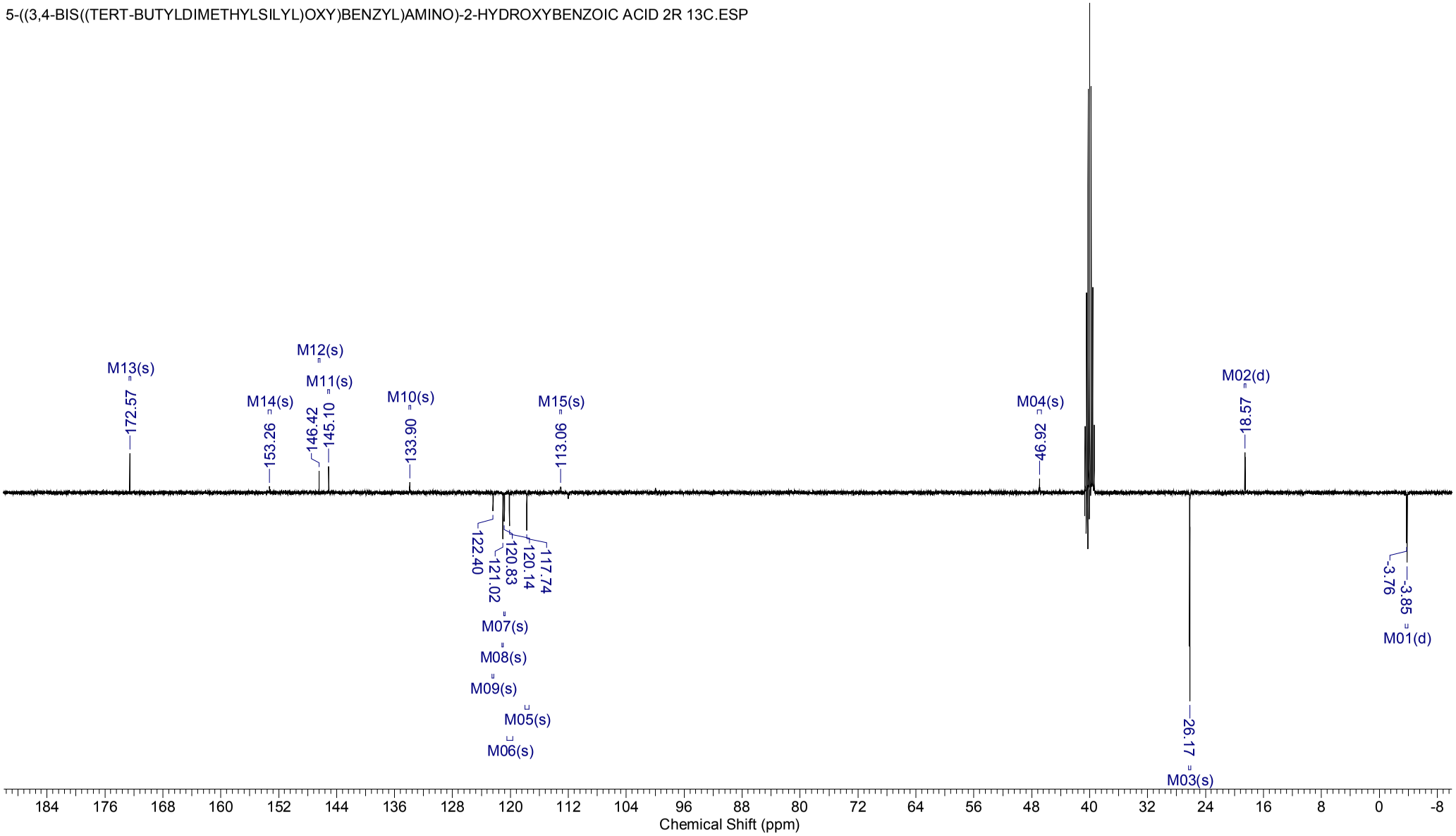
Acquisition Time (sec)	4.0894	***Date***	28 Jan 2019 12:33:20			***Date Stamp***	28 Jan 2019 12:33:20
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM293F2_1\JM293F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	98.20	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.149		

5-((3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)amino)-2-hydroxybenzoic acid 2r 1H.esp



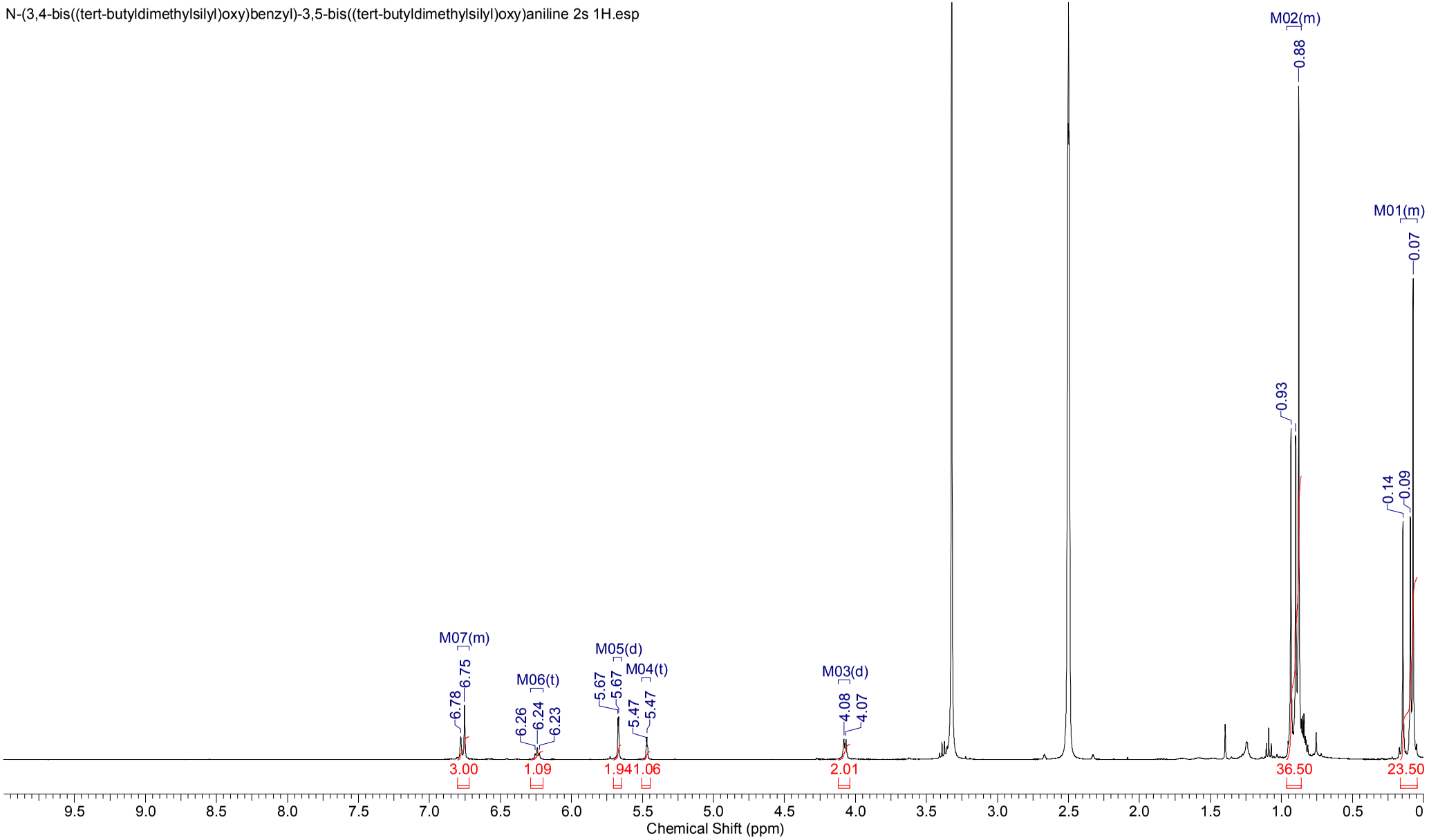
Acquisition Time (sec)	1.3631	***Date***	11 Nov 2019 20:35:28			***Date Stamp***	11 Nov 2019 20:35:28
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM293F2_11\JM293F2\11\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10061.2783
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.148		

5-((3,4-BIS((TERT-BUTYLDIMETHYLSILYL)OXY)BENZYL)AMINO)-2-HYDROXYBENZOIC ACID 2R 13C.ESP



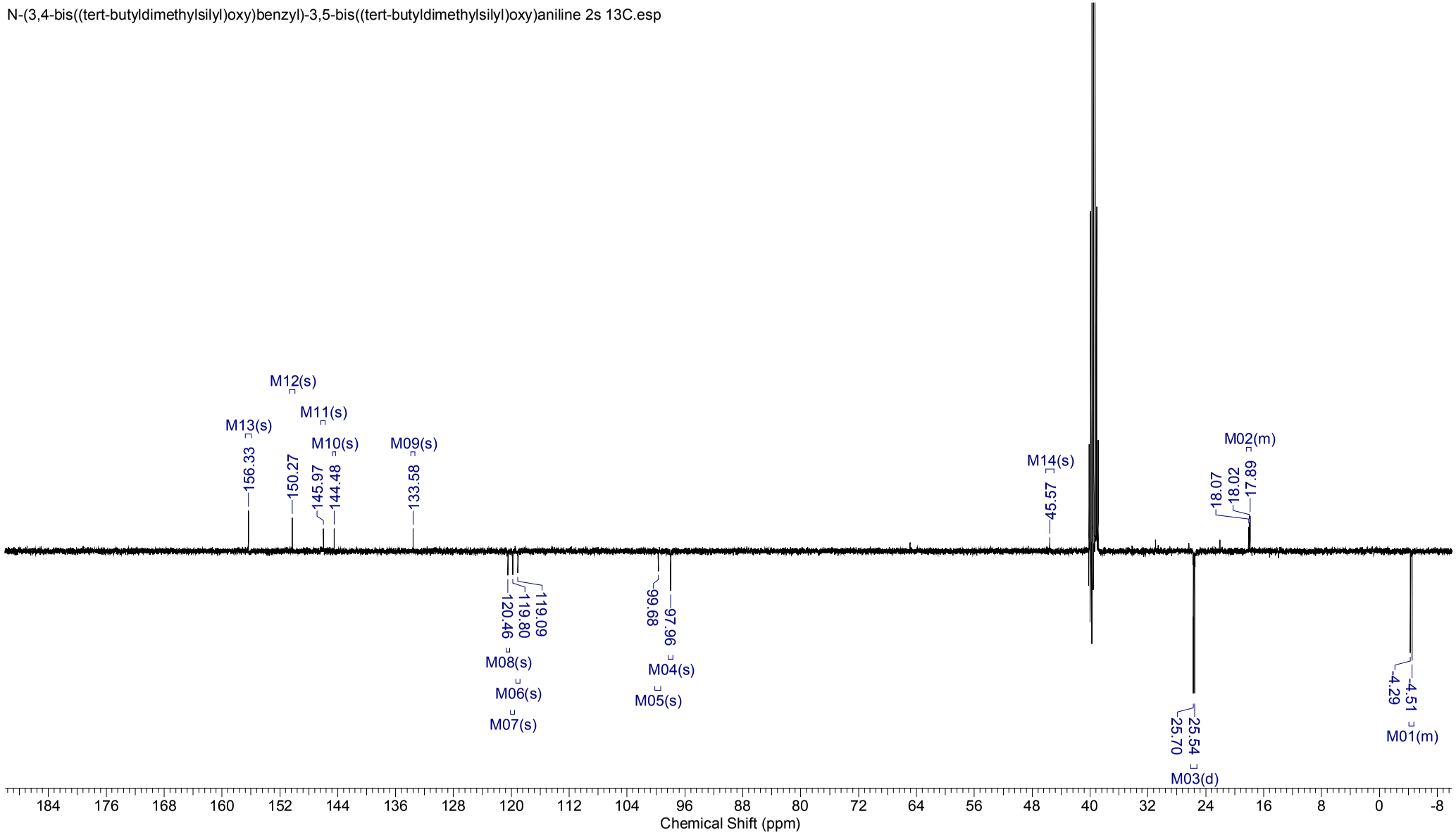
Acquisition Time (sec)	4.0894	***Date***	11 Jul 2019 06:09:36			***Date Stamp***	11 Jul 2019 06:09:36		
File Name	C:\USERS\JASON\DOWNLOADS\JM355F4\1\FID			***Frequency (MHz)***	400.13	***Nucleus***	1H	***Number of Transients***	32
Origin	spect	***Original Points Count***	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	87.87	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940	***Spectrum Type***	STANDARD
Sweep Width (Hz)	8012.58	***Temperature (degree C)***	25.150						

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-3,5-bis((tert-butyldimethylsilyl)oxy)aniline 2s 1H.esp



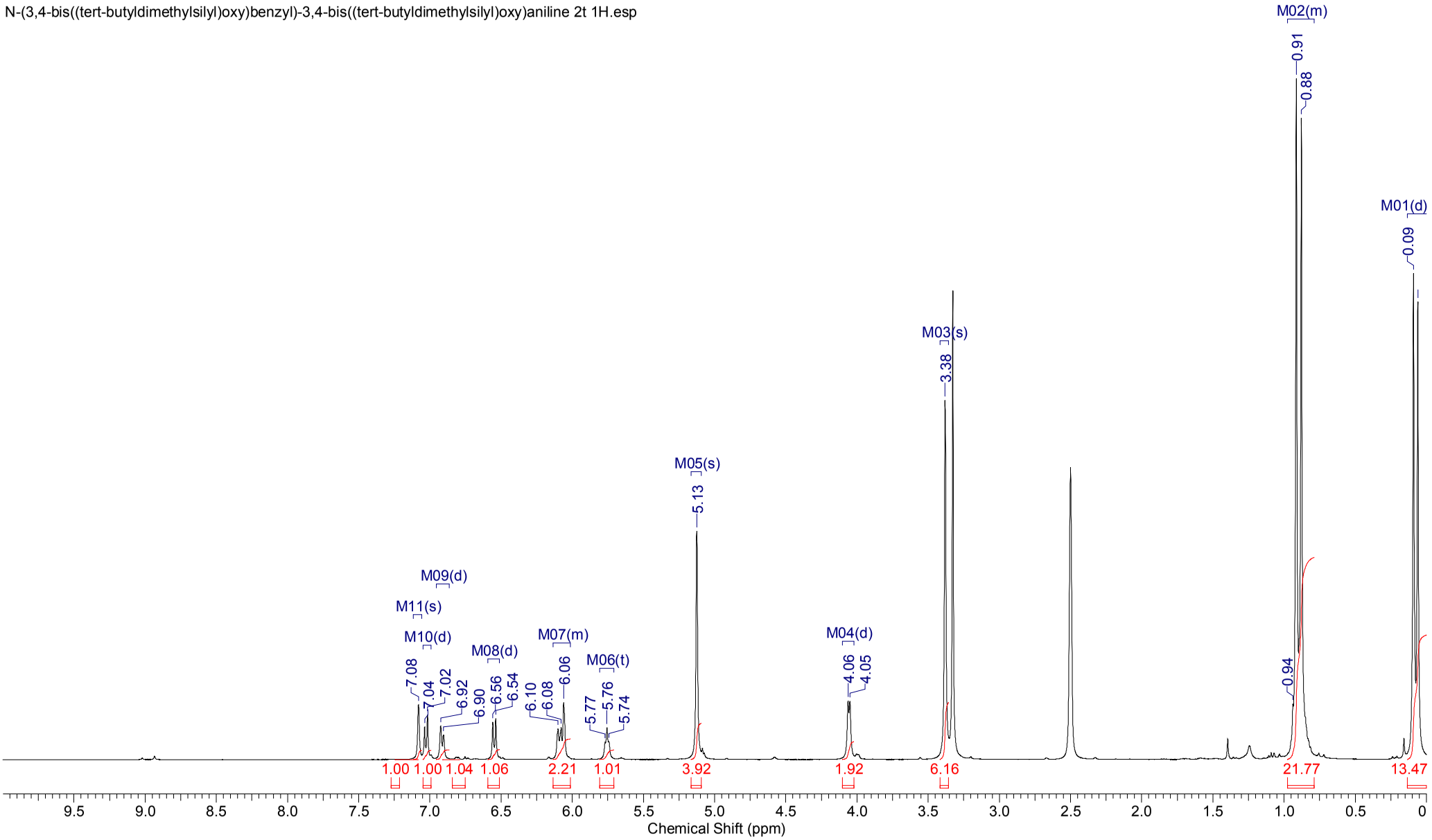
Acquisition Time (sec)	1.3631	***Date***	12 Jul 2019 00:41:04			***Date Stamp***	12 Jul 2019 00:41:04
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM355F4_3\JM355F4\3\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10011.6016
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.151		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-3,5-bis((tert-butyldimethylsilyl)oxy)aniline 2s 13C.esp



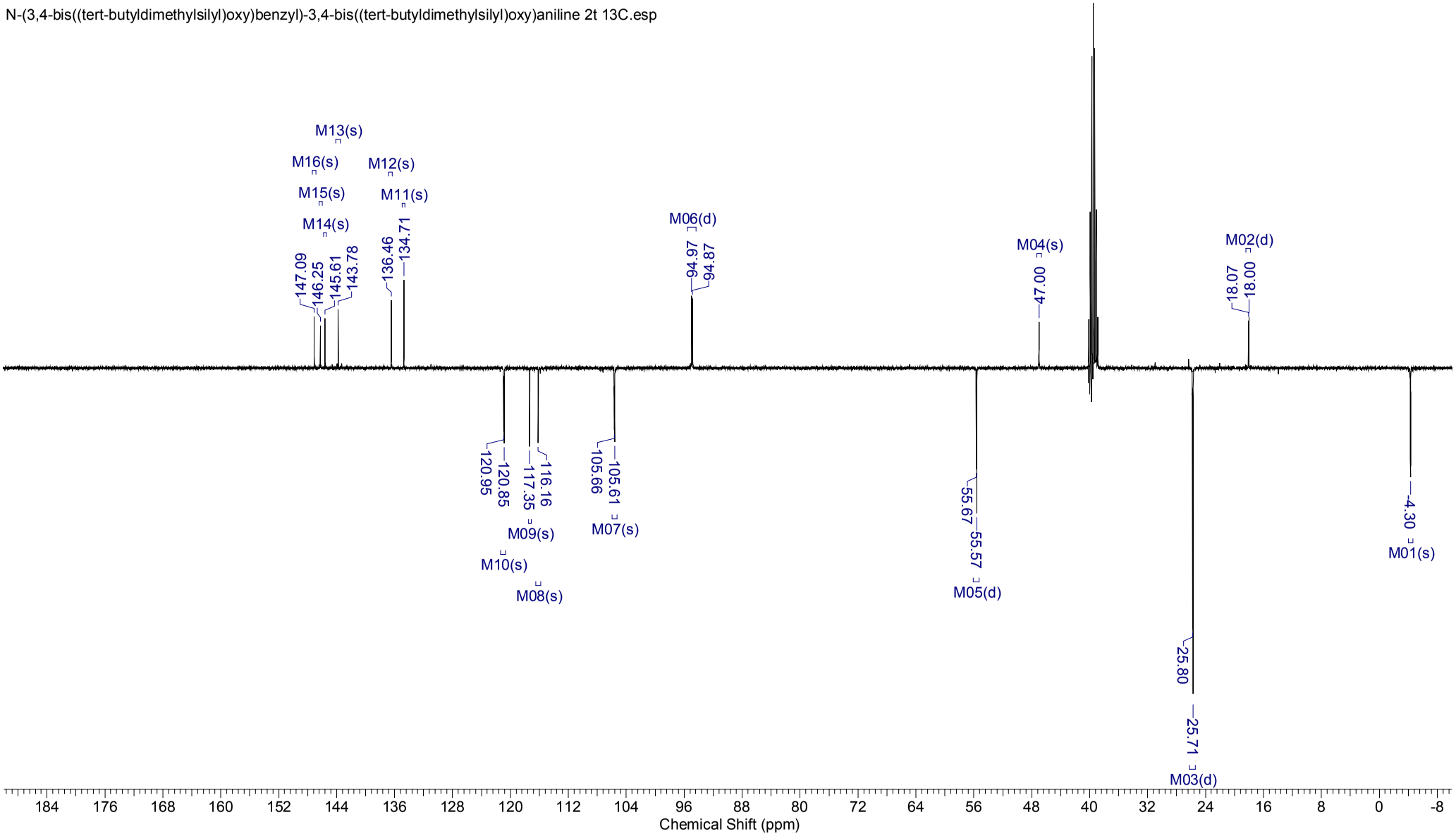
Acquisition Time (sec)	4.0894	***Date***	11 Jul 2019 06:35:12			***Date Stamp***	11 Jul 2019 06:35:12		
File Name	C:\USERS\JASON\DOWNLOADS\JM356F3\1\FID			***Frequency (MHz)***	400.13	***Nucleus***	1H	***Number of Transients***	32
Origin	spect	***Original Points Count***	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	30.70	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940	***Spectrum Type***	STANDARD
Sweep Width (Hz)	8012.58	***Temperature (degree C)***	25.149						

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-3,4-bis((tert-butyldimethylsilyl)oxy)aniline 2t 1H.esp



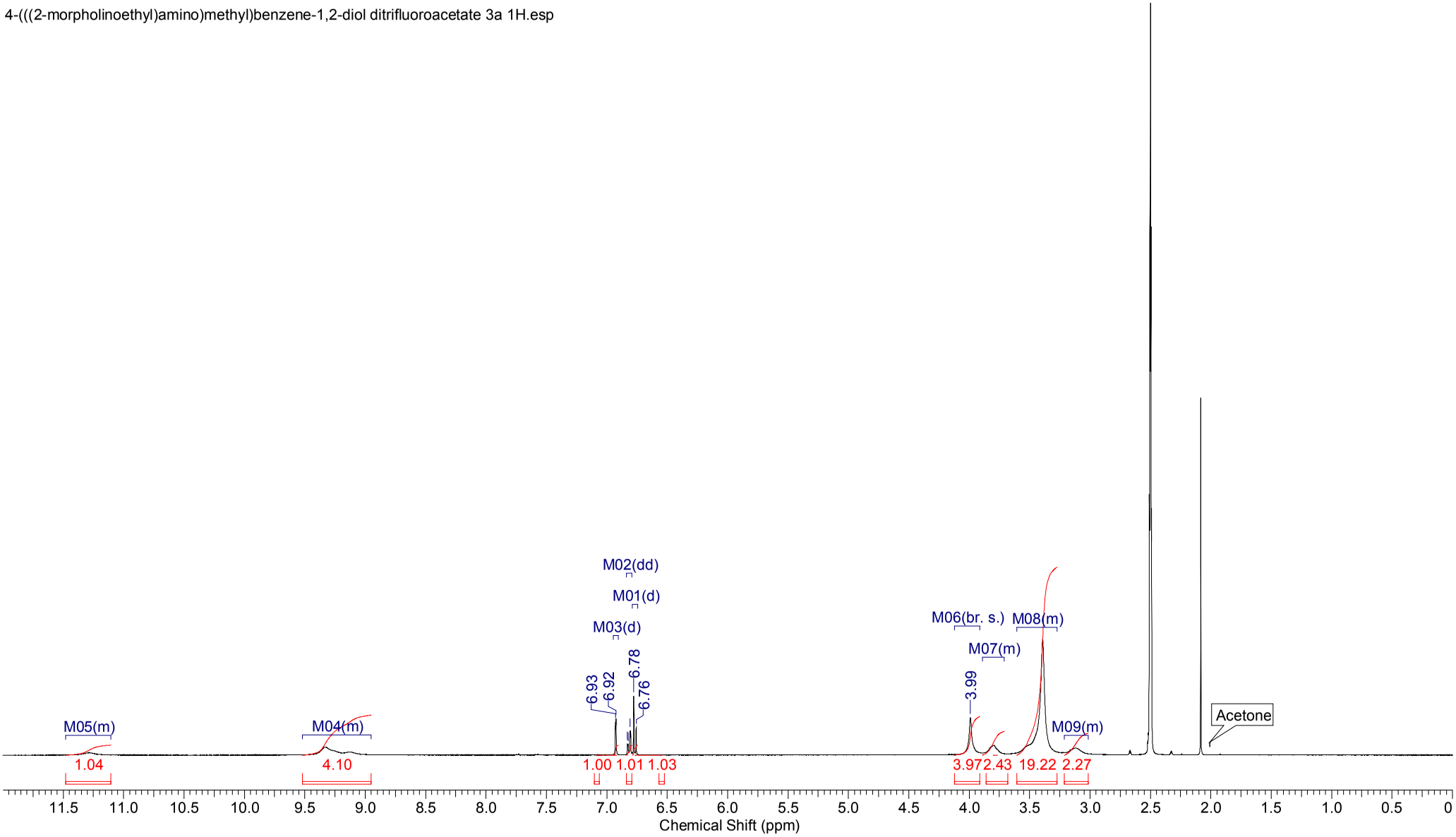
Acquisition Time (sec)	1.3631	***Date***	11 Jul 2019 21:29:04			***Date Stamp***	11 Jul 2019 21:29:04
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM356F3_3\JM356F3\3\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10011.6016
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.151		

N-(3,4-bis((tert-butyldimethylsilyl)oxy)benzyl)-3,4-bis((tert-butyldimethylsilyl)oxy)aniline 2t 13C.esp



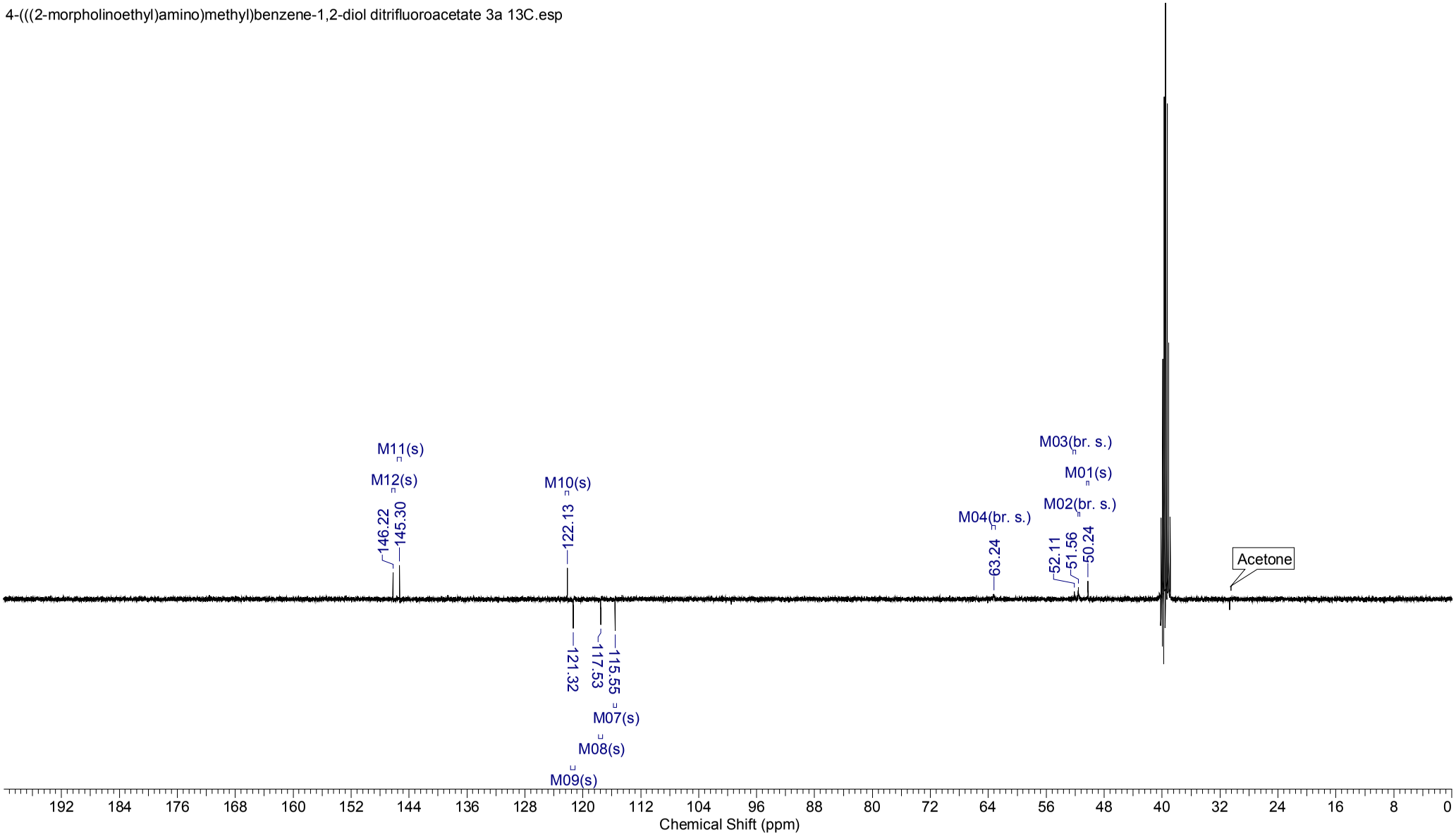
Acquisition Time (sec)	4.0894	***Date***	30 Sep 2018 01:51:28			***Date Stamp***	30 Sep 2018 01:51:28
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM204F2_1\JM204F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	112.05	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.150		

4-(((2-morpholinoethyl)amino)methyl)benzene-1,2-diol ditrifluoroacetate 3a 1H.esp



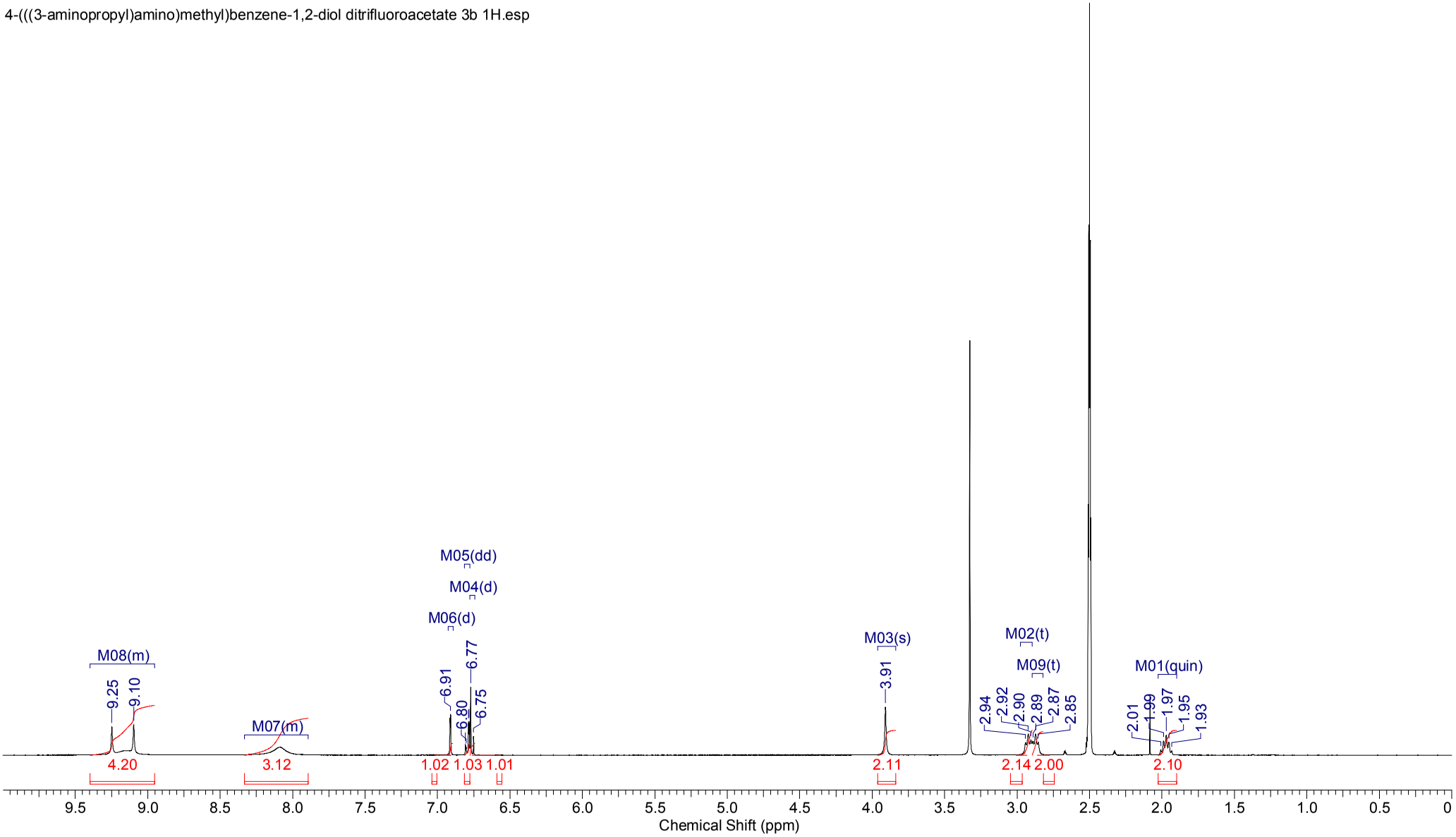
Acquisition Time (sec)	1.3631	***Date***	30 Sep 2018 04:57:04			***Date Stamp***	30 Sep 2018 04:57:04
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM204F2_2\JM204F2\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10012.3350
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.148		

4-(((2-morpholinoethyl)amino)methyl)benzene-1,2-diol ditrifluoroacetate 3a 13C.esp



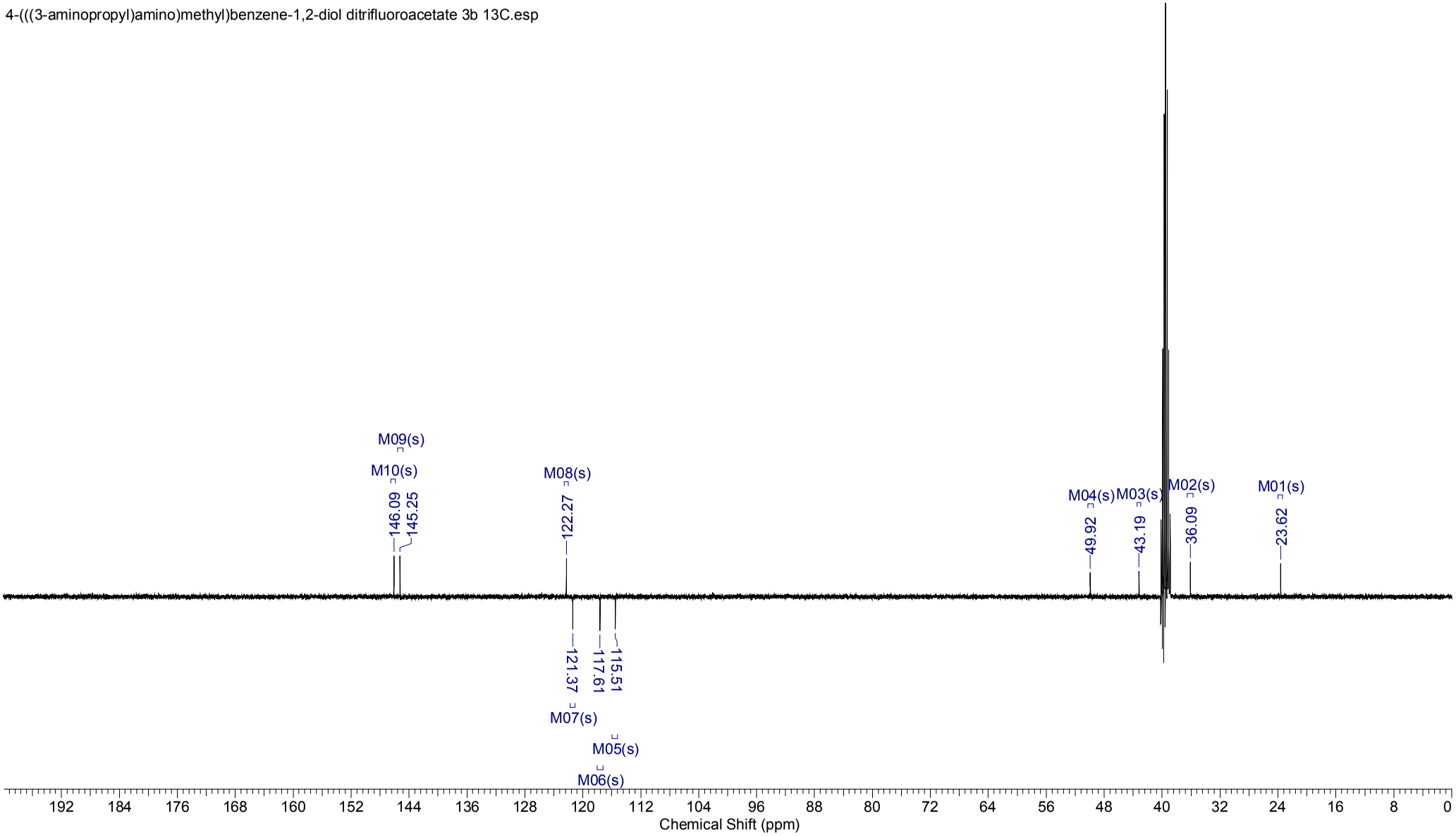
Acquisition Time (sec)	4.0894	***Date***	30 Sep 2018 08:21:52			***Date Stamp***	30 Sep 2018 08:21:52
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM206F2_1\JM206F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	112.05	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.151		

4-(((3-aminopropyl)amino)methyl)benzene-1,2-diol ditrifluoroacetate 3b 1H.esp



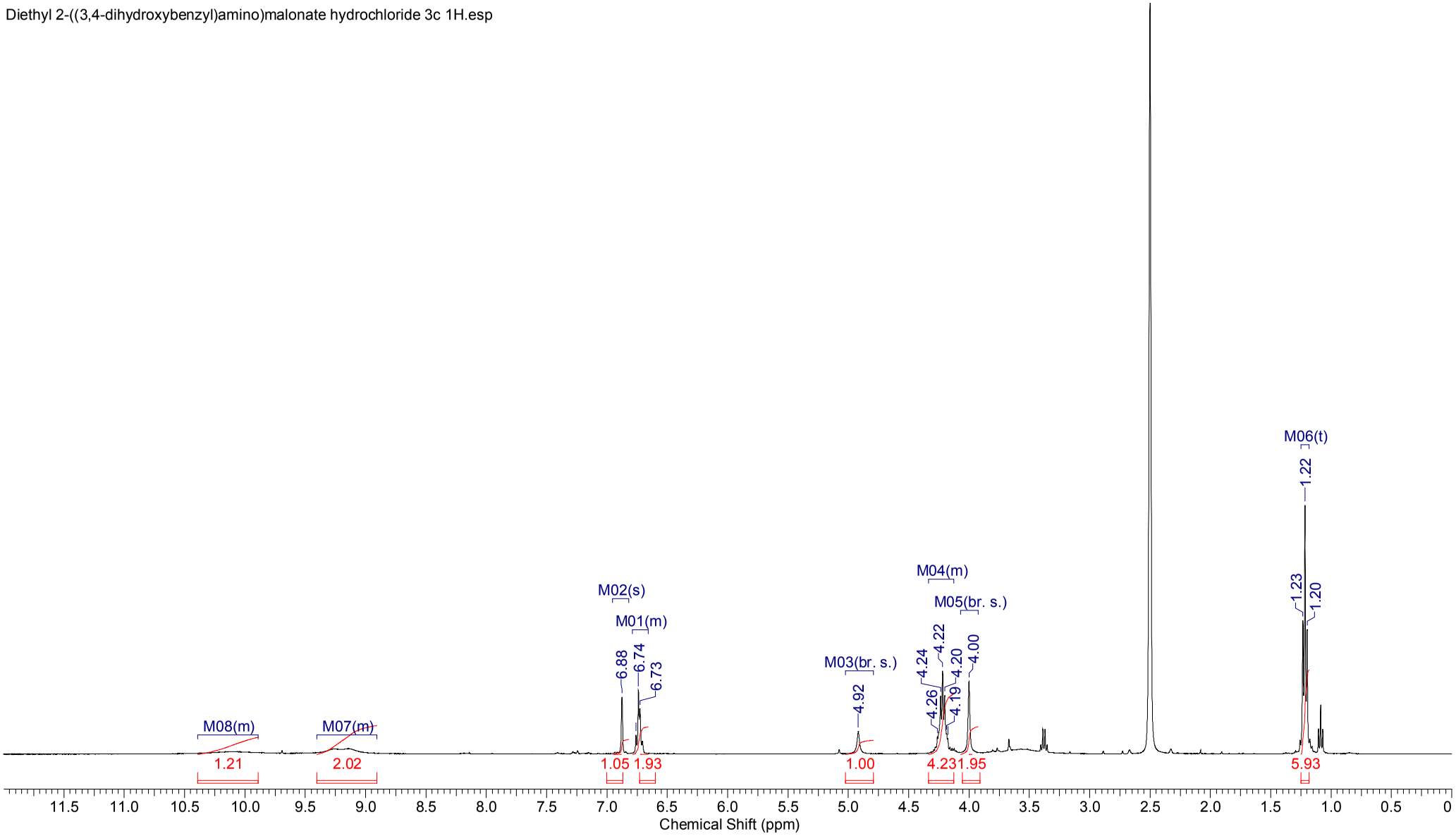
Acquisition Time (sec)	1.3631	***Date***	30 Sep 2018 11:29:36			***Date Stamp***	30 Sep 2018 11:29:36
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM206F2_2\JM206F2\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10011.6016
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150		

4-(((3-aminopropyl)amino)methyl)benzene-1,2-diol ditrifluoroacetate 3b 13C.esp



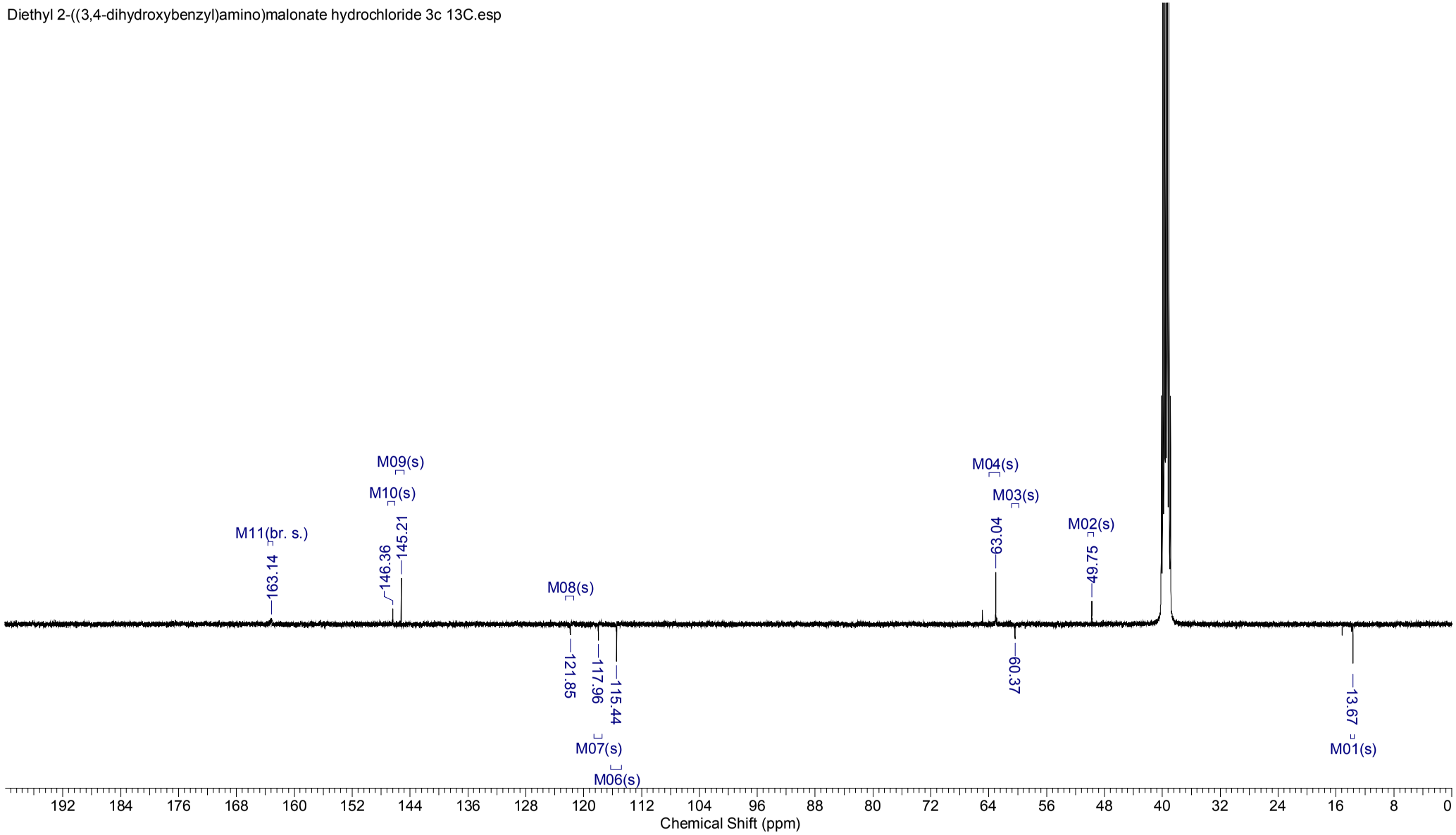
Acquisition Time (sec)	4.0894	***Date***	15 Jan 2019 15:09:04			***Date Stamp***	15 Jan 2019 15:09:04
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM288F2_1\JM288F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	98.20	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2468.1277
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.150		

Diethyl 2-((3,4-dihydroxybenzyl)amino)malonate hydrochloride 3c 1H.esp



Acquisition Time (sec)	1.3631	***Date***	21 Jan 2019 18:38:08			***Date Stamp***	21 Jan 2019 18:38:08
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM288F2_2\JM288F2\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	1024	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10009.4004
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.153		

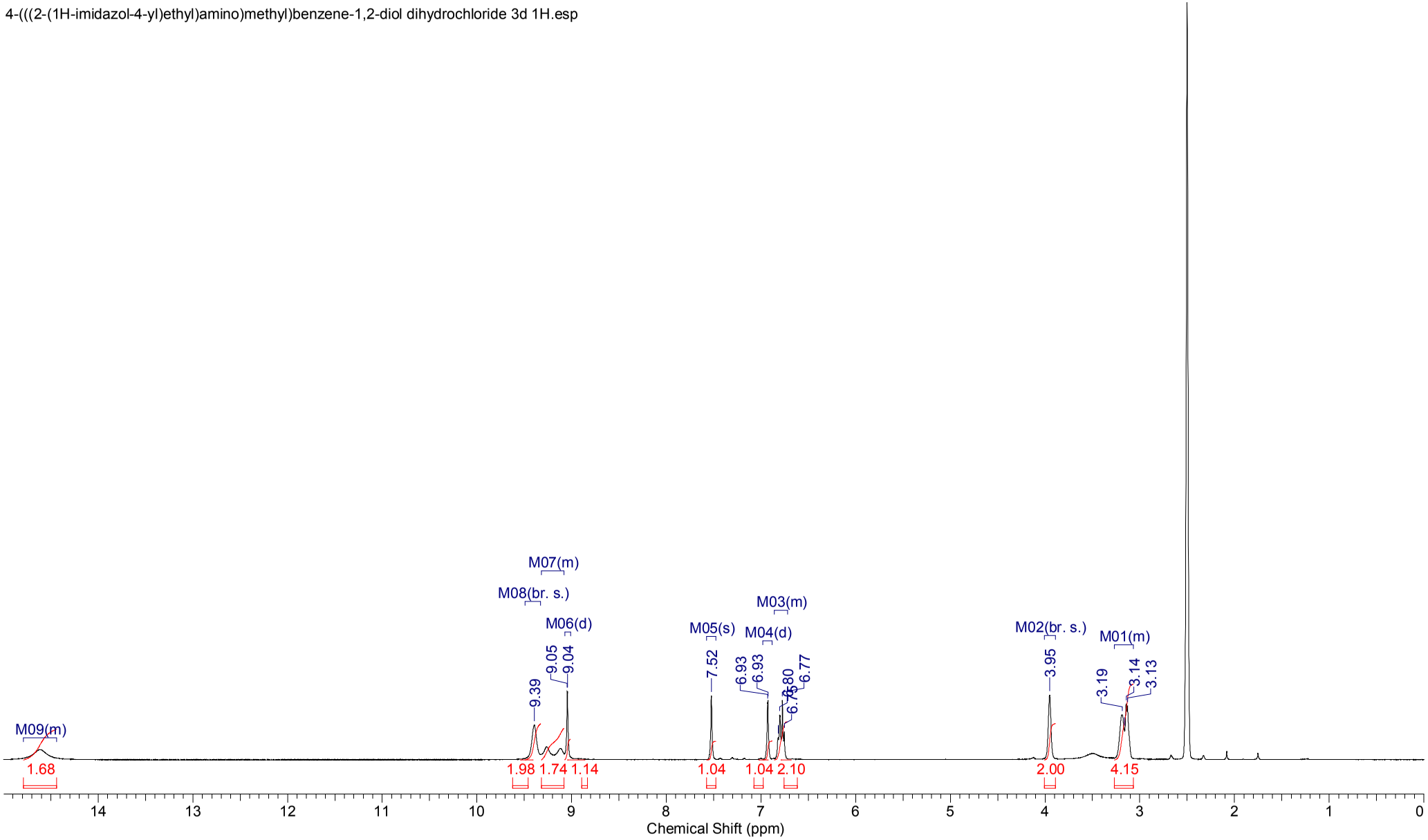
Diethyl 2-((3,4-dihydroxybenzyl)amino)malonate hydrochloride 3c 13C.esp



Acquisition Time (sec)	4.0894	***Date***	02 Feb 2019 20:46:08			***Date Stamp***	02 Feb 2019 20:46:08
File Name	C:\USERS\JASON\DOWNLOADS\NOUVEAU DOSSIER\JM295F1_1\JM295F1\1\1\FID					***Frequency (MHz)***	400.13
Number of Transients	32	***Origin***	spect	***Original Points Count***	32768	***Owner***	nmr
Pulse Sequence	zg30	***Receiver Gain***	98.20	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.149		

Nucleus	1H
Points Count	32768
Spectrum Offset (Hz)	2467.3940

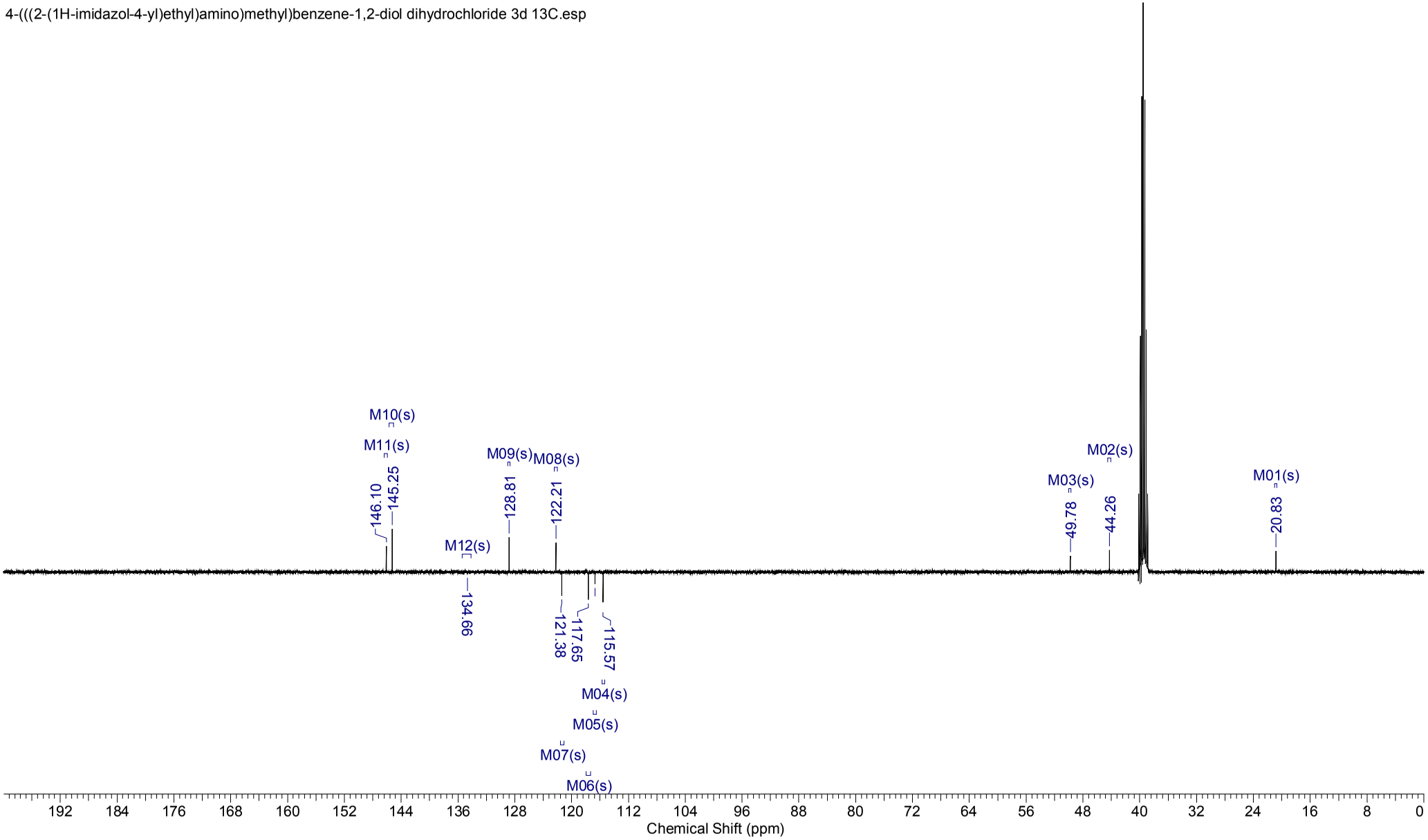
4-(((2-(1H-imidazol-4-yl)ethyl)amino)methyl)benzene-1,2-diol dihydrochloride 3d 1H.esp



Acquisition Time (sec)	1.3631	***Date***	02 Feb 2019 22:20:00			***Date Stamp***	02 Feb 2019 22:20:00
File Name	C:\USERS\JASON\DOWNLOADS\NOUVEAU DOSSIER\JM295F1_2\JM295F1\2\FID					***Frequency (MHz)***	100.61
Number of Transients	1024	***Origin***	spect	***Original Points Count***	32768	***Owner***	nmr
Pulse Sequence	jmod	***Receiver Gain***	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150		

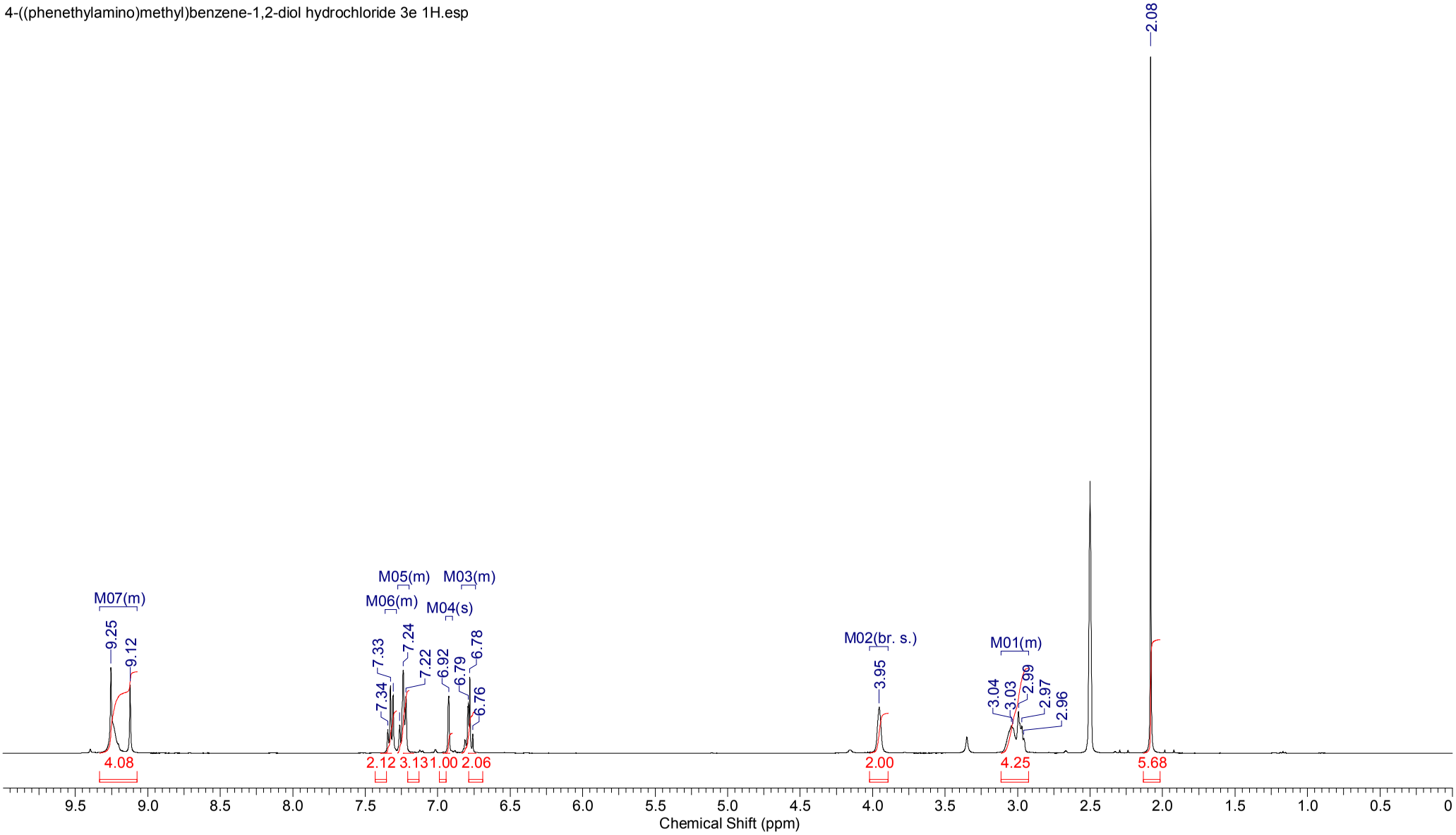
Nucleus	13C		
Points Count	32768		
Spectrum Offset (Hz)	10011.6016		

4-(((2-(1H-imidazol-4-yl)ethyl)amino)methyl)benzene-1,2-diol dihydrochloride 3d 13C.esp



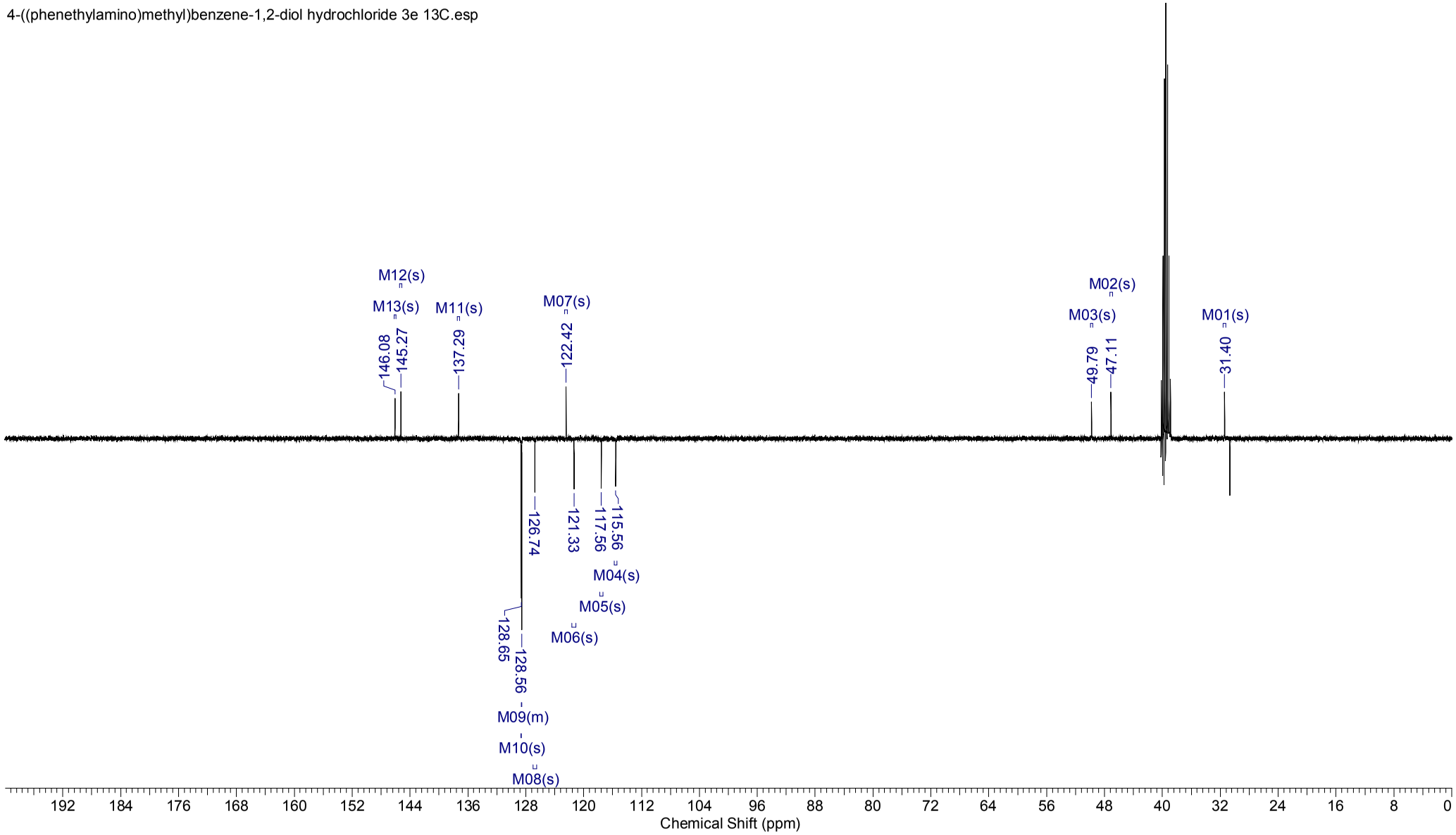
Acquisition Time (sec)	4.0894	***Date***	12 Dec 2018 17:23:28			***Date Stamp***	12 Dec 2018 17:23:28
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM270F2_1\JM270F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	71.53	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.147		

4-((phenethylamino)methyl)benzene-1,2-diol hydrochloride 3e 1H.esp



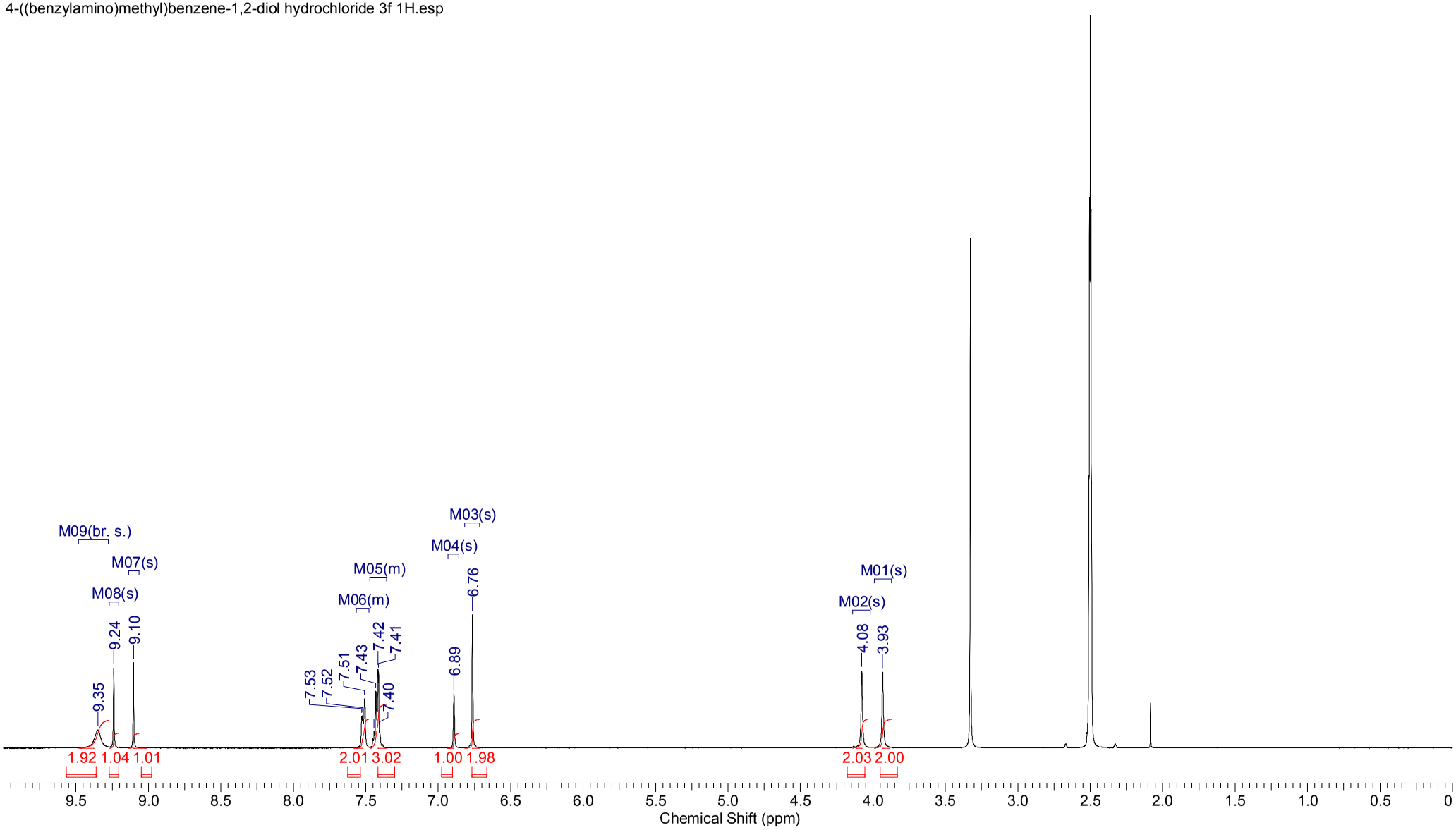
Acquisition Time (sec)	1.3631	***Date***	14 Dec 2018 18:38:08			***Date Stamp***	14 Dec 2018 18:38:08
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM270F2_3\JM270F2\3\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	1024	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10011.6016
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.154		

4-((phenethylamino)methyl)benzene-1,2-diol hydrochloride 3e 13C.esp



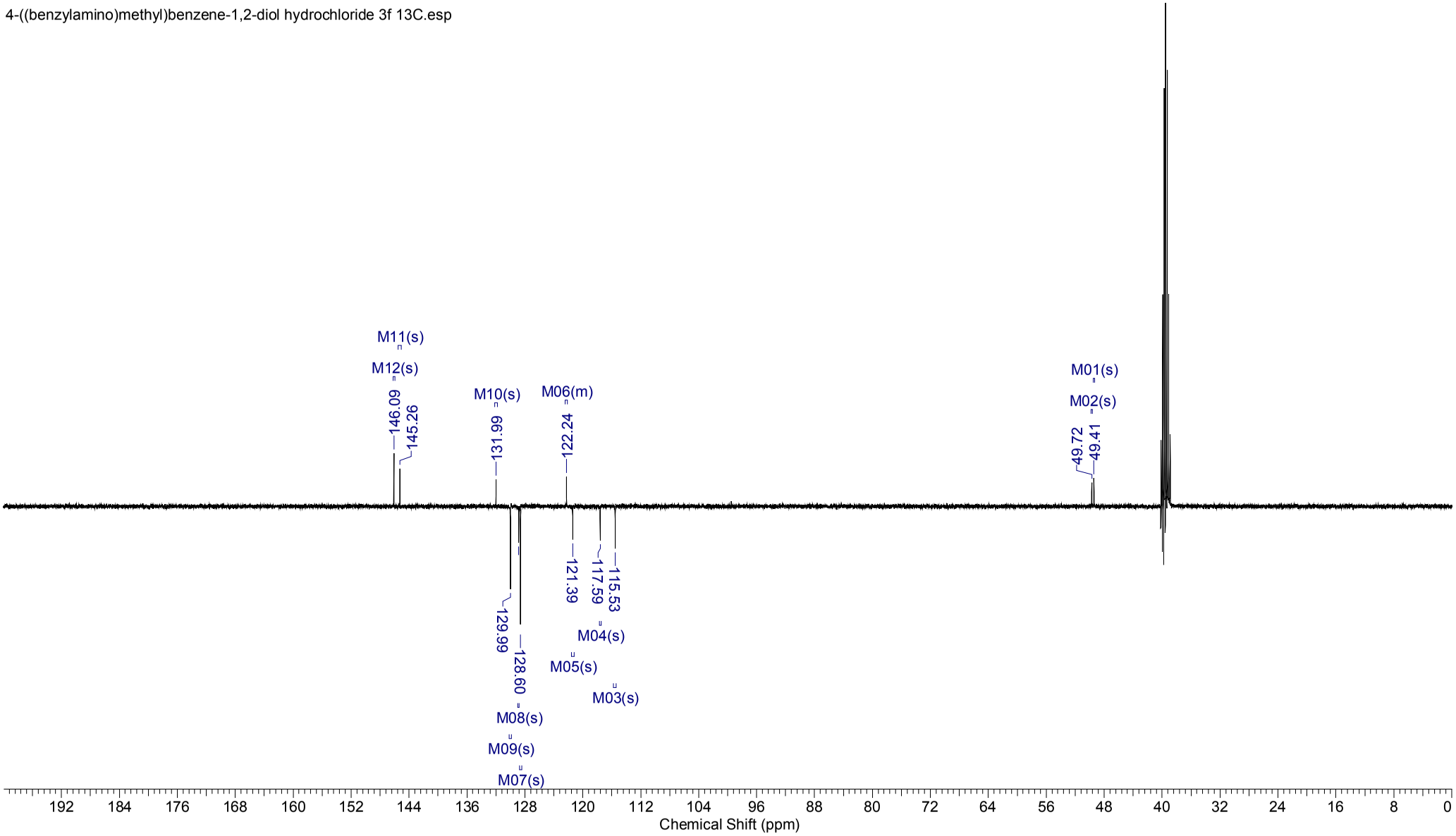
Acquisition Time (sec)	4.0894	***Date***	26 Sep 2018 22:48:00			***Date Stamp***	26 Sep 2018 22:48:00
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM203F3_1\JM_203F3\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	112.05	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.150		

4-((benzylamino)methyl)benzene-1,2-diol hydrochloride 3f 1H.esp



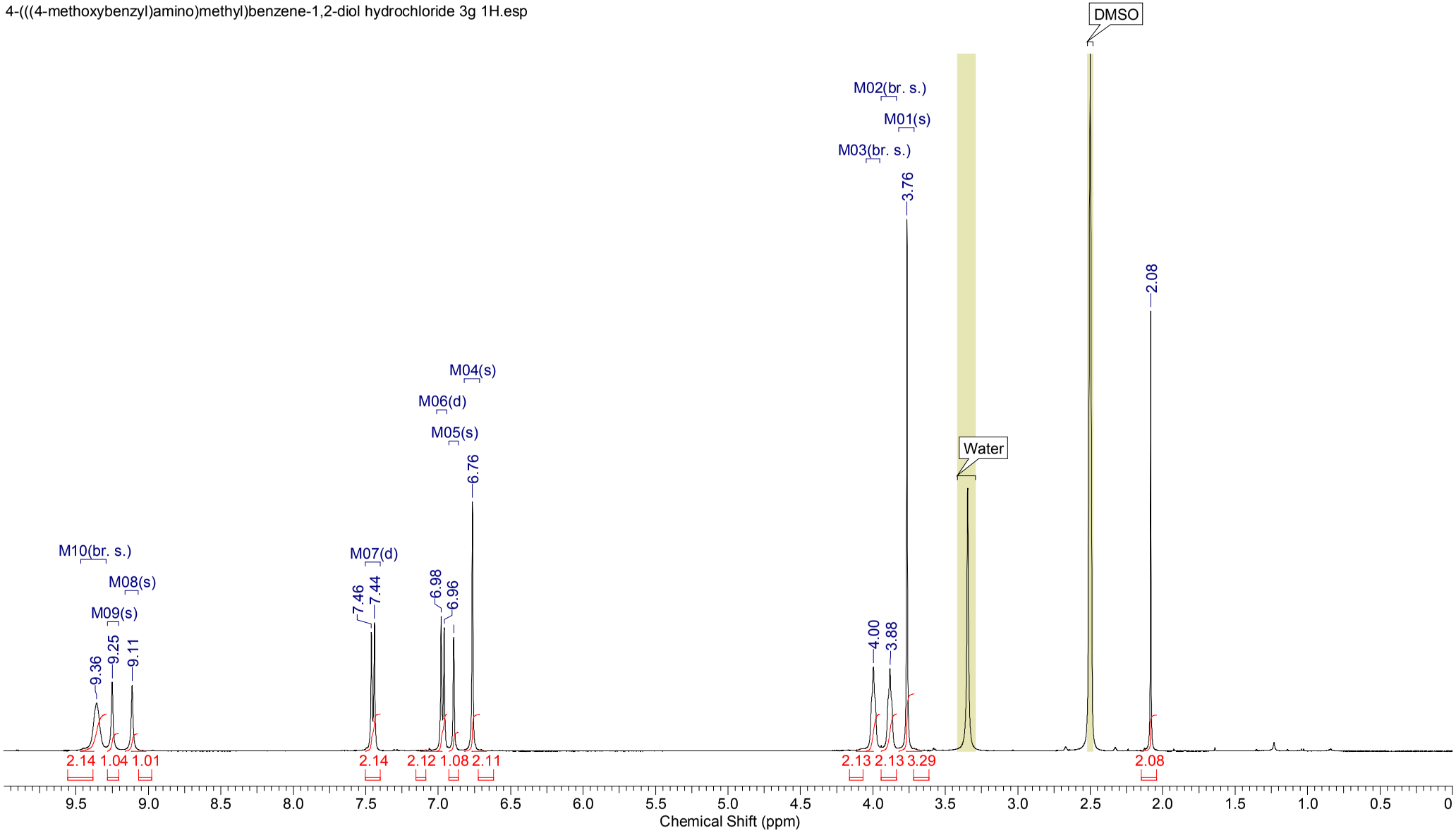
Acquisition Time (sec)	1.3631	***Date***	27 Sep 2018 01:53:36			***Date Stamp***	27 Sep 2018 01:53:36
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM203F3_2\JM_203F3\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10011.6016
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150		

4-((benzylamino)methyl)benzene-1,2-diol hydrochloride 3f 13C.esp



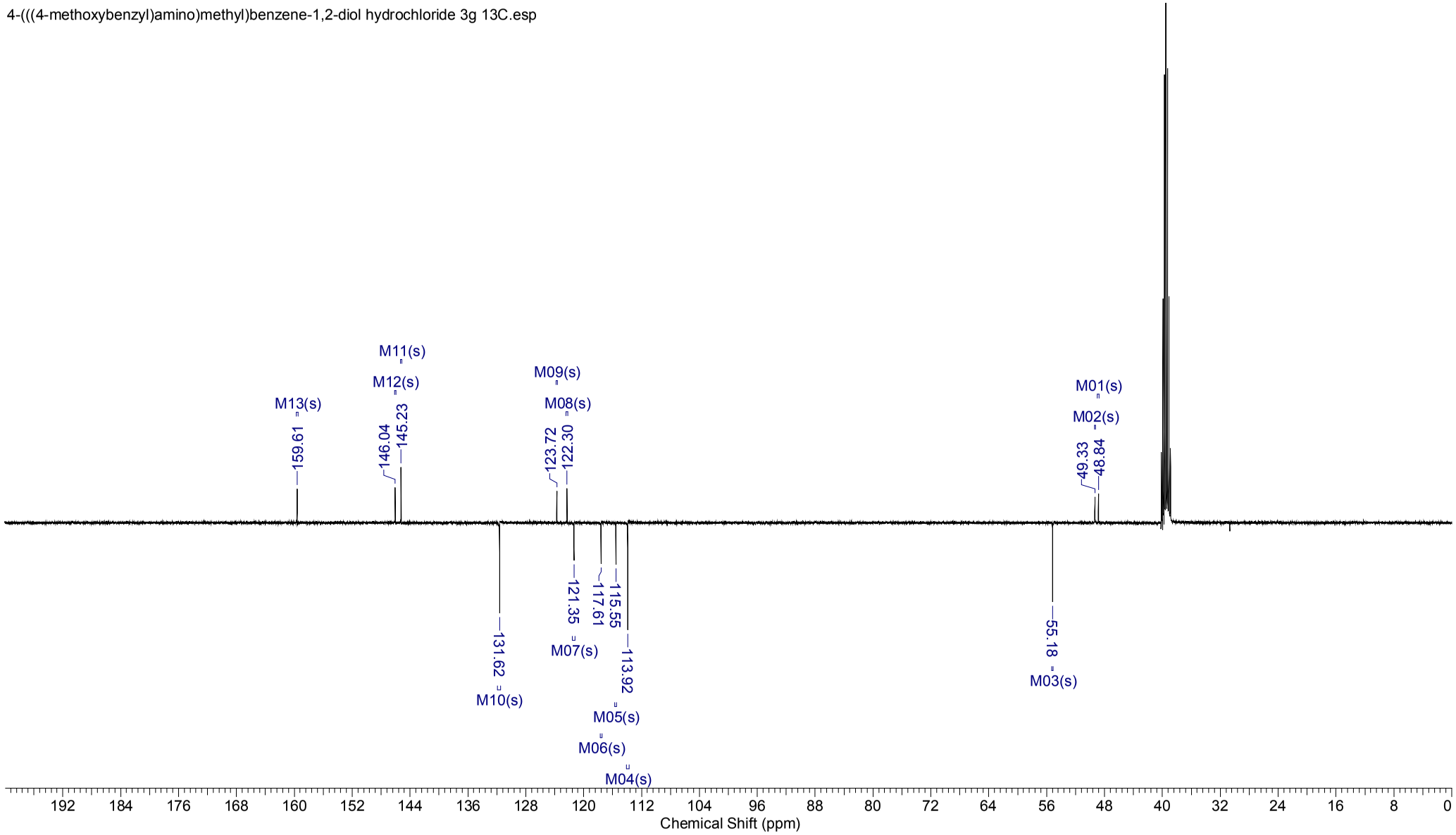
Acquisition Time (sec)	4.0894	***Date***	05 Jun 2019 16:43:12			***Date Stamp***	05 Jun 2019 16:43:12
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM342F1_1\JM342F1\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	78.49	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3938
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.149		

4-(((4-methoxybenzyl)amino)methyl)benzene-1,2-diol hydrochloride 3g 1H.esp



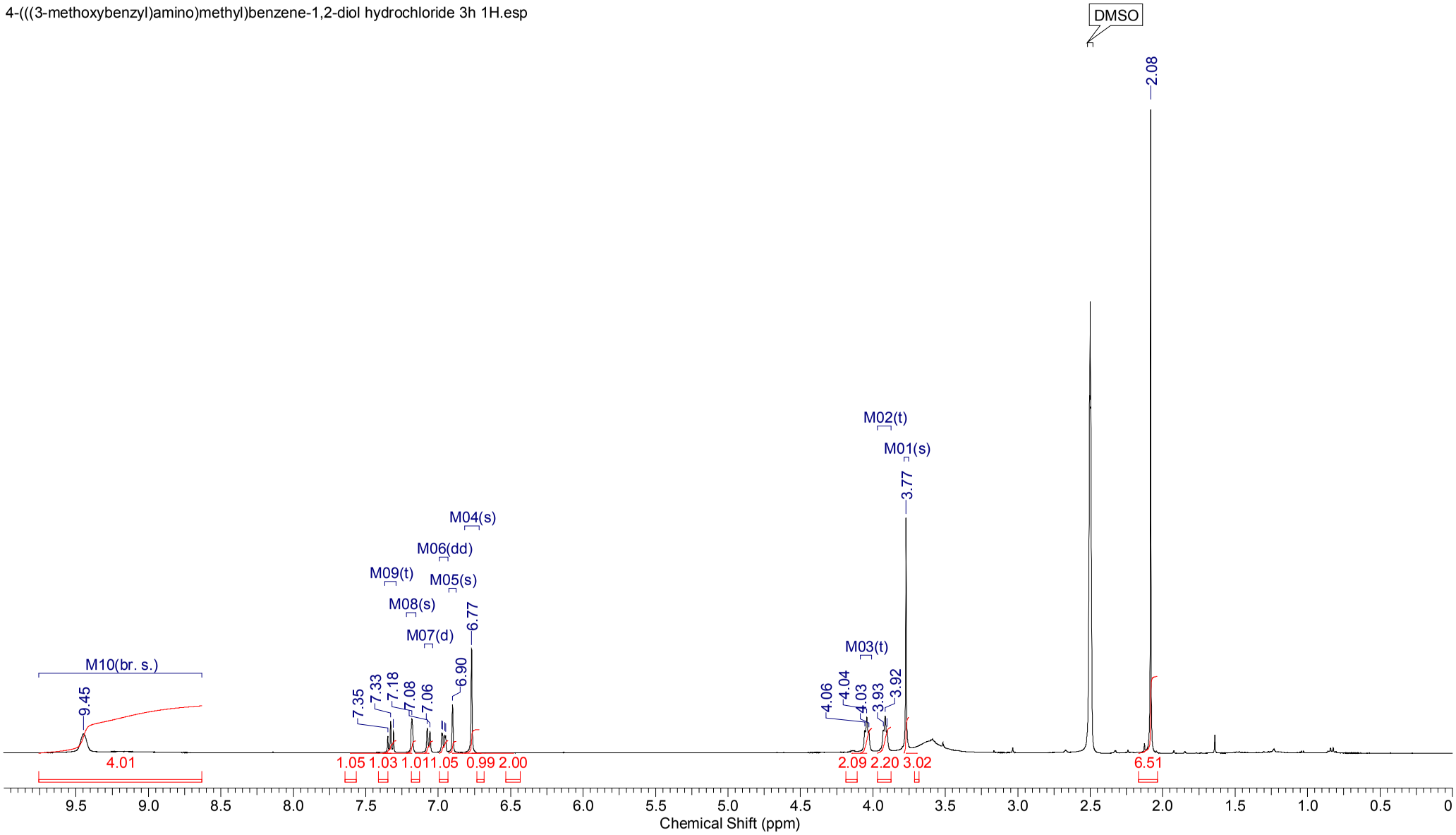
Acquisition Time (sec)	1.3631	***Date***	07 Jun 2019 02:55:28			***Date Stamp***	07 Jun 2019 02:55:28
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM342F1_2\JM342F1\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	1024	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10011.6016
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150		

4-(((4-methoxybenzyl)amino)methyl)benzene-1,2-diol hydrochloride 3g 13C.esp



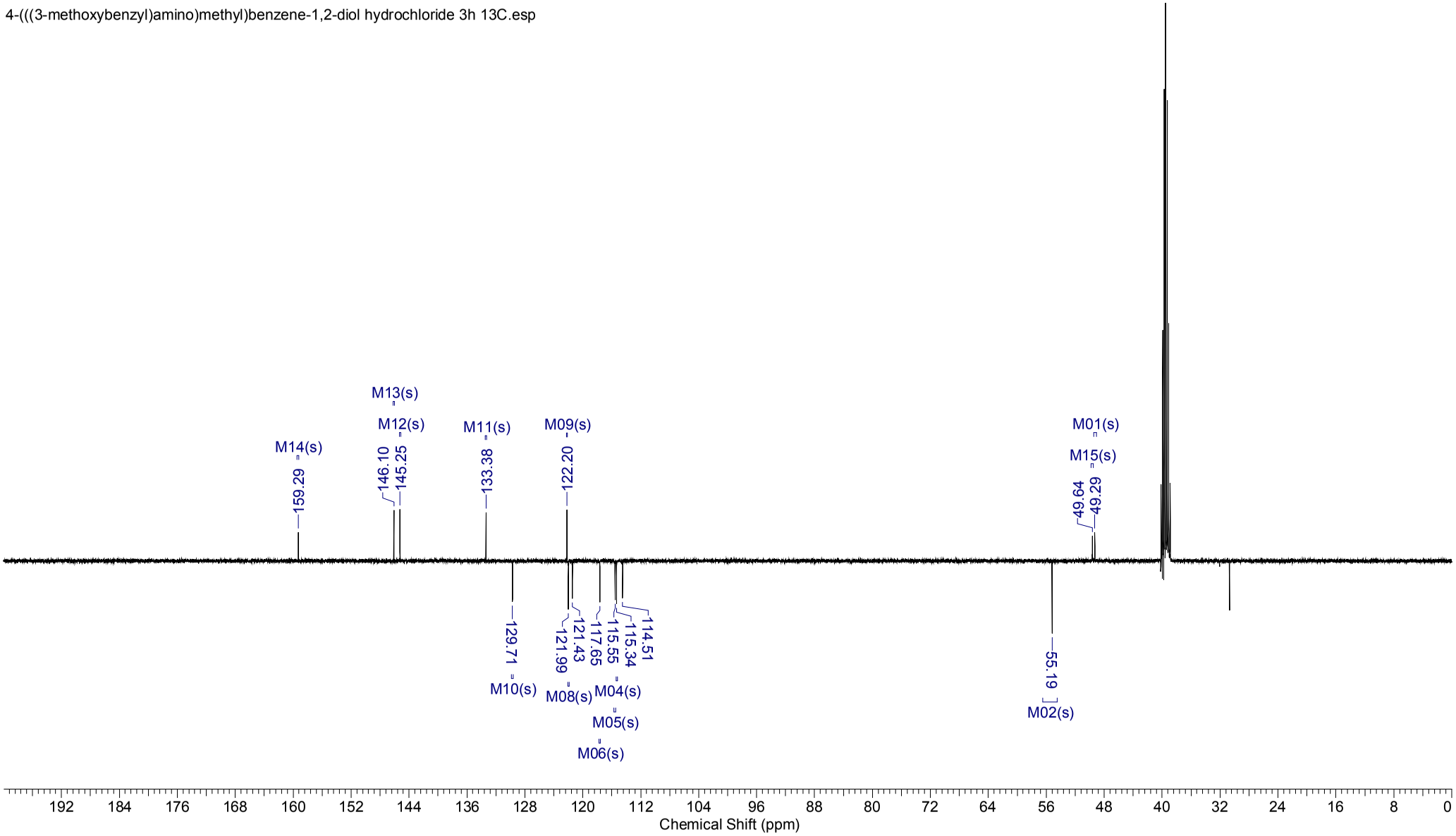
Acquisition Time (sec)	4.0894	***Date***	05 Jun 2019 16:34:40			***Date Stamp***	05 Jun 2019 16:34:40
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM341F1_1\JM341F1\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	87.87	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.6384
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.151		

4-(((3-methoxybenzyl)amino)methyl)benzene-1,2-diol hydrochloride 3h 1H.esp



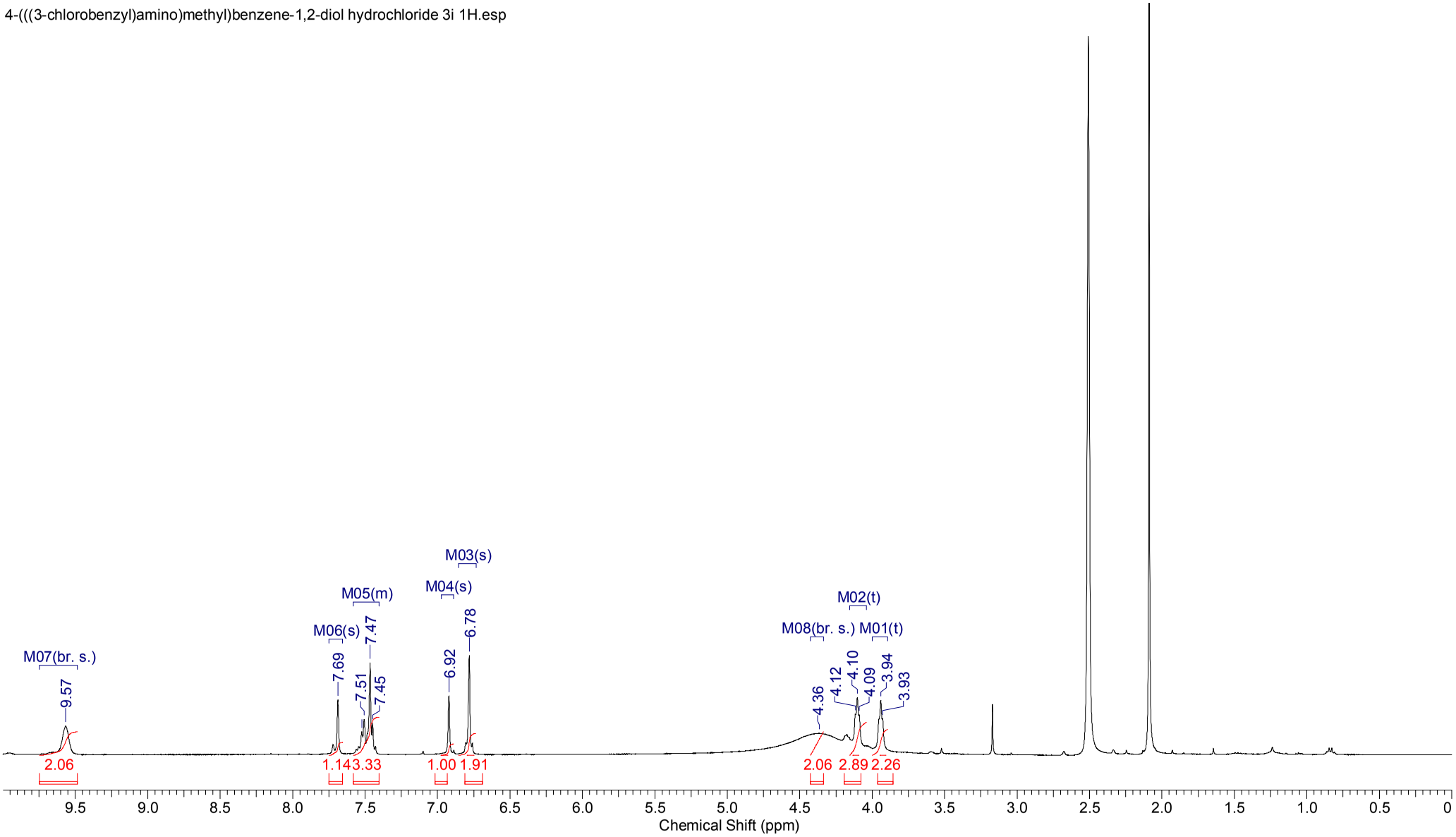
Acquisition Time (sec)	1.3631	***Date***	07 Jun 2019 01:15:12			***Date Stamp***	07 Jun 2019 01:15:12
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM341F1_2\JM341F1\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	1024	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10012.3350
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150		

4-(((3-methoxybenzyl)amino)methyl)benzene-1,2-diol hydrochloride 3h 13C.esp



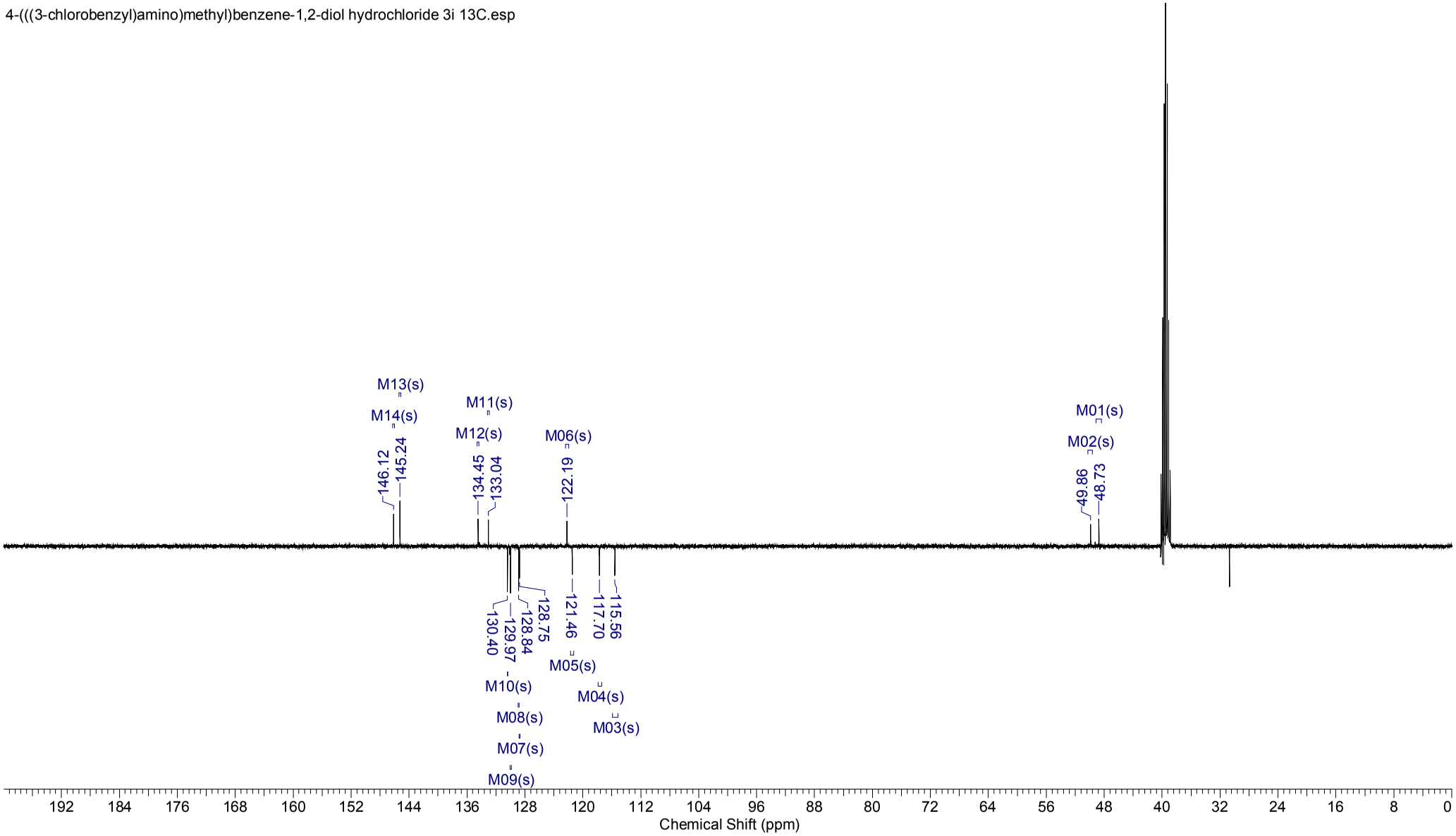
Acquisition Time (sec)	4.0894	***Date***	05 Jun 2019 16:51:44			***Date Stamp***	05 Jun 2019 16:51:44
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM343F1_1\JM343F1\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	87.87	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2470.8027
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.149		

4-(((3-chlorobenzyl)amino)methyl)benzene-1,2-diol hydrochloride 3i 1H.esp



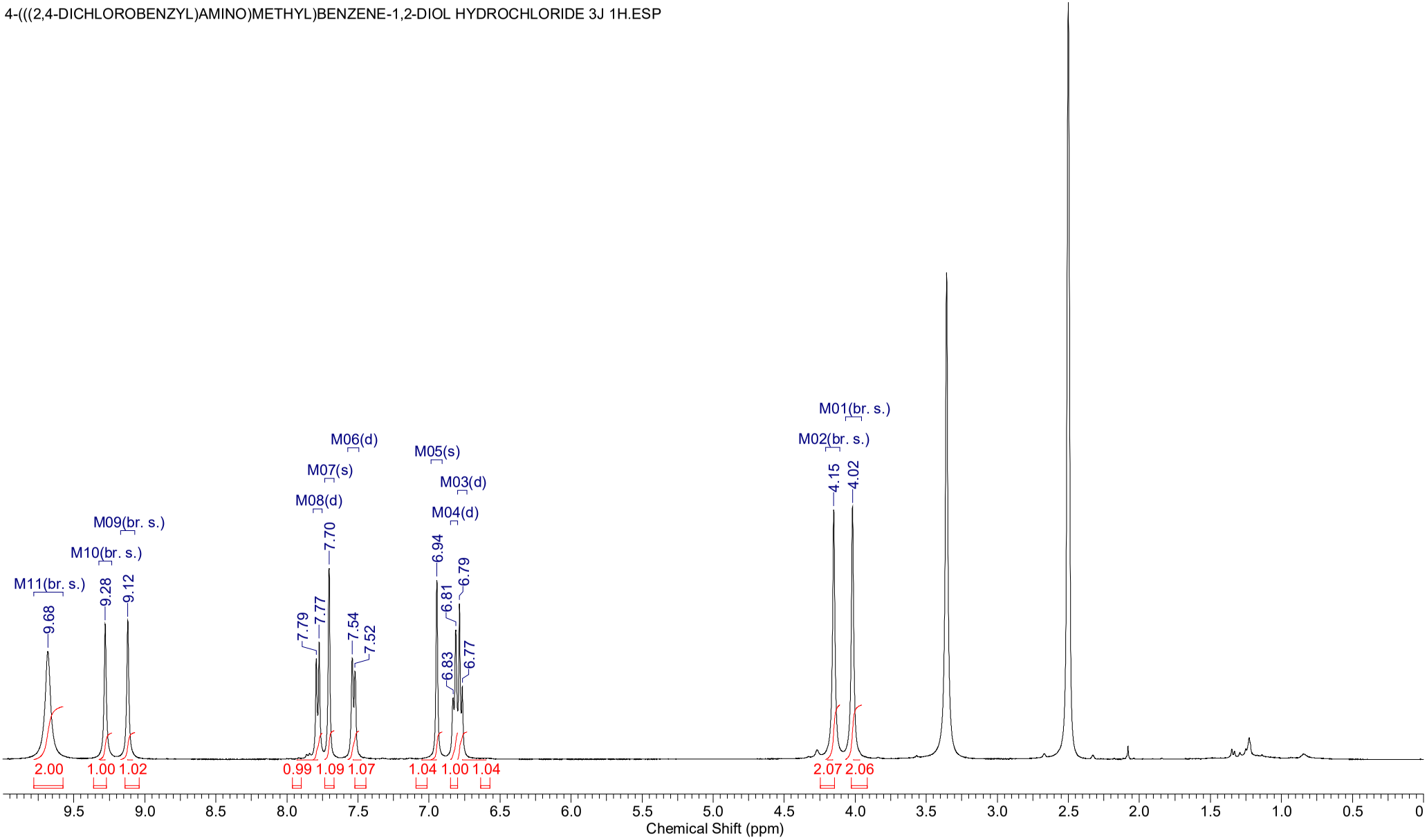
Acquisition Time (sec)	1.3631	***Date***	07 Jun 2019 04:33:36			***Date Stamp***	07 Jun 2019 04:33:36
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM343F1_2\JM343F1\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	1024	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10013.8027
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.149		

4-(((3-chlorobenzyl)amino)methyl)benzene-1,2-diol hydrochloride 3i 13C.esp



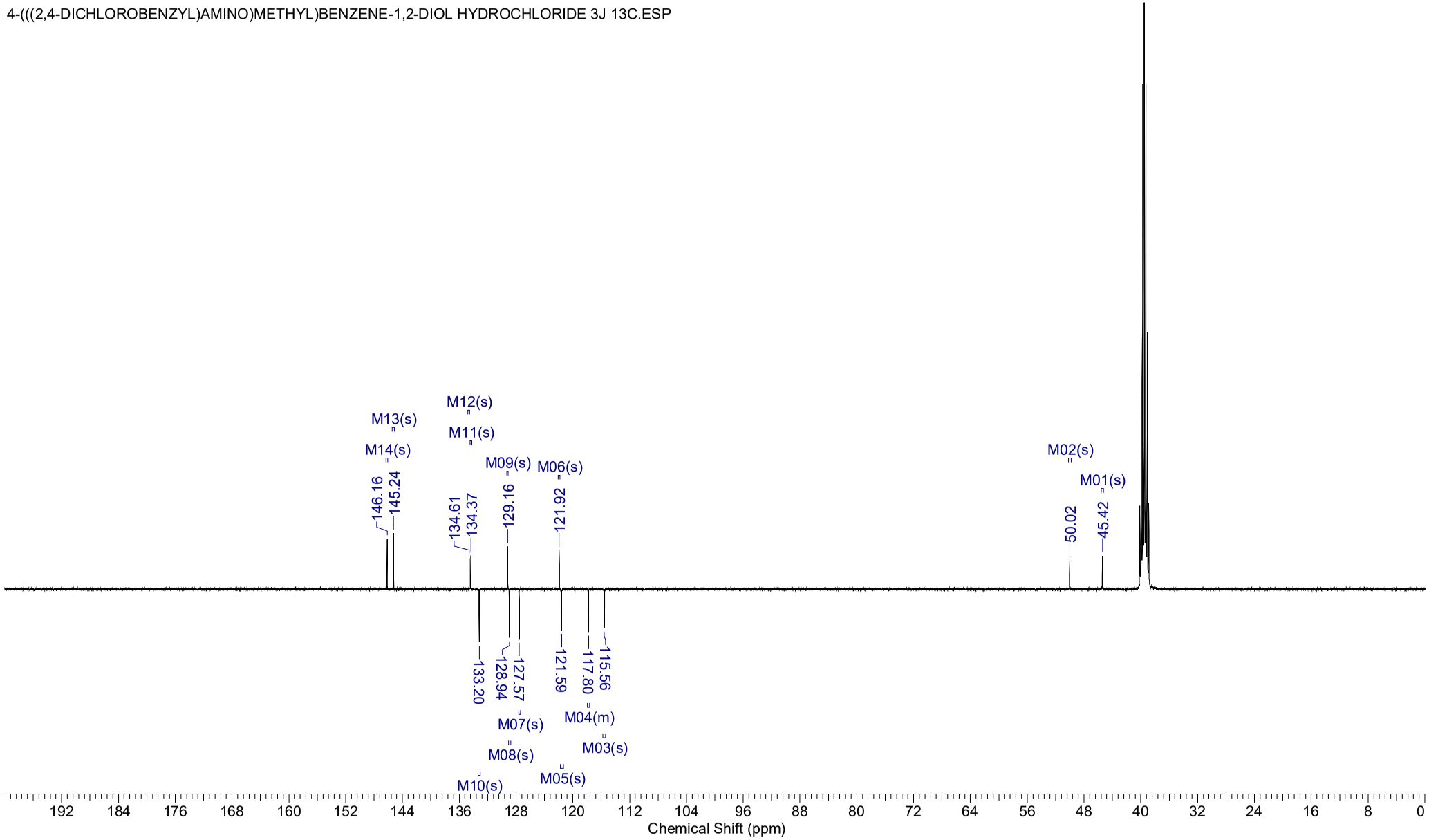
Acquisition Time (sec)	4.0894	***Date***	01 Jul 2019 16:49:36			***Date Stamp***	01 Jul 2019 16:49:36		
File Name	C:\USERS\JASON\DOWNLOADS\CD035F1\1\FID			***Frequency (MHz)***	400.13	***Nucleus***	1H	***Number of Transients***	32
Origin	spect	***Original Points Count***	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	78.49	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.8831	***Spectrum Type***	STANDARD
Sweep Width (Hz)	8012.58	***Temperature (degree C)***	25.520						

4-(((2,4-DICHLOROBENZYL)AMINO)METHYL)BENZENE-1,2-DIOL HYDROCHLORIDE 3J 1H.ESP



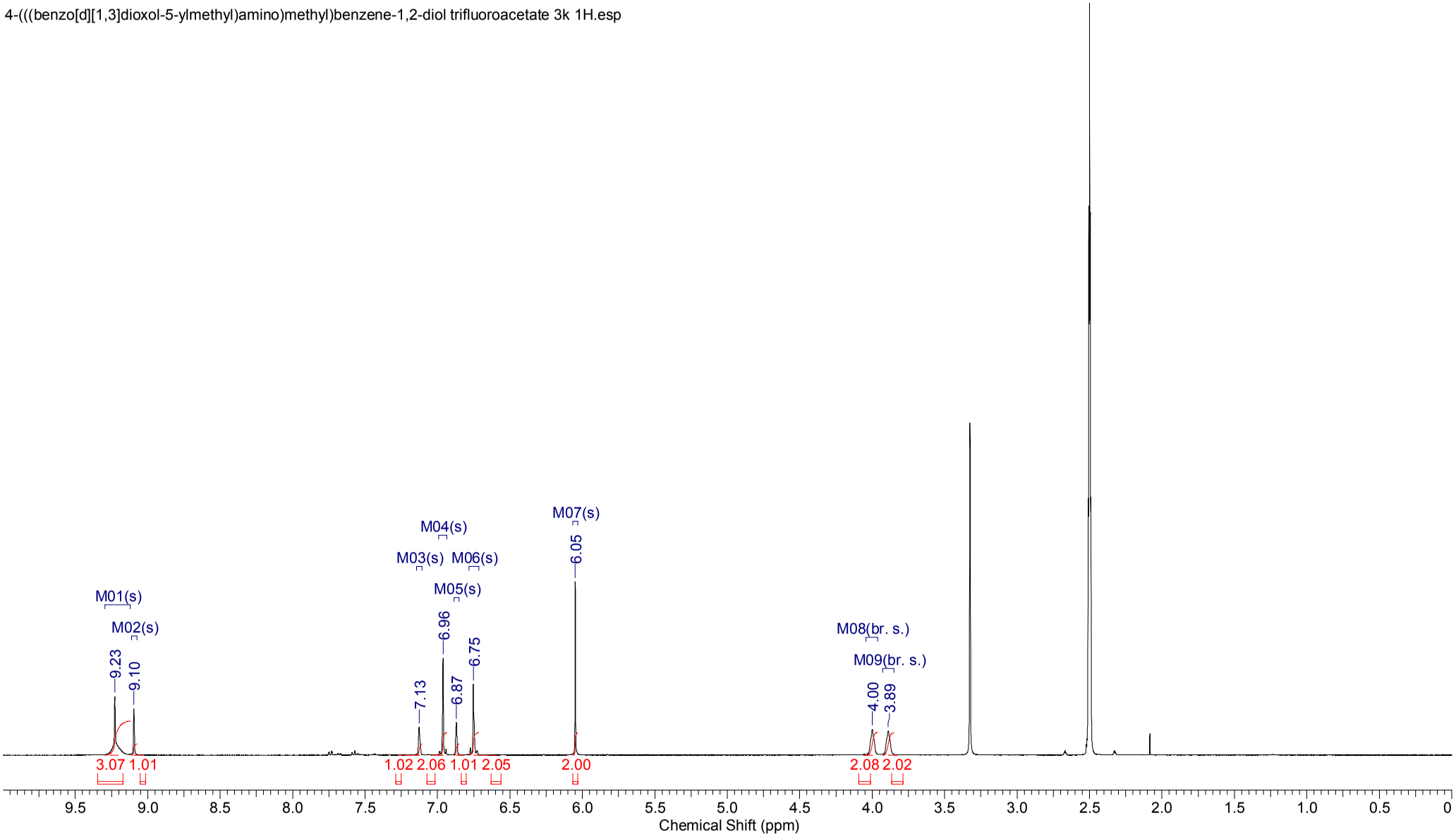
Acquisition Time (sec)	1.3631	***Date***	01 Jul 2019 20:20:48			***Date Stamp***	01 Jul 2019 20:20:48		
File Name	C:\USERS\JASON\DOWNLOADS\CD035F1\2\FID			***Frequency (MHz)***	100.61	***Nucleus***	13C	***Number of Transients***	1024
Origin	spect	***Original Points Count***	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10010.8682	***Spectrum Type***	APT
Sweep Width (Hz)	24037.73	***Temperature (degree C)***	25.444						

4-(((2,4-DICHLOROBENZYL)AMINO)METHYL)BENZENE-1,2-DIOL HYDROCHLORIDE 3J 13C.ESP



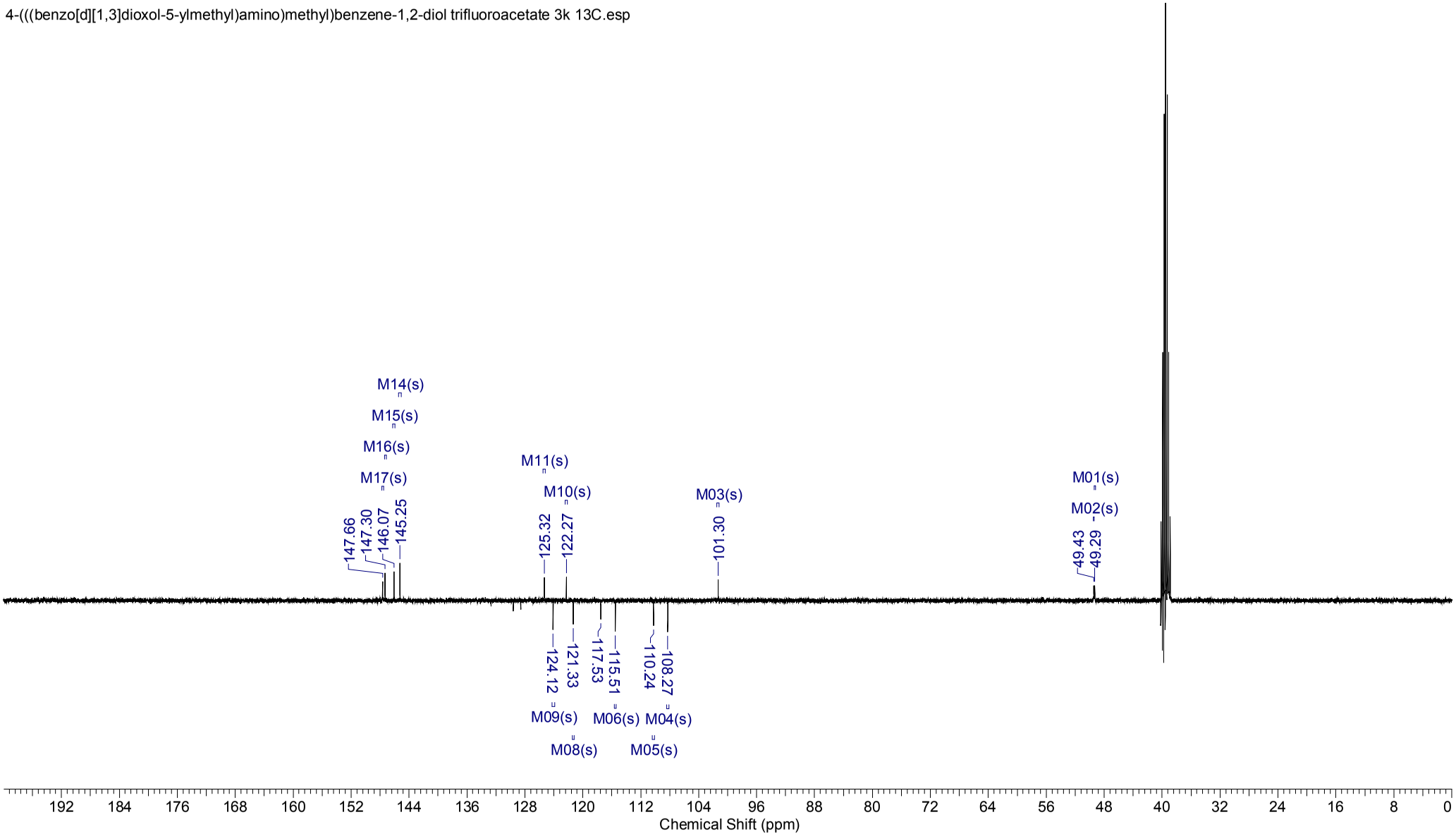
Acquisition Time (sec)	4.0894	***Date***	30 Sep 2018 05:05:36			***Date Stamp***	30 Sep 2018 05:05:36
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM205F2_1\JM205F2\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	112.05	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.148		

4-(((benzo[d][1,3]dioxol-5-ylmethyl)amino)methyl)benzene-1,2-diol trifluoroacetate 3k 1H.esp



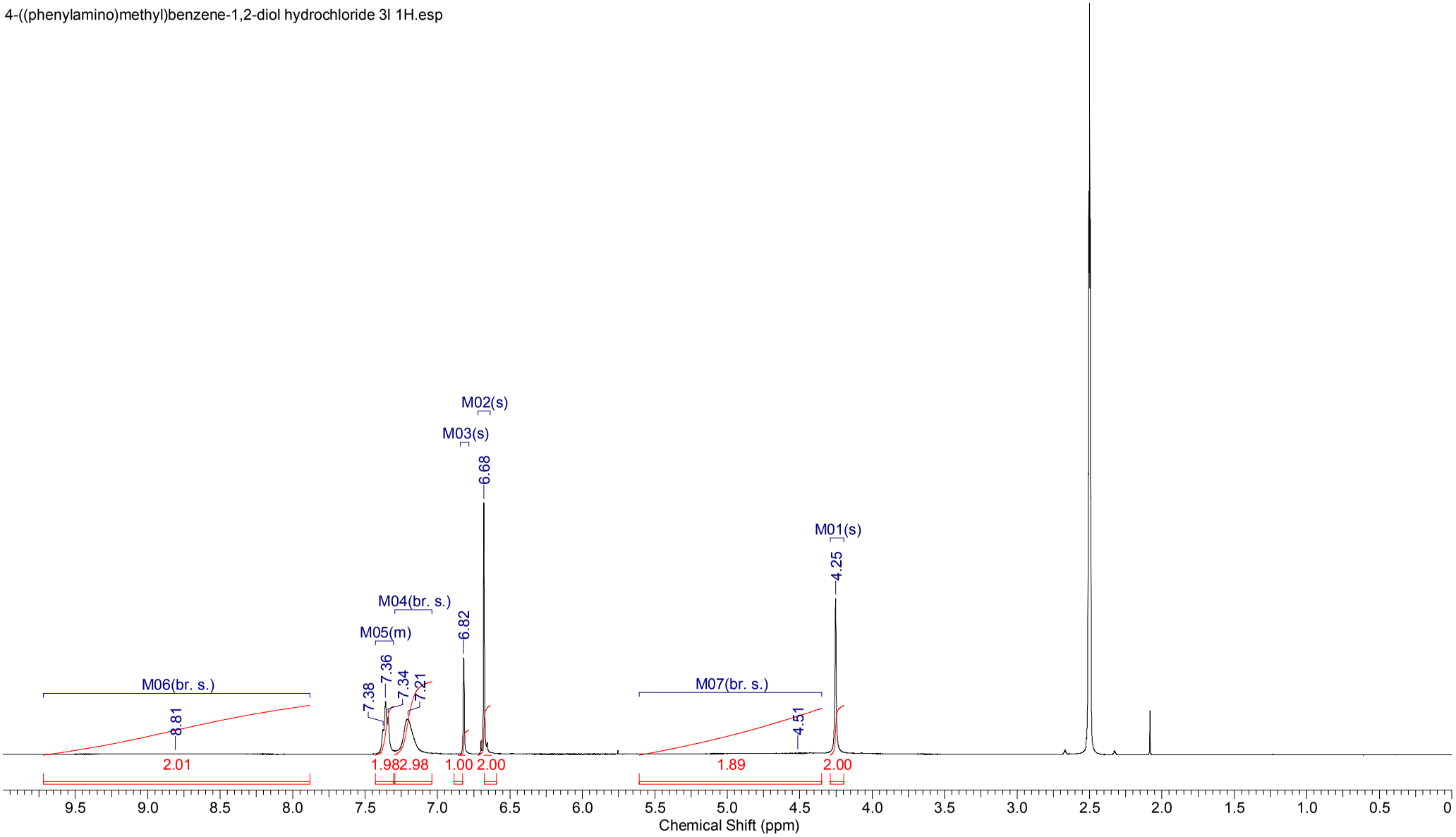
Acquisition Time (sec)	1.3631	***Date***	30 Sep 2018 08:13:20			***Date Stamp***	30 Sep 2018 08:13:20
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM205F2_2\JM205F2\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10011.6016
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.149		

4-(((benzo[d][1,3]dioxol-5-ylmethyl)amino)methyl)benzene-1,2-diol trifluoroacetate 3k 13C.esp



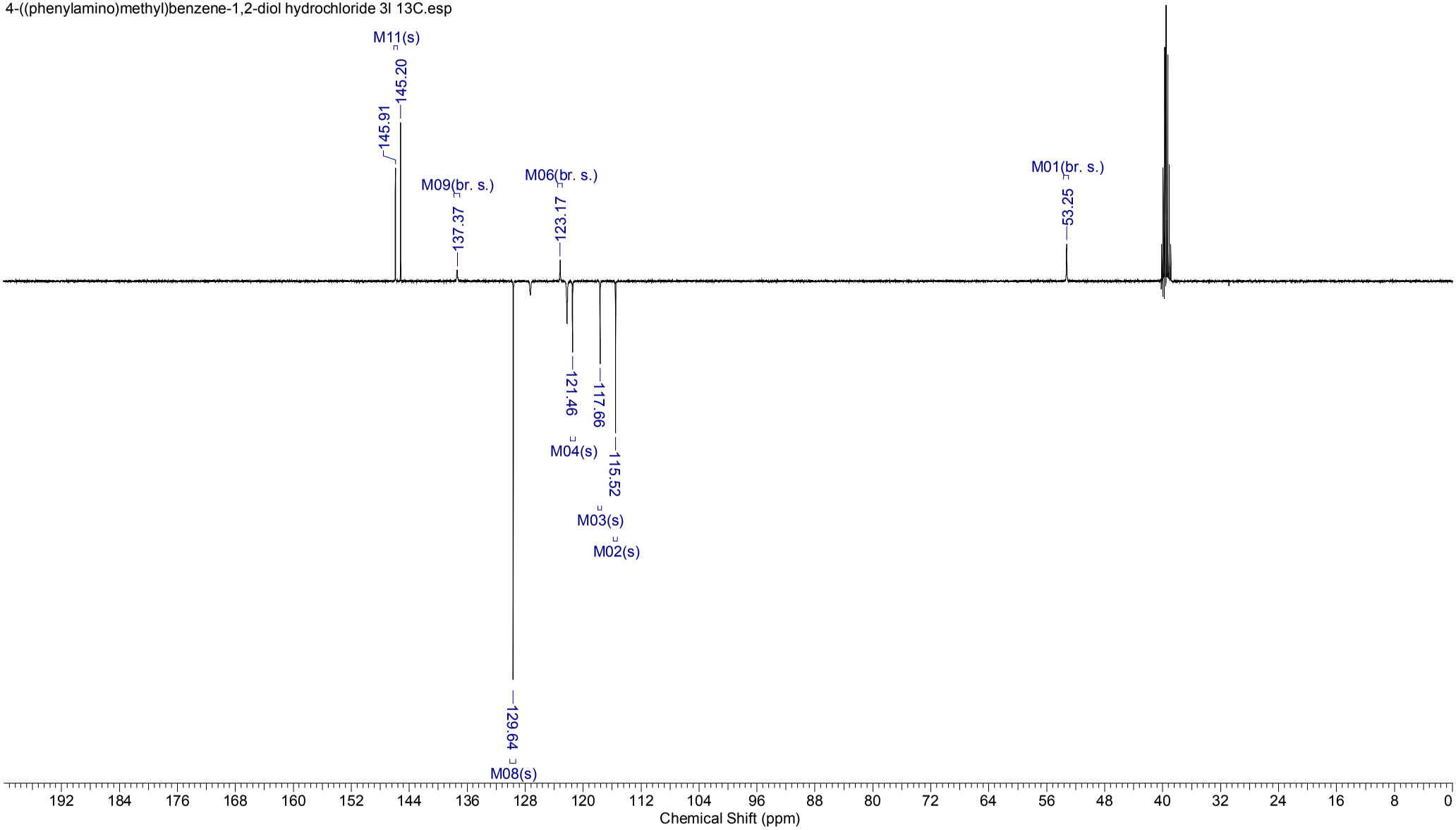
Acquisition Time (sec)	4.0894	***Date***	10 Dec 2018 17:29:52			***Date Stamp***	10 Dec 2018 17:29:52
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM268F1_1\JM268F1\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	98.20	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.151		

4-((phenylamino)methyl)benzene-1,2-diol hydrochloride 3l 1H.esp



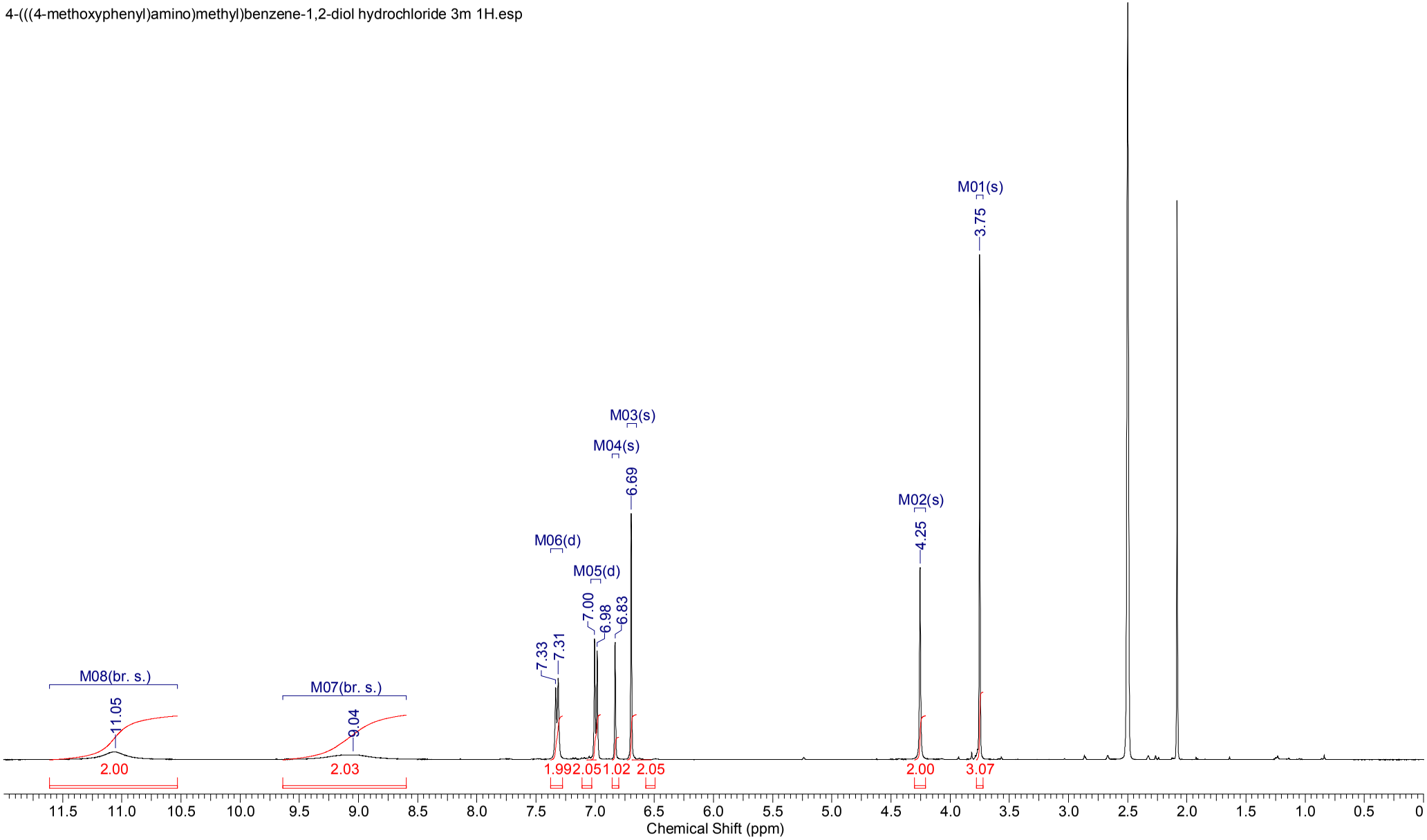
Acquisition Time (sec)	1.3631	***Date***	22 Jun 2019 09:10:56			***Date Stamp***	22 Jun 2019 09:10:56
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM268F1_2\JM268F1\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10027.0078
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.147		

4-((phenylamino)methyl)benzene-1,2-diol hydrochloride 3l 13C.esp



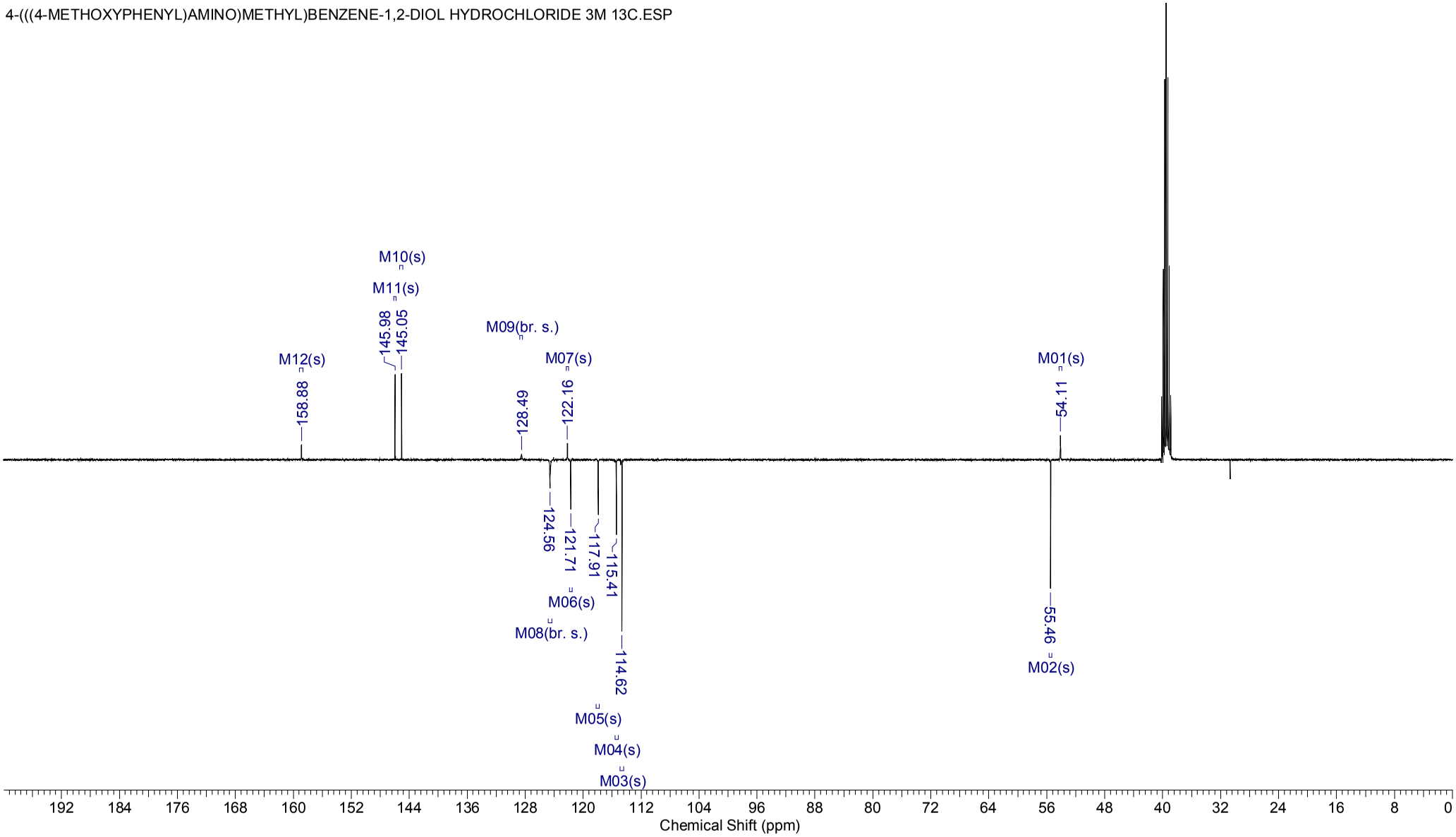
Acquisition Time (sec)	4.0894	***Date***	19 Feb 2019 16:10:56			***Date Stamp***	19 Feb 2019 16:10:56		
File Name	D:\JM310F1	1\JM310F1\1\FID		***Frequency (MHz)***	400.13	***Nucleus***	1H	***Number of Transients***	32
Origin	spect	***Original Points Count***	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	87.87	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.1494	***Spectrum Type***	STANDARD
Sweep Width (Hz)	8012.58	***Temperature (degree C)***	25.150						

4-(((4-methoxyphenyl)amino)methyl)benzene-1,2-diol hydrochloride 3m 1H.esp



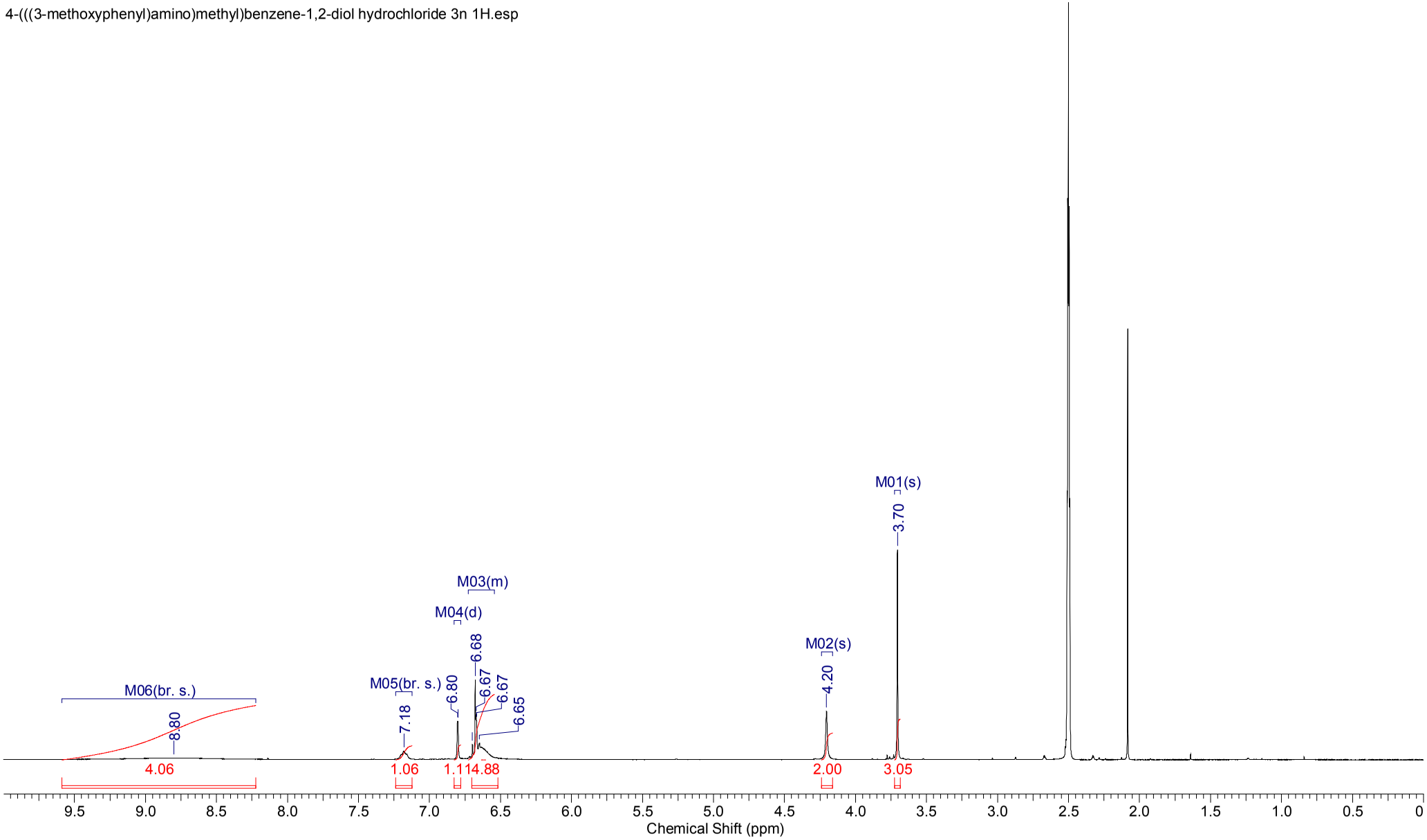
Acquisition Time (sec)	1.3631	***Date***	13 Nov 2019 05:41:36			***Date Stamp***	13 Nov 2019 05:41:36
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM310_2\JM310\2\FID					***Frequency (MHz)***	100.61
Nucleus	13C	***Number of Transients***	2048	***Origin***	spect	***Original Points Count***	32768
Owner	nmr	***Points Count***	32768	***Pulse Sequence***	jmod	***Receiver Gain***	198.06
SW(cyclical) (Hz)	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10013.0684	***Spectrum Type***	APT
Sweep Width (Hz)	24037.73	***Temperature (degree C)***	25.157				

4-(((4-METHOXYPHENYL)AMINO)METHYL)BENZENE-1,2-DIOL HYDROCHLORIDE 3M 13C.ESP



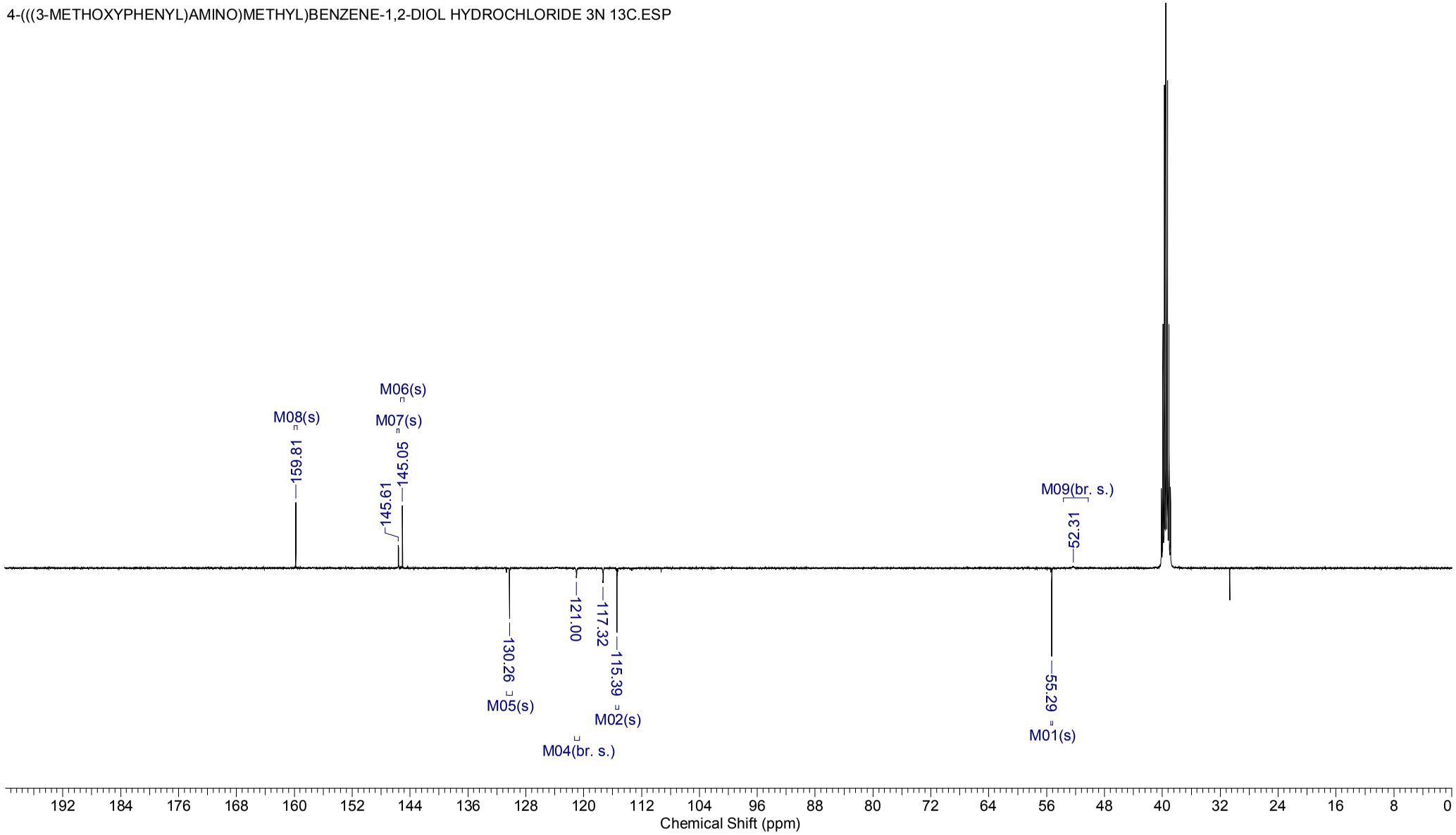
Acquisition Time (sec)	4.0894	***Date***	19 Feb 2019 16:00:16			***Date Stamp***	19 Feb 2019 16:00:16		
File Name	D:\JM309F1	1\JM309F1\1\FID		***Frequency (MHz)***	400.13	***Nucleus***	1H	***Number of Transients***	32
Origin	spect	***Original Points Count***	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	112.05	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.6384	***Spectrum Type***	STANDARD
Sweep Width (Hz)	8012.58	***Temperature (degree C)***	25.147						

4-(((3-methoxyphenyl)amino)methyl)benzene-1,2-diol hydrochloride 3n 1H.esp



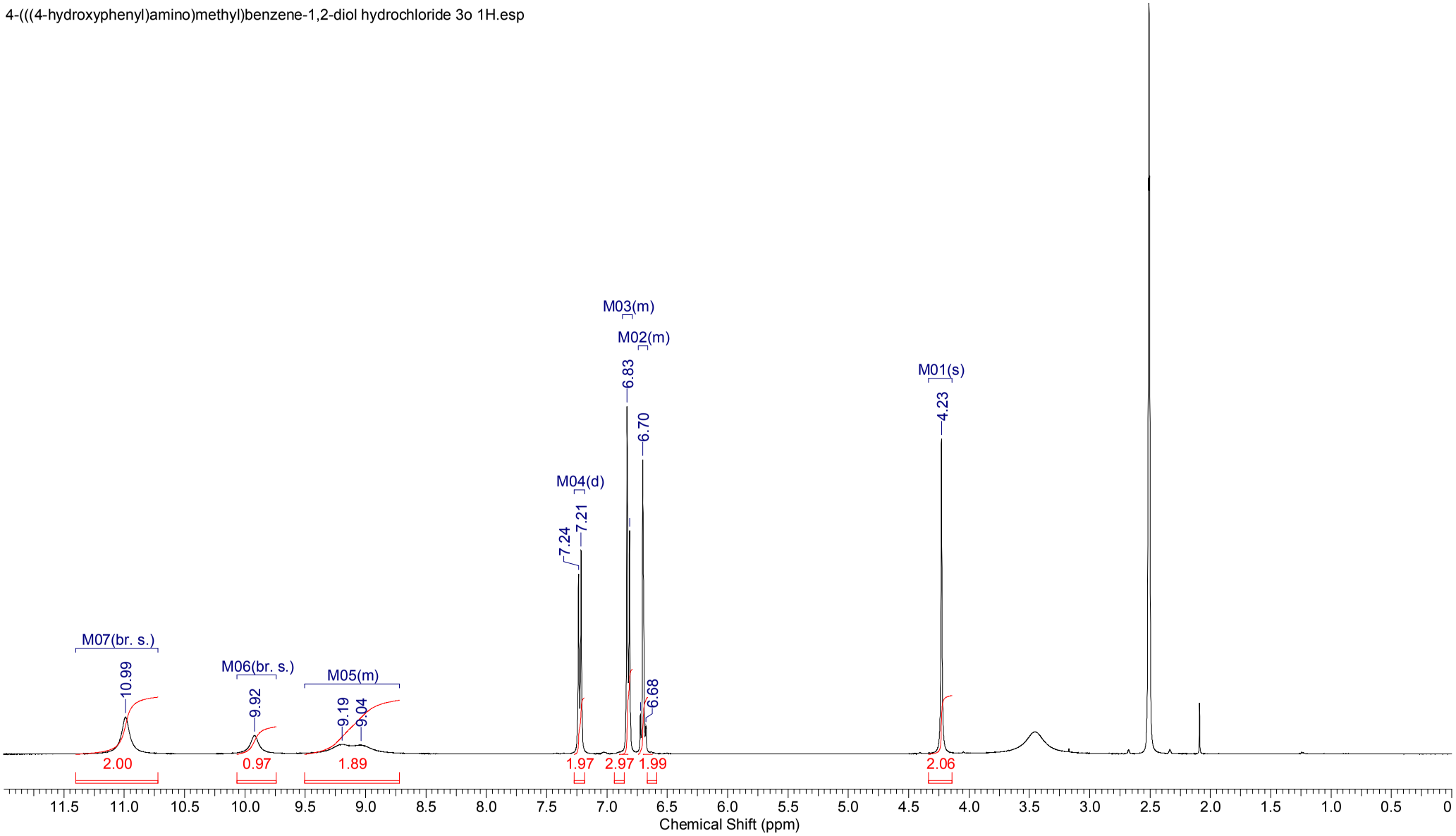
Acquisition Time (sec)	1.3631	***Date***	12 Nov 2019 20:09:52			***Date Stamp***	12 Nov 2019 20:09:52
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM309_11\JM309\11\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10012.3350
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150		

4-(((3-METHOXYPHENYL)AMINO)METHYL)BENZENE-1,2-DIOL HYDROCHLORIDE 3N 13C.ESP



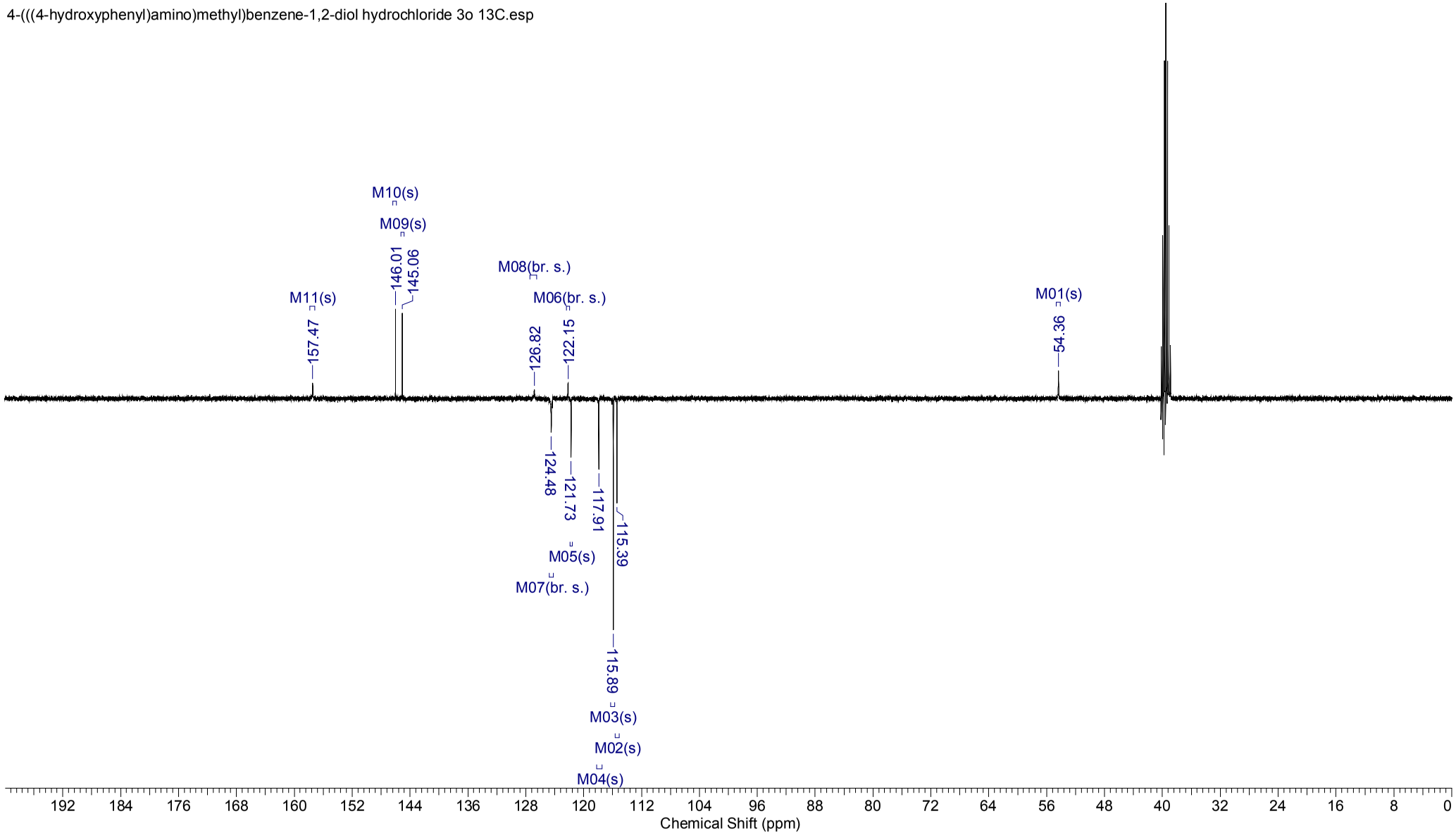
Acquisition Time (sec)	4.0894	***Date***	05 Jun 2019 16:26:08			***Date Stamp***	05 Jun 2019 16:26:08
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM340F1_1\JM340F1\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	87.87	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2470.8027
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.150		

4-(((4-hydroxyphenyl)amino)methyl)benzene-1,2-diol hydrochloride 3o 1H.esp



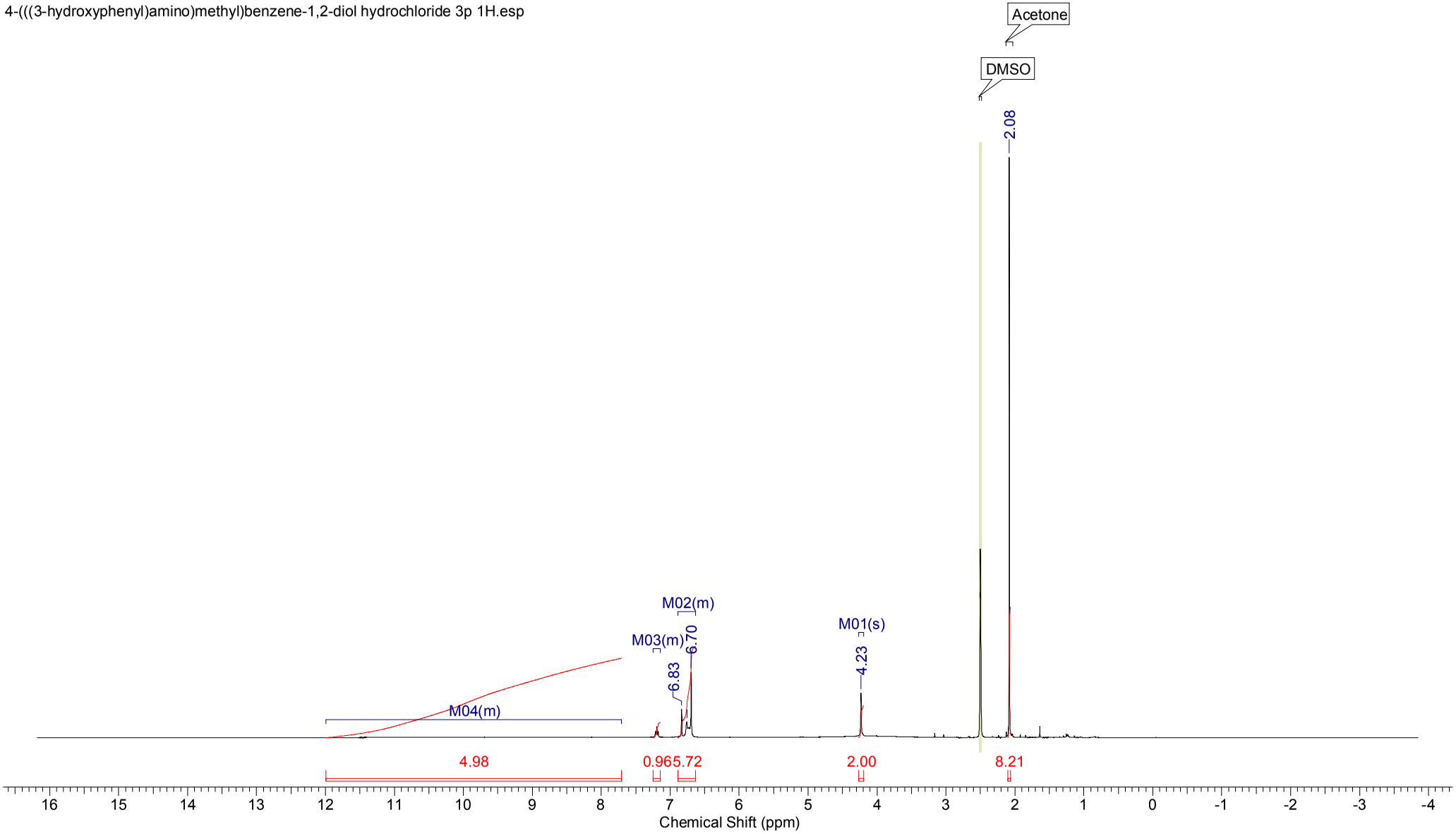
Acquisition Time (sec)	1.3631	***Date***	06 Jun 2019 23:37:04			***Date Stamp***	06 Jun 2019 23:37:04
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM340F1_2\JM340F1\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	1024	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10013.8027
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150		

4-(((4-hydroxyphenyl)amino)methyl)benzene-1,2-diol hydrochloride 3o 13C.esp



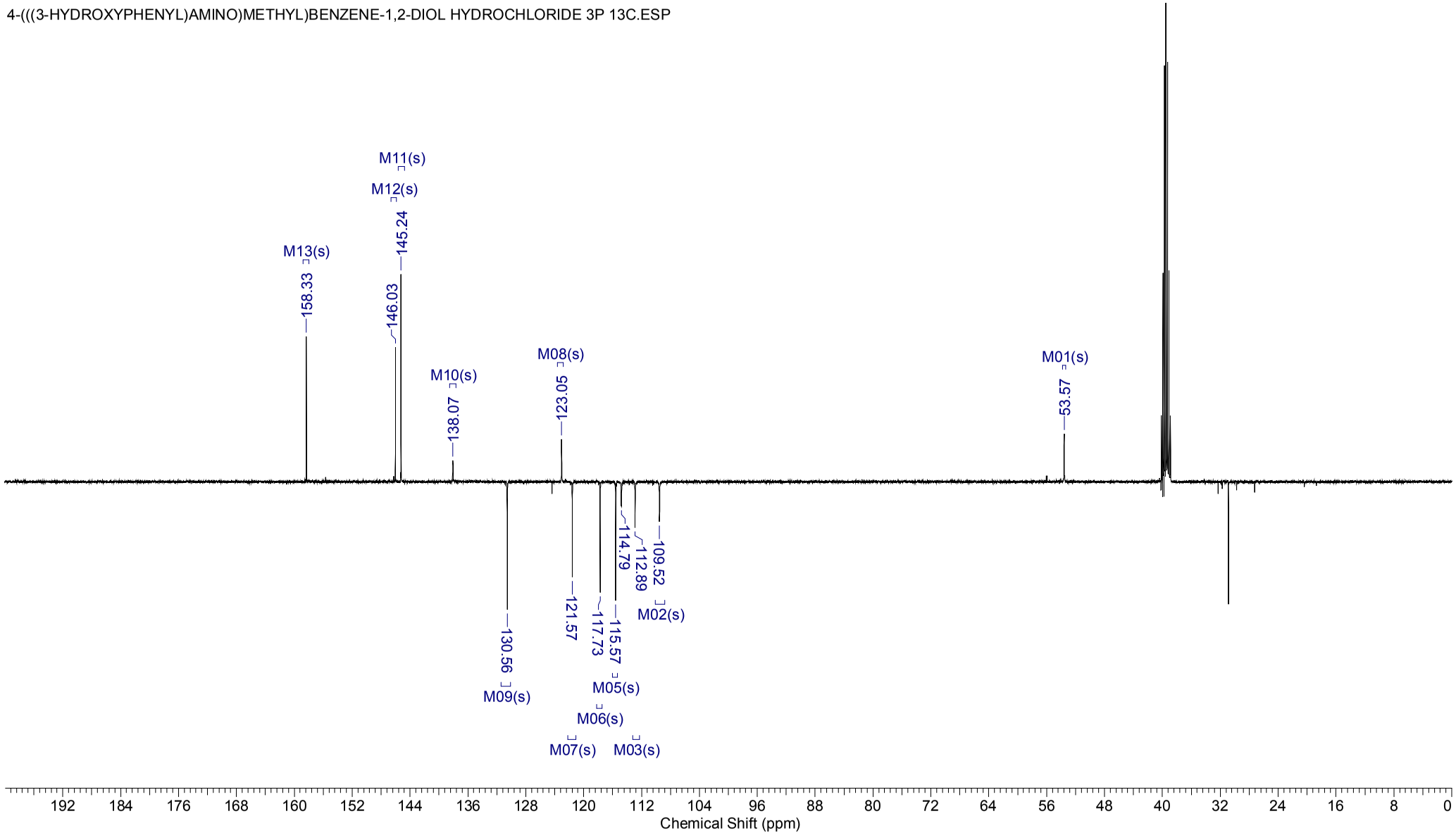
Acquisition Time (sec)	4.0894	***Date***	05 Jun 2019 16:17:36			***Date Stamp***	05 Jun 2019 16:17:36
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM339F1_1\JM339F1\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	78.49	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3938
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.151		

4-(((3-hydroxyphenyl)amino)methyl)benzene-1,2-diol hydrochloride 3p 1H.esp



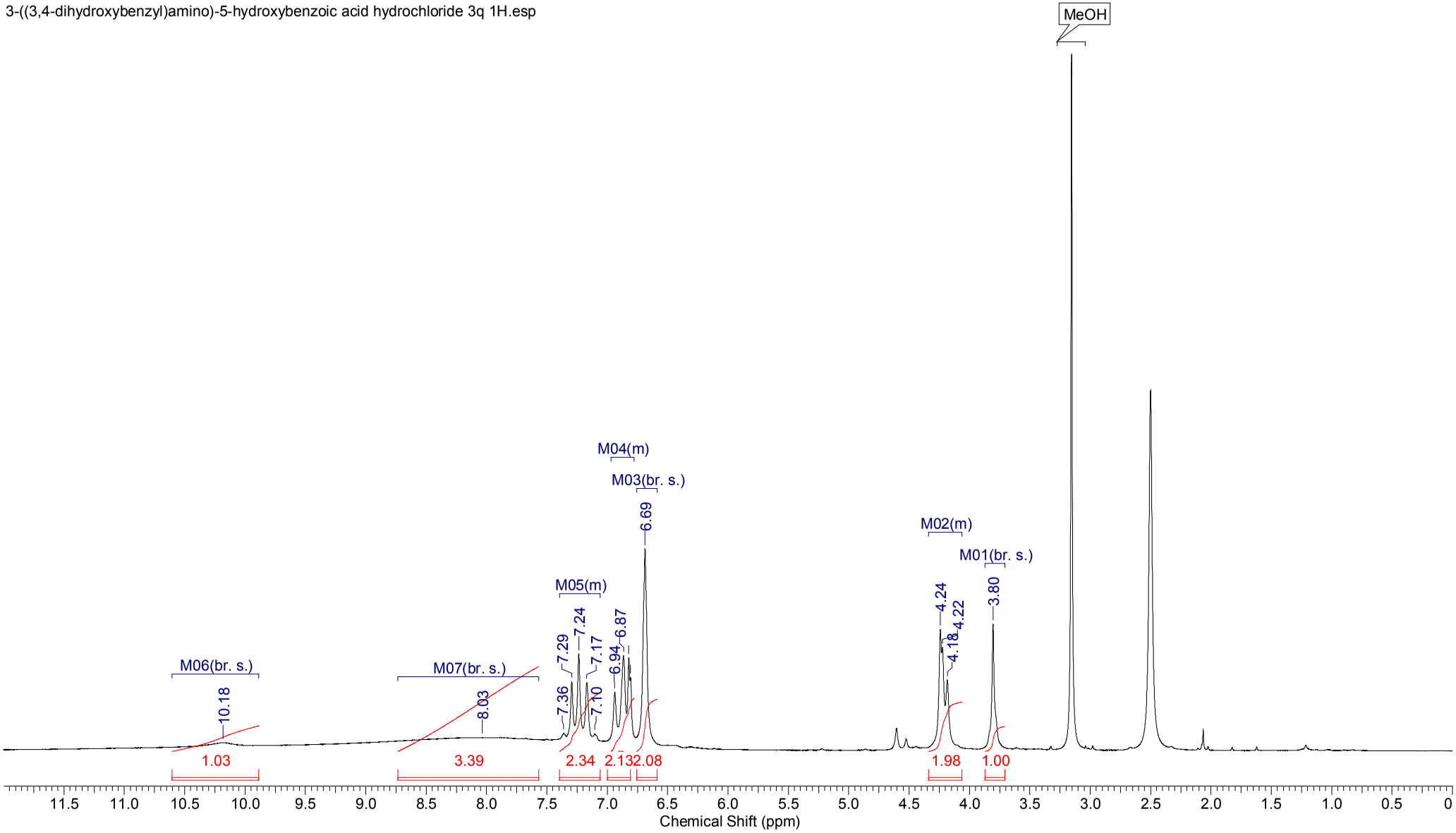
Acquisition Time (sec)	1.3631	***Date***	12 Nov 2019 23:19:44			***Date Stamp***	12 Nov 2019 23:19:44
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM339_1\JM339\1\FID					***Frequency (MHz)***	100.61
Nucleus	13C	***Number of Transients***	2048	***Origin***	spect	***Original Points Count***	32768
Owner	nmr	***Points Count***	32768	***Pulse Sequence***	jmod	***Receiver Gain***	198.06
SW(cyclical) (Hz)	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10034.3428	***Spectrum Type***	APT
Sweep Width (Hz)	24037.73	***Temperature (degree C)***	25.149				

4-(((3-HYDROXYPHENYL)AMINO)METHYL)BENZENE-1,2-DIOL HYDROCHLORIDE 3P 13C.ESP



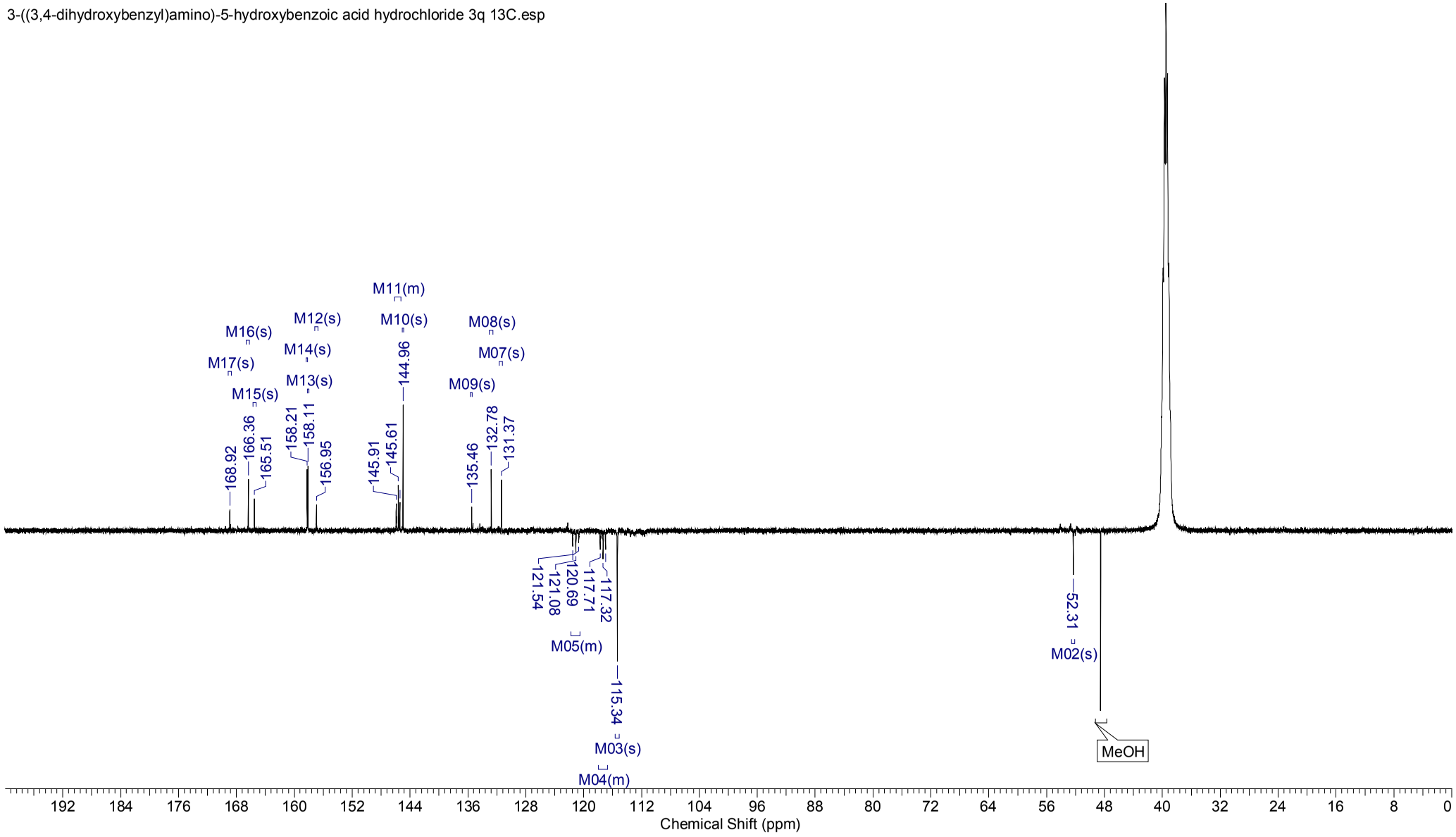
Acquisition Time (sec)	4.0894	***Date***	06 Sep 2019 08:32:32			***Date Stamp***	06 Sep 2019 08:32:32
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM364F1_1\JM364F1\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	56.28	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2471.0620
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.149		

3-((3,4-dihydroxybenzyl)amino)-5-hydroxybenzoic acid hydrochloride 3q 1H.esp



Acquisition Time (sec)	1.3631	***Date***	06 Sep 2019 23:22:08			***Date Stamp***	06 Sep 2019 23:22:08
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM364F1_2\JM364F1\2\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10004.9990
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150		

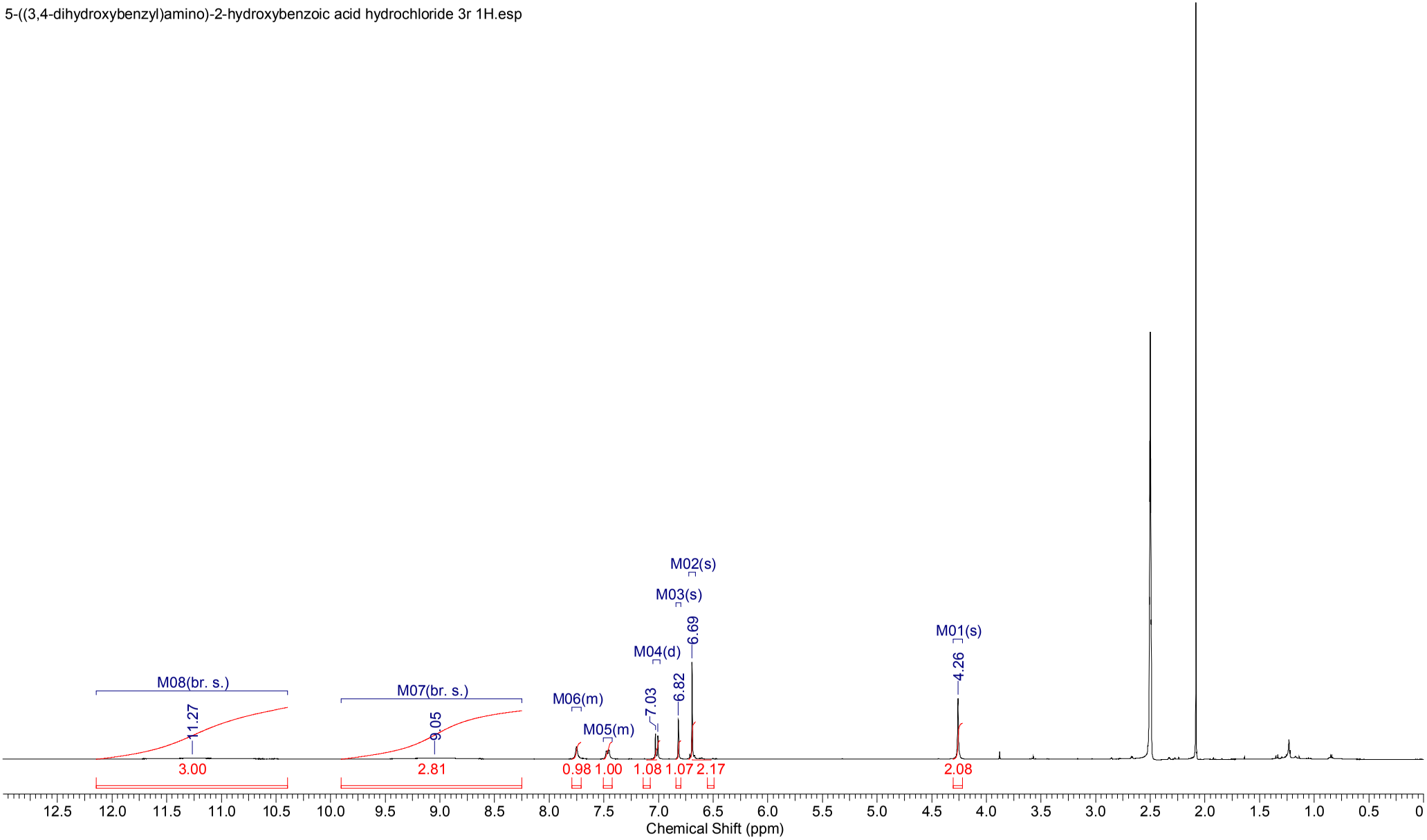
3-((3,4-dihydroxybenzyl)amino)-5-hydroxybenzoic acid hydrochloride 3q 13C.esp



Acquisition Time (sec)	4.0894	***Date***	01 Feb 2019 19:14:24			***Date Stamp***	01 Feb 2019 19:14:24
File Name	C:\USERS\JASON\DOWNLOADS\NOUVEAU DOSSIER\JM294F1_1\JM294F1\1\FID					***Frequency (MHz)***	400.13
Number of Transients	32	***Origin***	spect	***Original Points Count***	32768	***Owner***	nmr
Pulse Sequence	zg30	***Receiver Gain***	98.20	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.146		

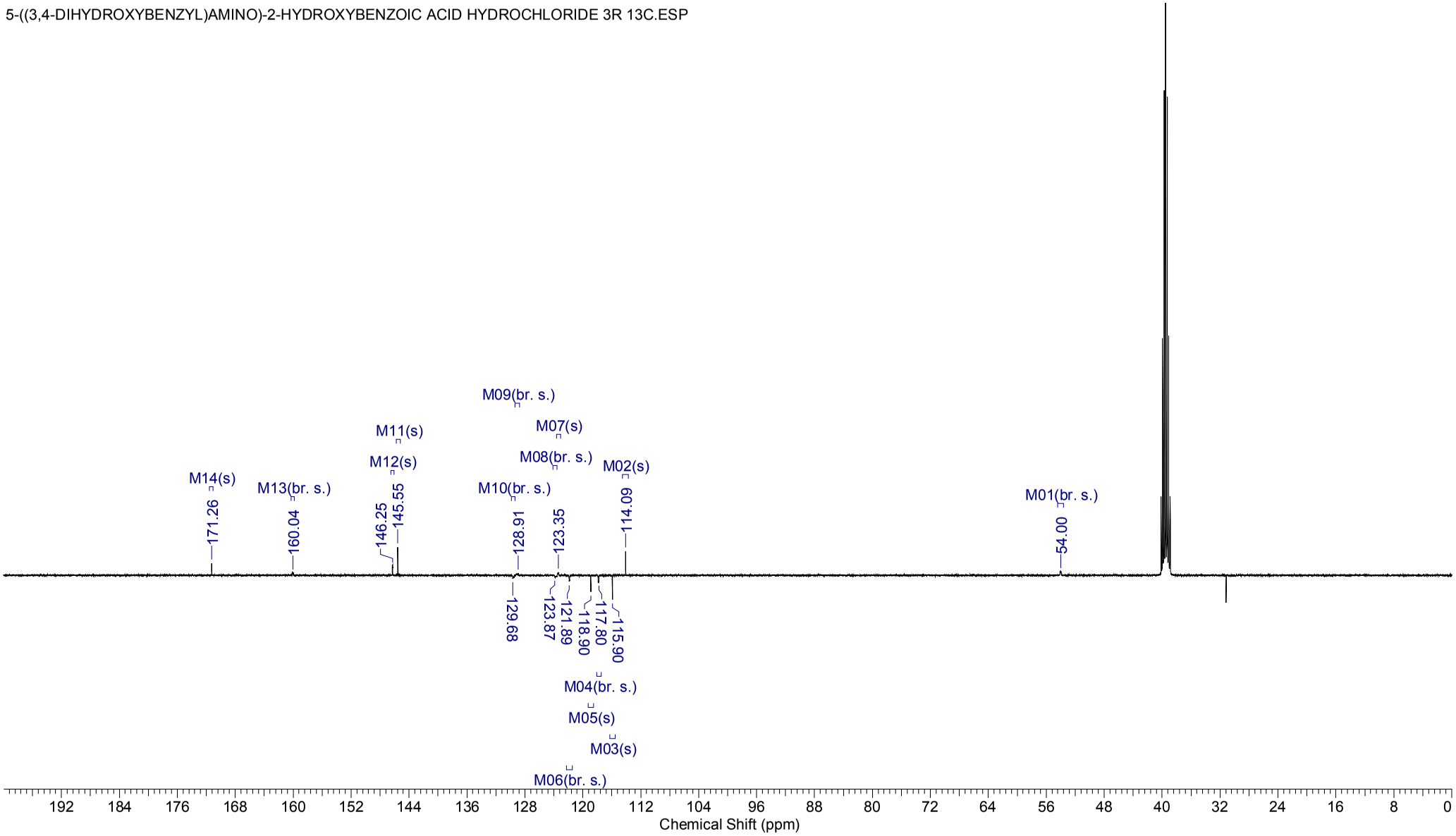
Nucleus	1H		
Points Count	32768		
Spectrum Offset (Hz)	2467.6384		

5-((3,4-dihydroxybenzyl)amino)-2-hydroxybenzoic acid hydrochloride 3r 1H.esp



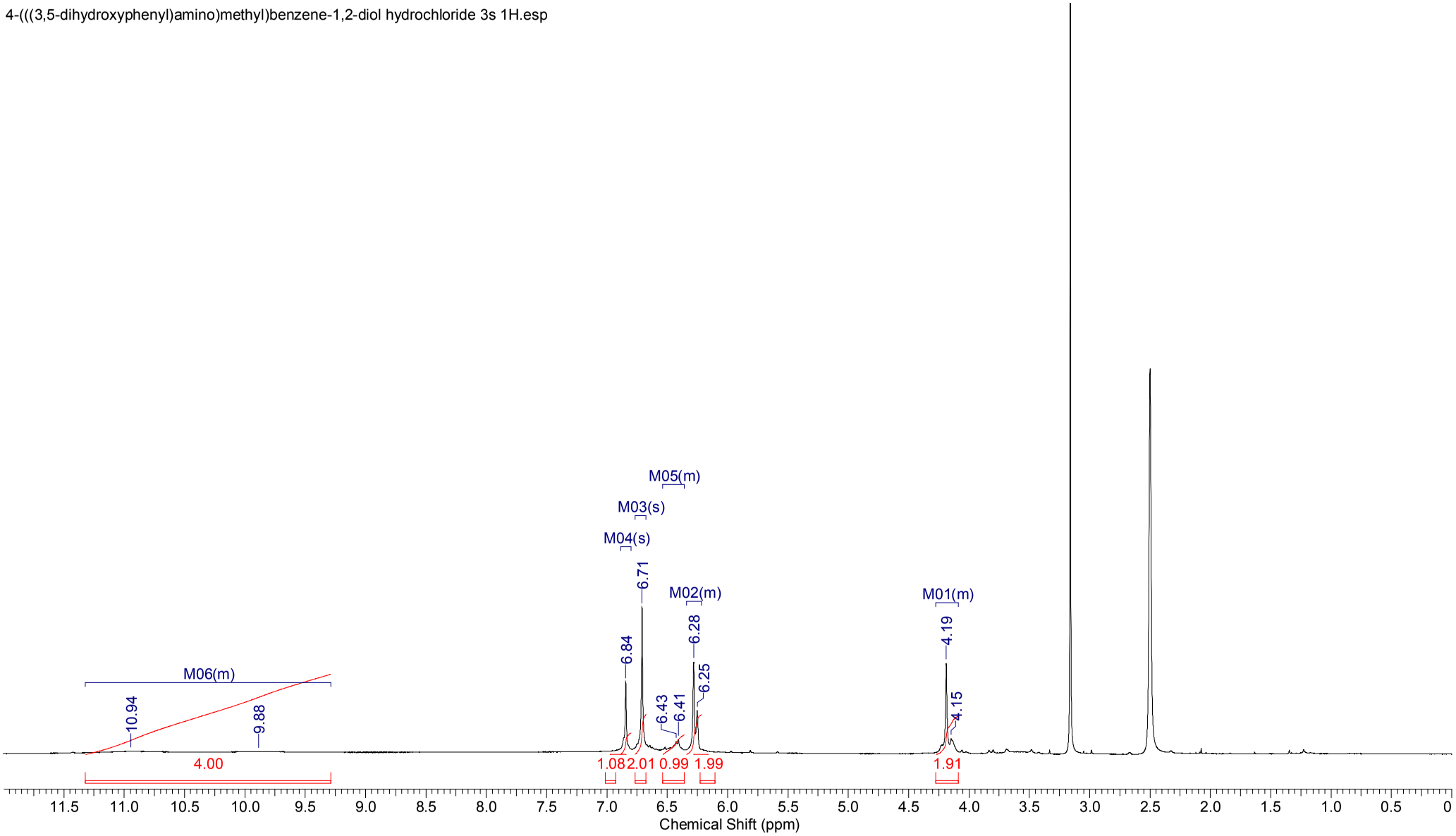
Acquisition Time (sec)	1.3631	***Date***	14 Jun 2019 05:35:28			***Date Stamp***	14 Jun 2019 05:35:28
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM294F1_21\JM294F1\21\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10065.1543
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.147		

5-((3,4-DIHYDROXYBENZYL)AMINO)-2-HYDROXYBENZOIC ACID HYDROCHLORIDE 3R 13C.ESP



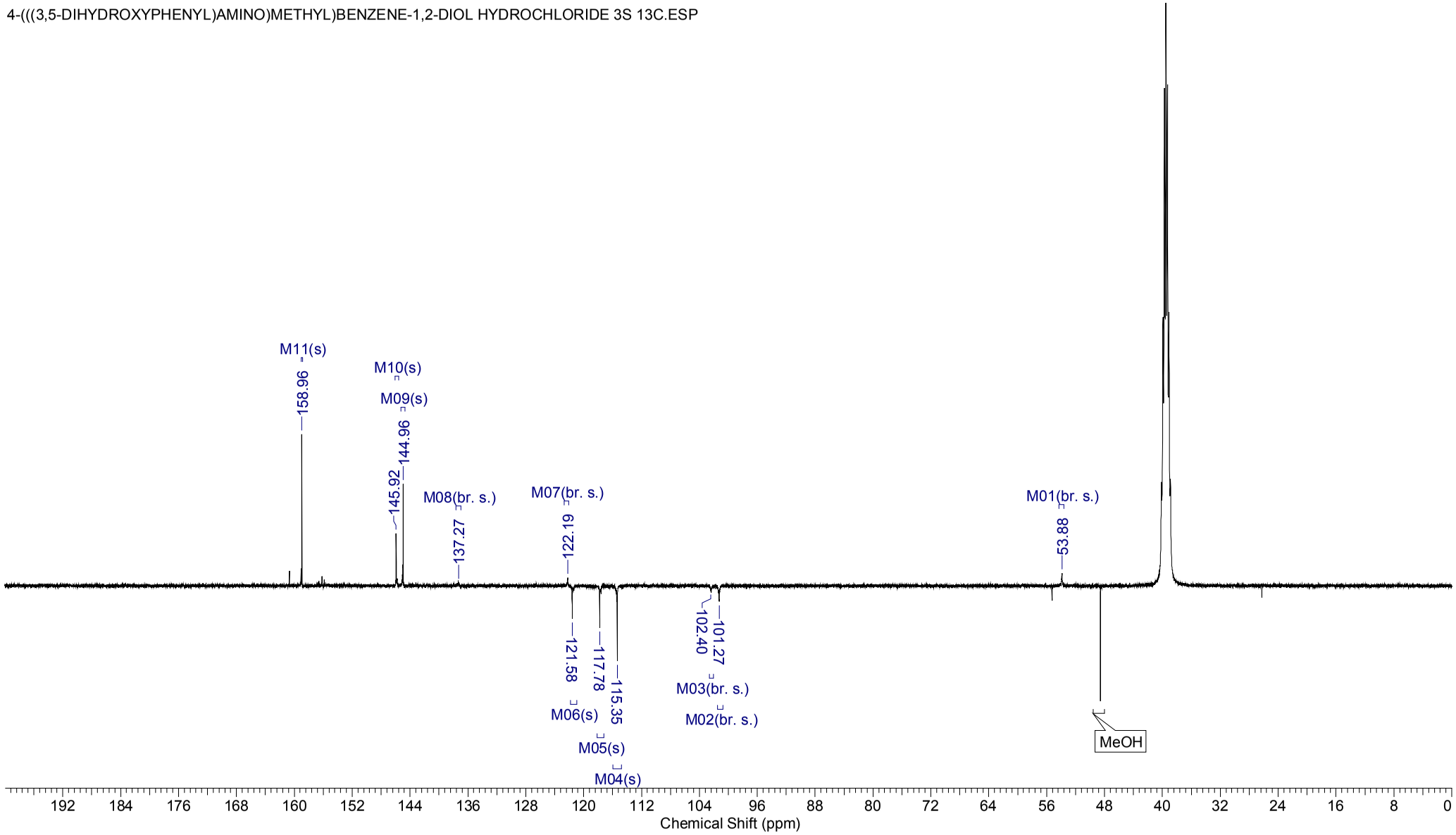
Acquisition Time (sec)	4.0894	***Date***	06 Sep 2019 08:26:08			***Date Stamp***	06 Sep 2019 08:26:08
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM362F1_1\JM362F1\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	71.53	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2468.6167
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.149		

4-(((3,5-dihydroxyphenyl)amino)methyl)benzene-1,2-diol hydrochloride 3s 1H.esp



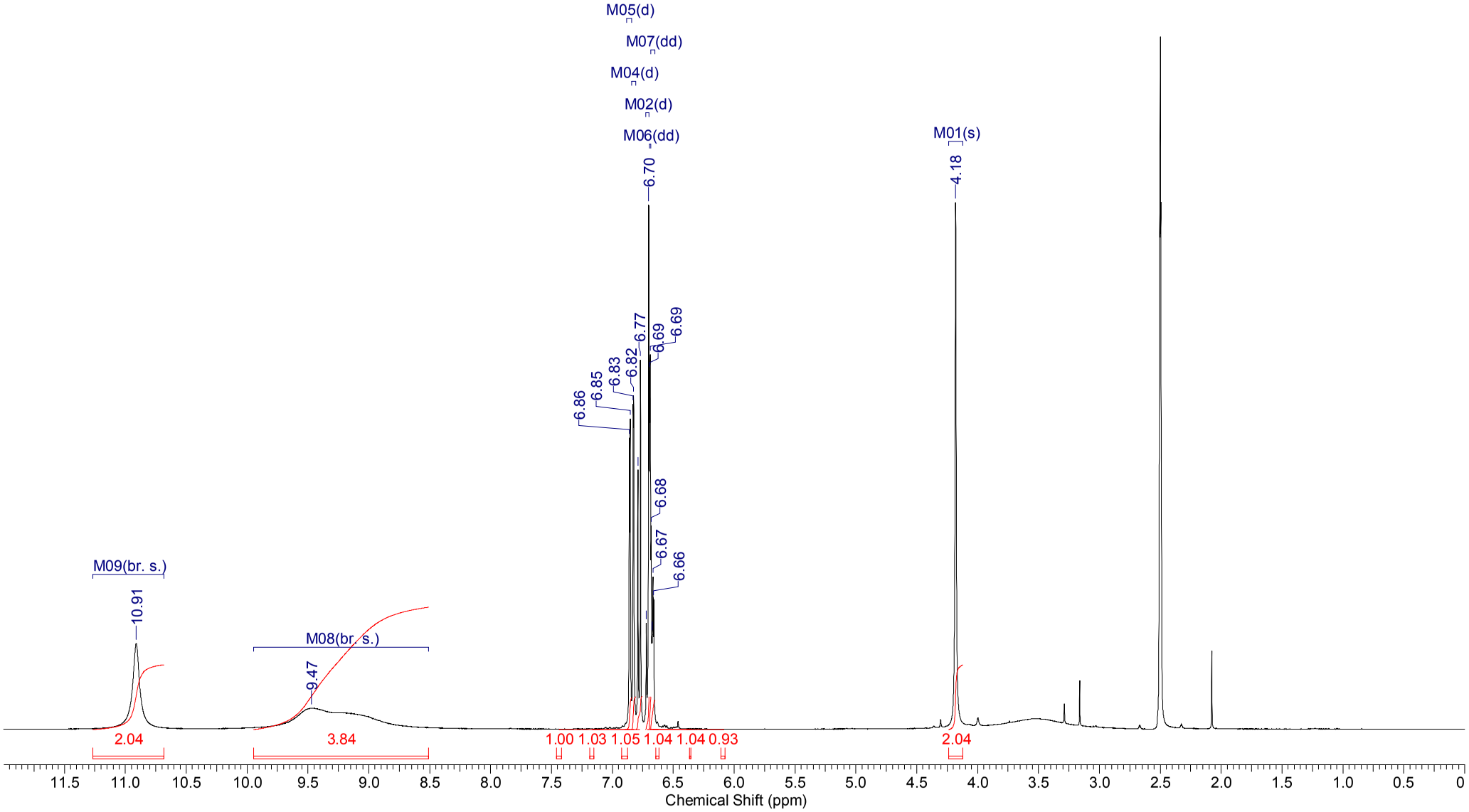
Acquisition Time (sec)	1.3631	***Date***	11 Sep 2019 21:05:36			***Date Stamp***	11 Sep 2019 21:05:36
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM362F1_4\JM362F1\4\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10007.9336
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.149		

4-(((3,5-DIHYDROXYPHENYL)AMINO)METHYL)BENZENE-1,2-DIOL HYDROCHLORIDE 3S 13C.ESP



Acquisition Time (sec)	4.0894	***Date***	15 Jul 2019 13:03:28			***Date Stamp***	15 Jul 2019 13:03:28
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM358F1_1\JM358F1\1\FID						
Frequency (MHz)	400.13	***Nucleus***	1H	***Number of Transients***	32	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	zg30
Receiver Gain	63.65	***SW(cyclical) (Hz)***	8012.82	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	2467.3940
Spectrum Type	STANDARD	***Sweep Width (Hz)***	8012.58	***Temperature (degree C)***	25.147		

4-((3,4-dihydroxybenzyl)amino)benzene-1,2-diol hydrochloride 3t 1H.esp



Acquisition Time (sec)	1.3631	***Date***	16 Jul 2019 20:10:08			***Date Stamp***	16 Jul 2019 20:10:08
File Name	C:\USERS\JMULLE14\DOCUMENTS\THèSE\SYNTHèSE ORGANIQUE\4-RMN\JM358F1_3\JM358F1\3\FID						
Frequency (MHz)	100.61	***Nucleus***	13C	***Number of Transients***	2048	***Origin***	spect
Original Points Count	32768	***Owner***	nmr	***Points Count***	32768	***Pulse Sequence***	jmod
Receiver Gain	198.06	***SW(cyclical) (Hz)***	24038.46	***Solvent***	DMSO-d6	***Spectrum Offset (Hz)***	10016.7363
Spectrum Type	APT	***Sweep Width (Hz)***	24037.73	***Temperature (degree C)***	25.150		

4-((3,4-dihydroxybenzyl)amino)benzene-1,2-diol hydrochloride 3t 13C.esp