Supplementary Information (SI) for RSC Advances.
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Organophotocatalytic Trifluoromethylation of 6-Azauracils

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1. General Information:

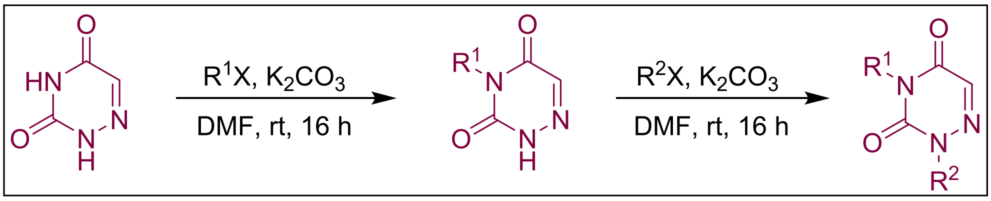
All reagents were purchased from commercial sources and used without further purification. 1H NMR spectra were determined on 400 MHz spectrometer as solutions in $CDCl_3$. Chemical shifts are expressed in parts per million (δ) and the signals were reported as s (singlet), d (doublet), t (triplet), m (multiplet) and coupling constants (J) were given in Hz. ^{13}C{1H} NMR spectra were recorded at 100 MHz in $CDCl_3$ solution. ^{19}F NMR spectra were recorded at 376 MHz in $CDCl_3$ solution. Chemical shifts as internal standard is referenced to $CDCl_3$ ($\delta = 7.26$ for ^1H and $\delta = 77.16$ for $^{13}C\{1H\}$ NMR) for as internal standard. Thin-layer chromatography (TLC) was performed on Merck pre-coated silica gel 60 F254 aluminum sheets with detection under UV light at 254 nm. Chromatographic separations were carried out on silica gel (60-120 mesh or 100−200 mesh). All 6-azouracils[1] were prepared by the reported methods. All solvents were dried and distilled before use. Commercially available solvents were freshly distilled before the reaction. All reactions involving moisture sensitive reactants were executed using oven dried glassware. Melting points (M.p.) were determined after recrystallization of solid compounds from a solution of dichloromethane/petroleum ether (1:3).

2. Light Information: Kessil 34 W blue LED (Model No. H150-BLUE) was used as a light source for light promoted reactions. Rating of LED: 24VDC 1.5A 34W. Model: H150-BLUE. Range of wavelength: 450-530 nm. Manufacturer: Kessil, 1689 Regatta blvd, Richmond, CA 94804 (www.kessil.com).

3. Reaction Setup: The Borosilicate glass tube was used to carry out light-promoted reaction. The reaction tube was kept 7 cm apart from the exposed of Kessil 34 W blue LED. Regular fan was used to keep up the temperature 28 to 30 °C during the reaction. We did not use any filter.

4. Starting Material Preparation:

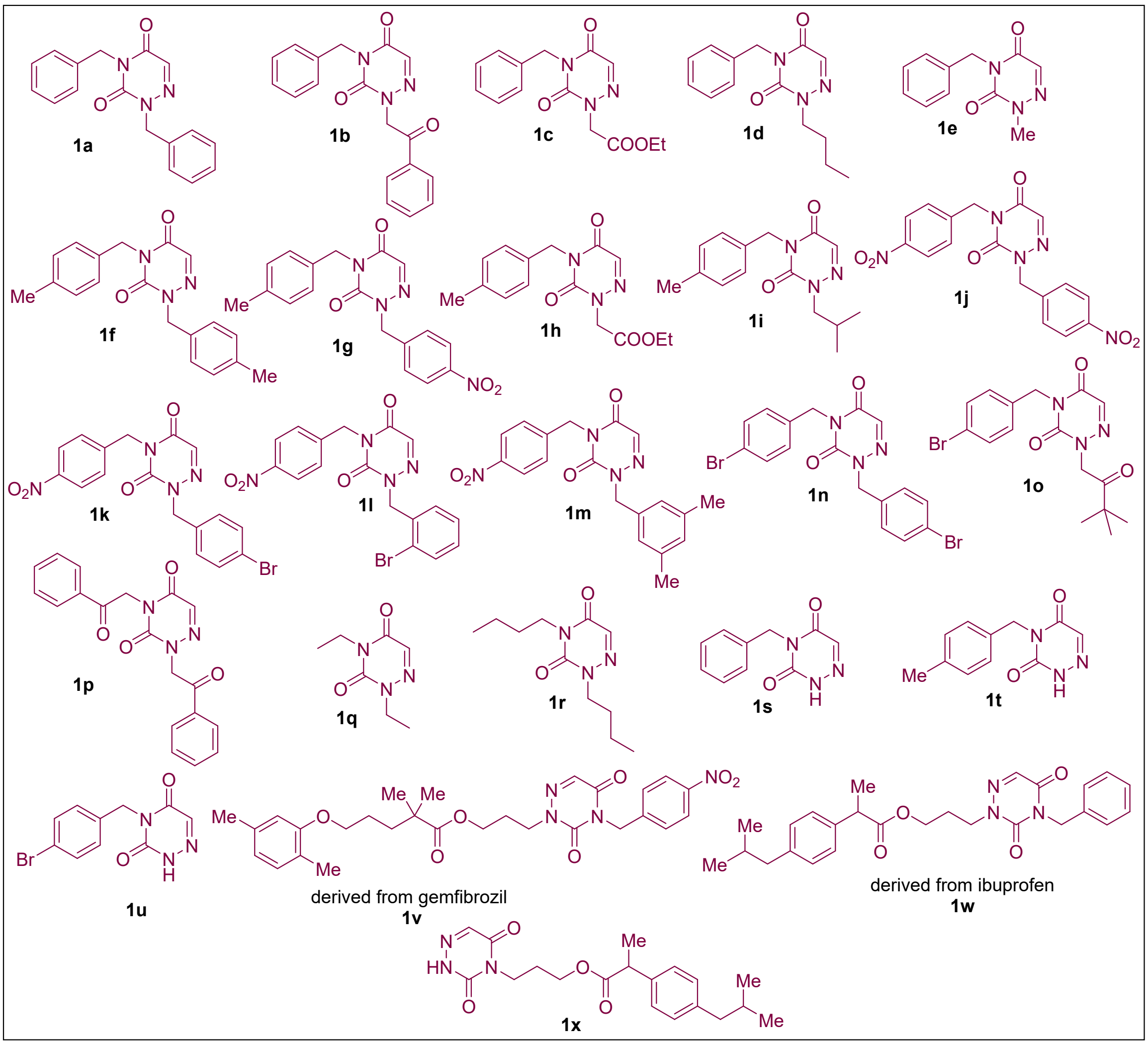
4.1. General Procedure for the Synthesis of Azauracils:[1]



Alkyl halides (3.6 mmol, 0.9 equiv) was added dropwise to a stirring solution of 6-azauracil (4.0 mmol, 1.0 equiv), K_2CO_3 (2.0 mmol, 0.5 equiv) in DMF (40 mL). The reaction mixture was allowed to stir at room temperature for 16 h. Then, the mixture was quenched with saturated Na_2CO_3 solution and extracted with DCM for three times. The organic layers were combined, dried over anhydrous Na_2SO_4 and concentrated under reduced pressure. The crude products were purified through silica gel column chromatography using petroleum ether/ethyl acetate as eluent to give to afford the corresponding *N*-4-alkyl-6-azauracils.

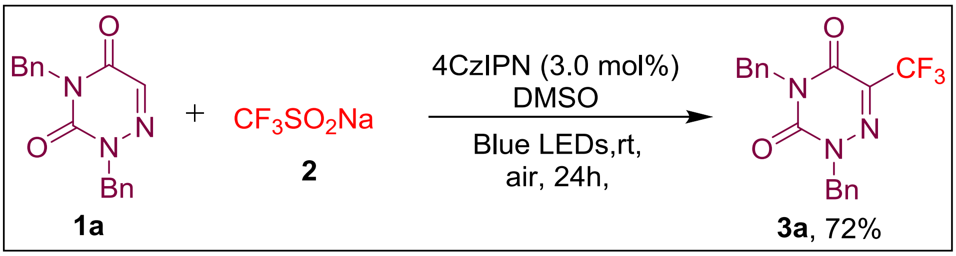
Alkyl halides (2.0 mmol, 1.0 equiv) was added dropwise to a stirring solution of *N-4*- alkyl-6-azauracils (2.0 mmol, 1.0 equiv), K_2CO_3 (1.0 mmol, 0.5 equiv) in DMF (20 mL). The reaction mixture was allowed to stir at room temperature for 16 h. Then, the mixture was quenched with saturated Na_2CO_3 solution and extracted with DCM for three times. The organic layers were combined, dried over anhydrous Na_2SO_4 and concentrated under reduced pressure. The crude products were purified through silica gel column chromatography using petroleum ether/ethyl acetate as eluent to give to afford the corresponding *N*-2,*N*-4-dialkyl-6-azauracils.

The following Azauracils were prepared using the aforesaid literature procedure:



5. Gram-Scale Preparations:

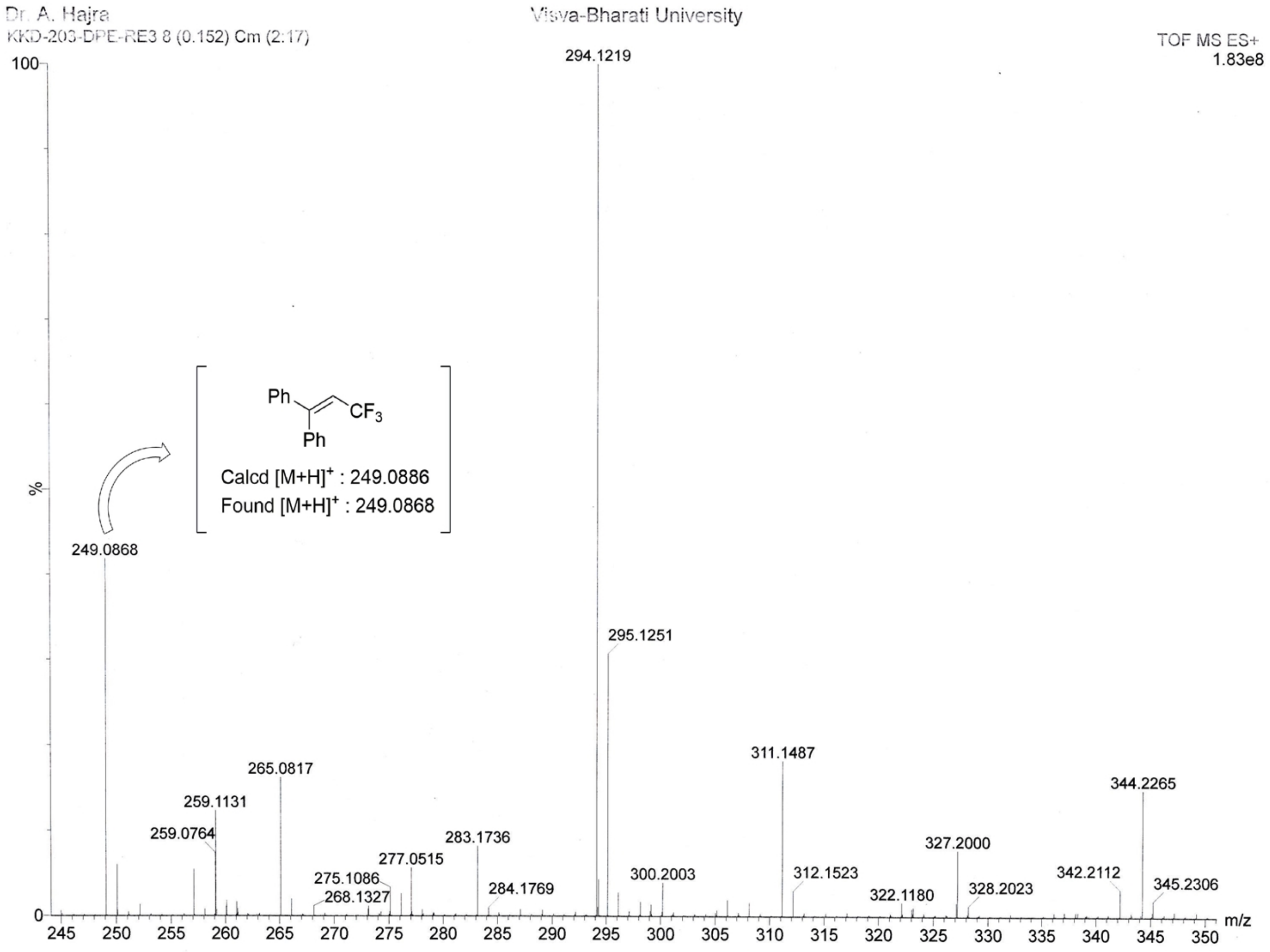
5.1. Synthesis of 3a on 5.0 mmol Scale:



A mixture of 2,4-dibenzyl-1,2,4-triazine-3,5(2H,4H)-dione (**1a**) (4 mmol, 1.1 g), Langlois' reagent (CF_3SO_2Na) (**2**) (2.0 equiv., 1.2 g) and 4CzIPN (3 mol%, 94.6 mg) was taken in an oven dried reaction tube. Then DMSO (18 mL) were added to an oven-dried reaction vessel (tube) equipped with a magnetic stirrer, and the reaction vessel was irradiated with Kessil 34 W blue LED at room temperature under open air atmosphere for 24 h. The progress of the reaction was monitored by TLC, and extracted with ethyl acetate. The organic phase was dried over anhydrous Na_2SO_4. The crude residue was obtained after evaporating the solvent in vacuum and was purified by column chromatography on silica gel using a mixture of petroleum ether and ethyl acetate as an eluting solvent to afford the pure product **3a** (844.7 mg, 72%) as a white solid.

6. Radical Trapping Experiment:

A mixture of 2,4-dibenzyl-1,2,4-triazine-3,5(2H,4H)-dione (**1a**) (0.3 mmol, 88.1 mg), Langlois' reagent (CF_3SO_2Na) (**2**) (2.0 equiv., 93.6 mg), 4CzIPN (3 mol%, 7.0 mg) and DPE (3.0 equiv., 135.1 mg) was taken in an oven dried reaction tube. Then DMSO (2 mL) were added to an oven-dried reaction vessel (tube) equipped with a magnetic stirrer, and the reaction vessel was irradiated with Kessil 34 W blue LED at room temperature under open air atmosphere for 24 h. After that, the reaction mixture was run for HRMS analysis showed that HRMS (ESI-TOF) *m/z*: $[M + H]^+$ Calcd for $[C_{15}H_{12}F_3]^+$: 249.0886; found: 249.0868, we confirmed that DPE trapped radical adduct was found.



HRMS spectra of DPE adduct

7. Fluorescence quenching studies:[2]

1.0 x 10^{-4} M 4CzIPN solution was prepared in DMSO for Photoluminescence studies where as other substrates like a) sodium trifluoromethanesulfinate (CF_3SO_2Na) (**2**), b) 2,4-dibenzyl-1,2,4-triazine-3,5(2*H*,4*H*)-dione (6-azouracil) (**1a**), in DMSO have been made maintaining 1.0 x 10^{-2} M concentration.

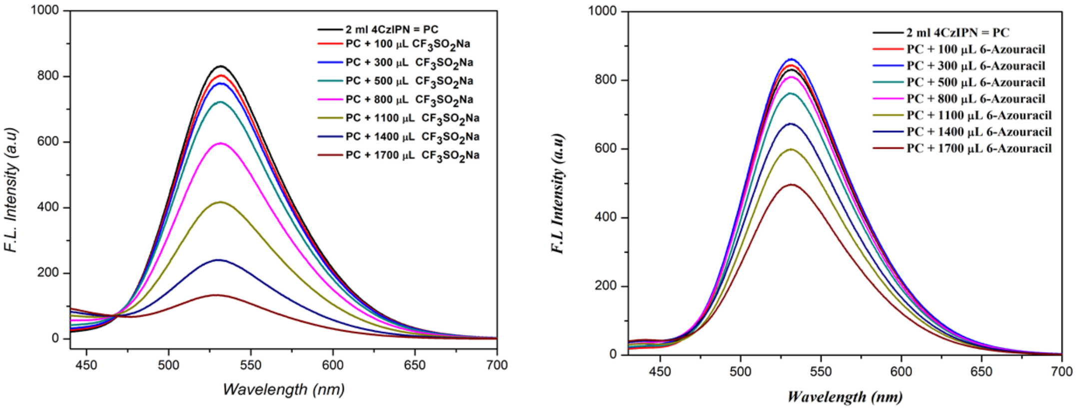


Fig (S1): Change in Fluorescence intensity of 4CzIPN (1.0 x 10^{-4} M in DMSO) upon incremental addition of a) sodium trifluoromethanesulfinate (CF_3SO_2Na) (**2**), b) 2,4-dibenzyl-1,2,4-triazine-3,5(2*H*,4*H*)-dione (6-azouracil) (**1a**). Excitation wavelength = 360 nm.

The quenching phenomena of the photocatalyst in presence of different substrates are explained by the Stern-Volmer plot with the help equation (i).

$$\mathbf{(I_0/I) = K_{SV}\ [Q] + 1} \qquad \text{---------------------(i)}$$

Here, I_0 and I represent the fluorescence intensity of 4CzIPN in absence and presence of the quencher respectively, K_{SV} is Stern-Volmer quenching constant and [Q] is the concentration of the quencher. If the I_0/I versus [Q] plot are linear, K_{SV} can be estimated accurately. In case of sodium trifluoromethanesulfinate K_{SV} value obtained from Stern volmer plot is 5.93 x 10^3 M^{-1}. It has been observed that the emission intensity of 4CzIPN, which is largely quenched by the gradual addition of sodium trifluoromethanesulfinate (CF_3SO_2Na) (**2**), is moderately affected by the **1a**.

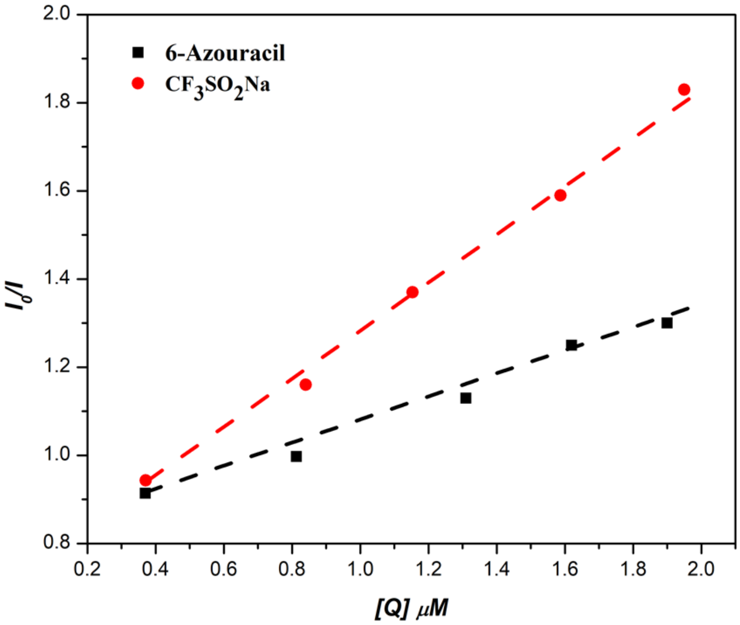
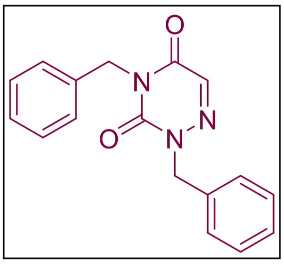
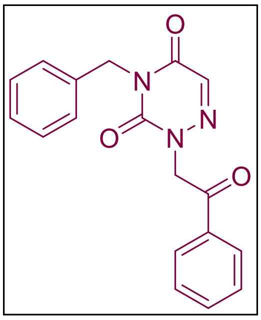


Fig (S2): Stern-Volmer plot from the steady state fluorescence emission of 4CzIPN in presence of quencher in DMSO at 300 K obtained from Fig. (S1).

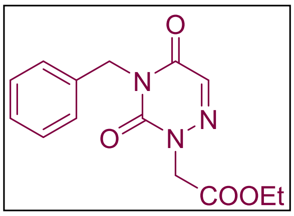
8. Characterization data of the synthesized compounds (1a–3x):



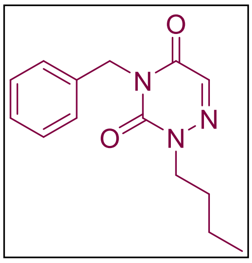
2,4-dibenzyl-1,2,4-triazine-3,5(2H,4H)-dione **(1a):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 7.49-7.46 (m, 2H), 7.41 (s, 1H), 7.38-7.36 (m, 2H), 7.35-7.27 (m, 3H), 5.10 (s, 2H), 5.07 (s, 2H). $^{13}C\{^1H\}$ NMR (100 MHz, $CDCl_3$): *δ* 156.0, 148.8, 135.52, 135.50, 134.6, 129.5, 128.9, 128.8, 128.7, 128.5, 128.2, 55.5, 44.1; HRMS (ESI-TOF) *m/z*: $[M + H]^+$ Calcd for $[C_{17}H_{16}N_3O_2]^+$: 294.1237; found: 294.1254.



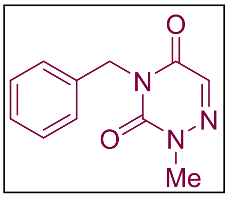
***4-benzyl-2-(2-oxo-2-phenylethyl)-1,2,4-triazine-3,5(2H,4H)-dione* (1b):** ^{1}H NMR (CDCl3, 400 MHz): δ 7.97- 7.95 (m, 2H), 7.64 (t, J = 7.6 Hz, 1H), 7.51 (t, J = 8.0 Hz, 2H), 7.46 (d, J = 6.8 Hz, 2H), 7.34-7.28 (m, 3H), 5.39 (s, 2H), 5.11 (s, 2H); ^{13}C{^{1}H} NMR (100 MHz, CDCl$_3$): δ 191.5, 156.0, 149.2, 135.3, 135.2, 135.1, 134.4, 129.3, 129.1, 128.7, 128.2, 128.1, 57.6, 44.1; HRMS (ESI-TOF) *m/z*: [M + H]$^+$ Calcd for [$C_{18}H_{16}N_3O_3$]$^+$: 322.1186; found: 322.1208.



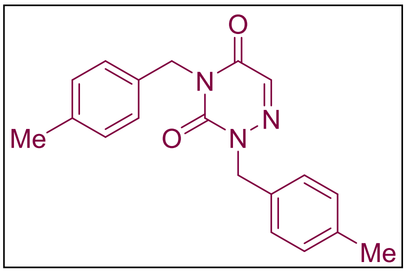
***Ethyl 2-(4-benzyl-3,5-dioxo-4,5-dihydro-1,2,4-triazin-2(3H)-yl)acetate* (1c):** ^{1}H NMR (CDCl3, 400 MHz): δ 7.46- 7.42 (m, 3H), 7.34-7.28 (m, 3H), 5.09 (s, 2H), 4.67 (s, 2H), 4.26-4.21 (m, 2H), 1.27 (t, J = 7.6 Hz, 2H); ^{13}C{^{1}H} NMR (100 MHz, CDCl$_3$): δ 167.3, 155.8, 148.8, 135.2, 135.0, 129.2, 128.6, 128.2, 62.0, 52.8, 44.0, 14.1; HRMS (ESI-TOF) *m/z*: [M + H]$^+$ Calcd for [$C_{14}H_{16}N_3O_4$]$^+$: 290.1135; found: 290.1154.



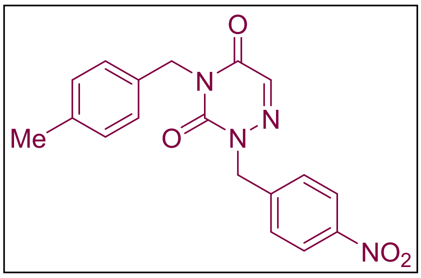
***4-benzyl-2-butyl-1,2,4-triazine-3,5(2H,4H)-dione* (1d):** ^{1}H NMR (CDCl3, 400 MHz): δ 7.42-7.40 (m, 2H), 7.32 (s, 1H), 7.25-7.19 (m, 2H), 5.00 (s, 2H), 3.88 (t, J = 8.4 Hz, 2H), 1.68-1.60 (m, 2H), 1.33-1.24 (m, 2H), 0.87 (t, J = 7.6 Hz, 2H); ^{13}C{^{1}H} NMR (100 MHz, CDCl$_3$): δ 156.0, 148.6, 135.5, 134.0, 129.4, 128.5, 128.1, 51.7, 43.8, 30.2, 19.6, 13.6; HRMS (ESI-TOF) *m/z*: [M + H]$^+$ Calcd for [$C_{14}H_{18}N_3O_2$]$^+$: 260.1394; found: 260.1402.



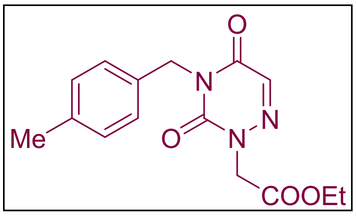
4-benzyl-2-methyl-1,2,4-triazine-3,5(2H,4H)-dione **(1e):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 7.42-7.40 (m, 2H), 7.32 (s, 1H), 7.25-7.19 (m, 3H), 5.00 (s, 2H), 3.88 (t, *J* = 7.6 Hz, 2H), 1.68-1.60 (m, 2H), 1.33-1.24 (m, 2H), 0.87 (t, *J* = 7.6 Hz, 2H); ^{13}C{^{1}H} NMR (100 MHz, CDCl$_3$): *δ* 156.2, 148.9, 135.5, 134.1, 129.5, 128.7, 128.2, 43.9, 39.7; HRMS (ESI-TOF) *m/z*: [M + H]$^+$ Calcd for [$C_{11}H_{12}N_3O_2$]$^+$: 218.0924; found: 218.0902.



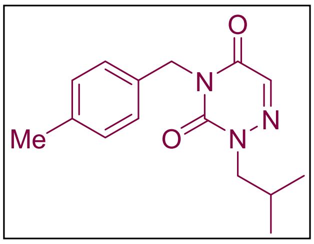
2,4-bis(4-methylbenzyl)-1,2,4-triazine-3,5(2H,4H)-dione **(1f):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 7.38 (d, *J* = 6.4 Hz, 3H), 7.29 (d, *J* = 8.0 Hz, 2H), 7.17- 7.12 (m, 4H), 5.06 (s, 2H), 5.03 (s, 2H), 2.34 (s, 3H), 2.33 (s, 3H); ^{13}C{^{1}H} NMR (100 MHz, CDCl$_3$): *δ* 156.0, 148.7, 138.3, 138.0, 134.5, 132.56, 132.54, 129.5, 129.3, 128.8, 55.2, 43.8, 21.3; HRMS (ESI-TOF) *m/z*: [M + H]$^+$ Calcd for [$C_{19}H_{20}N_3O_2$]$^+$: 322.1550; found: 322.1572.



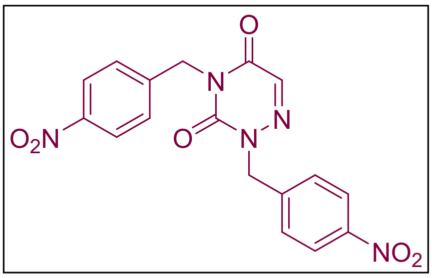
4-(4-methylbenzyl)-2-(4-nitrobenzyl)-1,2,4-triazine-3,5(2H,4H)-dione **(1g):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 8.20 (d, *J* = 8.8 Hz, 2H), 7.54 (d, *J* = 8.4 Hz, 2H), 7.42 (s, 1H), 7.35 (d, *J* = 8.0 Hz, 2H), 7.12 (d, *J* = 8.0 Hz, 2H), 5.16 (s, 2H), 5.02 (s, 2H), 2.31 (s, 3H); ^{13}C{^{1}H} NMR (100 MHz, CDCl$_3$): *δ* 155.7, 148.7, 148.0, 142.4, 138.2, 135.2, 132.2, 129.6, 129.5, 129.4, 124.1, 54.7, 43.9, 21.2; HRMS (ESI-TOF) *m/z*: [M + H]$^+$ Calcd for [$C_{18}H_{17}N_4O_4$]$^+$: 353.1244; found: 353.1228.



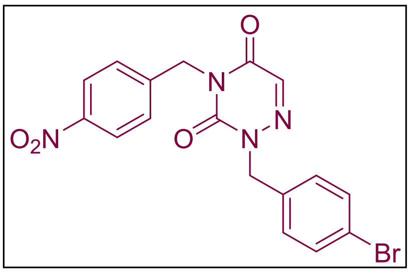
Ethyl 2-(4-(4-methylbenzyl)-3,5-dioxo-4,5-dihydro-1,2,4-triazin-2(3H)-yl)acetate **(1h):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 7.41 (s, 1H), 7.34 (d, *J* = 7.6 Hz, 2H), 7.11 (d, *J* = 8.0 Hz, 2H), 5.04 (s, 2H), 4.66 (s, 2H), 4.26-4.21 (m, 2H), 2.31 (s, 3H), 1.27 (t, *J* = 7.2 Hz, 2H); ^{13}C{^{1}H} NMR (100 MHz, CDCl$_3$): *δ* 167.3, 155.8, 148.8, 138.0, 135.0, 132.2, 129.3, 129.3, 62.0, 52.8, 43.8, 21.2, 14.1; HRMS (ESI-TOF) *m/z*: [M + H]$^+$ Calcd for [$C_{15}H_{18}N_3O_4$]$^+$: 304.1292; found: 304.1309.



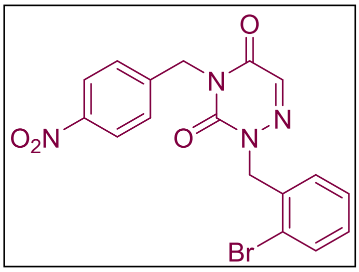
2-isobutyl-4-(4-methylbenzyl)-1,2,4-triazine-3,5(2H,4H)-dione **(1i):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 7.37 (d, *J* = 6.4 Hz, 3H), 7.12 (d, *J* = 7.4 Hz, 2H), 5.05 (s, 2H), 3.77 (d, *J* = 7.2 Hz, 2H), 2.31 (s, 3H), 2.19-2.12 (m, 1H), 0.94 (d, *J* = 8.0 Hz, 6H); ^{13}C{^{1}H} NMR (100 MHz, $CDCl_3$): *δ* 155.9, 148.9, 137.9, 134.0, 132.6, 129.4, 129.2, 58.8, 43.6, 27.7, 21.2, 19.8; HRMS (ESI-TOF) *m/z*: $[M + H]^+$ Calcd for $[C_{15}H_{20}N_3O_2]^+$: 274.1550; found: 274.1563.



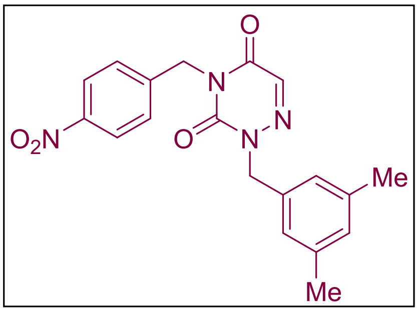
2,4-bis(4-nitrobenzyl)-1,2,4-triazine-3,5(2H,4H)-dione **(1j):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 8.17 (d, *J* = 8.8 Hz, 2H), 8.12 (d, *J* = 8.8 Hz, 2H), 7.60 (d, *J* = 8.4 Hz, 2H), 7.54 (d, *J* = 8.4 Hz, 2H), 7.47 (s, 1H), 5.18 (s, 2H), 5.13 (s, 2H); ^{13}C{^{1}H} NMR (100 MHz, $CDCl_3$): *δ* 155.5, 148.6, 148.0, 147.8, 142.1, 142.0, 135.0, 130.3, 129.6, 124.1, 129.6, 124.1, 123.9, 54.8, 43.4; HRMS (ESI-TOF) *m/z*: $[M + Na]^+$ Calcd for $[C_{17}H_{13}N_5O_6]^+$: 406.0758; found: 406.0752.



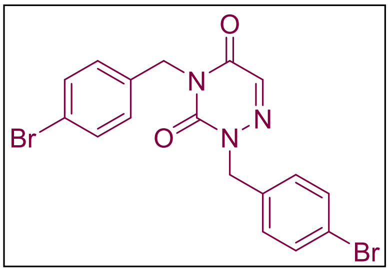
2-(4-bromobenzyl)-4-(4-nitrobenzyl)-1,2,4-triazine-3,5(2H,4H)-dione **(1k):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 8.19 (d, *J* = 8.8 Hz, 2H), 7.63 (d, *J* = 8.4 Hz, 2H), 7.51-7.49 (m, 2H), 7.47 (s, 1H), 7.29 (d, *J* = 8.0 Hz, 2H), 5.15(s, 2H), 5.07 (s, 2H); ^{13}C{^{1}H} NMR (100 MHz, $CDCl_3$): *δ* 155.6, 148.6, 148.0, 142.2, 135.1, 134.1, 131.9, 131.3, 129.6, 124.1, 122.5, 54.7, 43.5; HRMS (ESI-TOF) *m/z*: $[M + Na]^+$ Calcd for $[C_{17}H_{13}BrN_4O_4]^+$: 439.0012; found: 439.0032.



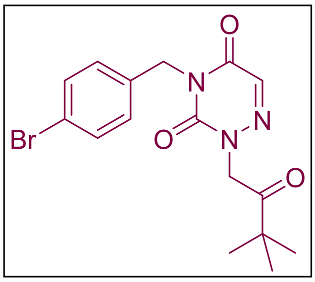
2-(2-bromobenzyl)-4-(4-nitrobenzyl)-1,2,4-triazine-3,5(2H,4H)-dione **(1l):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 8.18 (d, *J* = 8.8 Hz, 2H), 7.63 (d, *J* = 8.4 Hz, 2H), 7.69 (d, *J* = 8.0 Hz, 1H), 7.46 (s, 1H), 7.29 (t, *J* = 7.6 Hz, 1H), 7.21- 7.18 (m, 2H), 5.26 (s, 2H), 5.18 (s, 2H); ^{13}C{^{1}H} NMR (100 MHz, $CDCl_3$): *δ* 155.7, 148.8, 138.0, 134.8, 134.7, 133.1, 132.4, 129.7, 129.6, 129.4, 129.3, 127.6, 123.4, 54.8, 43.8, 21.2; HRMS (ESI-TOF) *m/z*: $[M + H]^+$ Calcd for $[C_{17}H_{14}BrN_4O_4]^+$: 417.0193; found: 417.0172.



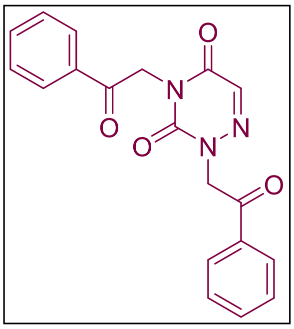
2-(3,5-dimethylbenzyl)-4-(4-nitrobenzyl)-1,2,4-triazine-3,5(2H,4H)-dione **(1m):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 8.16 (d, *J* = 8.8 Hz, 2H), 7.62 (d, *J* = 8.4 Hz, 2H), 7.45 (s, 1H), 6.69 (d, *J* = 5.6 Hz, 1H), 5.14 (s, 2H), 5.03 (s, 2H), 2.29 (s, 3H); ^{13}C{^{1}H} NMR (100 MHz, $CDCl_3$): *δ* 155.7, 148.4, 147.6, 142.3, 138.4, 135.0, 134.3, 130.1, 130.0, 126.3, 123.7, 55.4, 43.1, 21.2; HRMS (ESI-TOF) *m/z*: $[M + H]^+$ Calcd for $[C_{19}H_{19}N_4O_4]^+$: 367.1401; found: 367.1385.



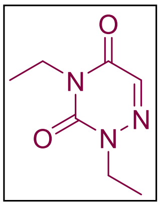
2,4-bis(4-bromobenzyl)-1,2,4-triazine-3,5(2H,4H)-dione **(1n):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 7.48 (d, *J* = 5.6 Hz, 2H), 7.45 (d, *J* = 2.4 Hz, 2H), 7.40 (s, 2H), 7.34 (d, *J* = 8.0 Hz, 2H), 7.27-7.24 (m, 2H), 5.02 (s, 2H), 4.99 (s, 2H); ^{13}C{^{1}H} NMR (100 MHz, $CDCl_3$): *δ* 155.7, 148.6, 134.7, 134.2, 132.07, 132.05, 131.8, 131.3, 130.6, 122.7, 122.5, 54.9, 43.4; HRMS (ESI-TOF) *m/z*: $[M + H]^+$ Calcd for $[C_{17}H_{14}Br_2N_3O_2]^+$: 449.9447; found: 449.9445.



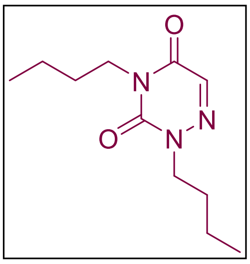
4-(4-bromobenzyl)-2-(3,3-dimethyl-2-oxobutyl)-1,2,4-triazine-3,5(2H,4H)-dione **(1o):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 7.44-7.40 (m, 3H), 7.31 (d, *J* = 8.4 Hz, 2H), 5.01 (s, 2H), 4.89 (s, 2H), 1.24 (s, 9H); ^{13}C{^{1}H} NMR (100 MHz, $CDCl_3$): *δ* 207.4, 155.9, 148.9, 134.9, 134.3, 131.8, 131.0, 122.3, 56.1, 43.4, 43.3, 26.2; HRMS (ESI-TOF) *m/z*: $[M + H]^+$ Calcd for $[C_{16}H_{19}BrN_3O_3]^+$: 380.0604; found: 380.0584.



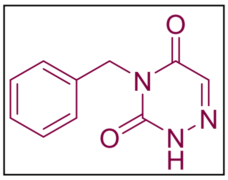
2,4-bis(2-oxo-2-phenylethyl)-1,2,4-triazine-3,5(2H,4H)-dione **(1p):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 7.89 (t, *J* = 7.2 Hz, 2H), 7.66-7.61 (m, 2H), 7.55-7.49 (m, 5H), 5.44 (s, 2H), 5.39 (s, 2H); ^{13}C{^{1}H} NMR (100 MHz, CDCl$_3$): *δ* 191.5, 190.2, 155.7, 148.9, 134.9, 134.5, 134.4, 134.3, 134.2, 129.1, 129.0, 128.3, 128.2, 57.6, 46.4; HRMS (ESI-TOF) *m/z*: [M + H]$^+$ Calcd for [$C_{19}H_{16}N_3O_4$]$^+$: 350.1135; found: 350.1143.



2,4-diethyl-1,2,4-triazine-3,5(2H,4H)-dione **(1q):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 7.99 (s, 1H), 4.01- 3.96 (m, 2H), 4.95-4.91 (m, 2H), 1.29 (t, *J* = 7.2 Hz, 3H), 1.20 (t, *J* = 7.2 Hz, 2H); ^{13}C{^{1}H} NMR (100 MHz, CDCl$_3$): *δ* 155.9, 148.2, 134.1, 46.9, 35.8, 13.3, 12.4; HRMS (ESI-TOF) *m/z*: [M + H]$^+$ Calcd for [$C_7H_{12}N_3O_2$]$^+$: 170.0924; found: 170.0905.

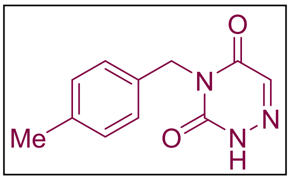


2,4-dibutyl-1,2,4-triazine-3,5(2H,4H)-dione **(1r):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 7.34 (s, 1H), 3.94 (t, *J* = 7.4 Hz, 2H), 3.89 (t, *J* = 7.2 Hz, 2H), 1.74-1.66 (m, 2H), 1.63-1.56 (m, 2H), 1.39-1.30 (m, 4H), 0.95-0.90 (m, 6H); ^{13}C{^{1}H} NMR (100 MHz, CDCl$_3$): *δ* 156.1, 148.6, 134.0, 51.6, 40.6, 30.2, 29.3, 20.1, 19.7, 13.73, 13.70; HRMS (ESI-TOF) *m/z*: [M + H]$^+$ Calcd for [$C_{11}H_{20}N_3O_2$]$^+$: 226.1550; found: 226.1529.

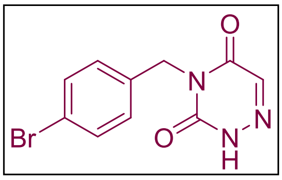


4-benzyl-1,2,4-triazine-3,5(2H,4H)-dione **(1s):** ^{1}H NMR (CDCl3, 400 MHz): *δ* 7.48- 7.46 (m, 2H), 7.41 (s, 1H), 7.34-7.27 (m, 3H), 5.06 (s, 2H); ^{13}C{^{1}H} NMR (100 MHz, CDCl$_3$): *δ*

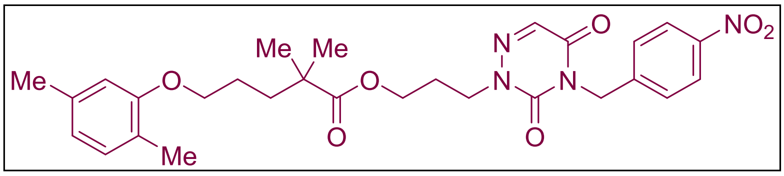
156.0, 149.7, 135.6, 135.1, 129.4, 128.7, 128.3, 43.4; HRMS (ESI-TOF) *m/z*: $[M + H]^+$ Calcd for $[C_{10}H_{10}N_3O_2]^+$: 204.0768; found: 204.0757.



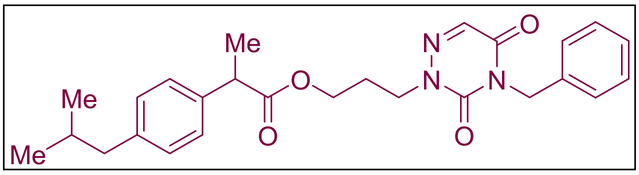
4-(4-methylbenzyl)-1,2,4-triazine-3,5(2H,4H)-dione **(1t):** ^{1}H NMR (CDCl3, 400 MHz): δ 10.10 (s, 1H), 7.38 (t, J = 8.0 Hz, 3H), 7.12 (d, J = 7.2 Hz, 2H), 5.02 (s, 2H), 2.31 (s, 3H); $^{13}C\{^1H\}$ NMR (100 MHz, $CDCl_3$): δ 156.0, 149.6, 138.2, 135.7, 132.2, 129.5, 129.4, 43.2, 21.2; HRMS (ESI-TOF) *m/z*: $[M + H]^+$ Calcd for $[C_{11}H_{12}N_3O_2]^+$: 218.0924; found: 218.0907.



4-(4-bromobenzyl)-1,2,4-triazine-3,5(2H,4H)-dione **(1u):** ^{1}H NMR (CDCl3, 400 MHz): δ 9.87 (s, 1H), 7.45- 7.41 (m, 3H), 7.37-7.35 (m, 2H), 5.00 (s, 2H); $^{13}C\{^1H\}$ NMR (100 MHz, $CDCl_3$): δ 155.8, 149.5, 135.6, 134.1, 131.9, 131.3, 122.6, 42.8; HRMS (ESI-TOF) *m/z*: $[M + H]^+$ Calcd for $[C_{10}H_9BrN_3O_2]^+$: 281.9873; found: 281.9853.

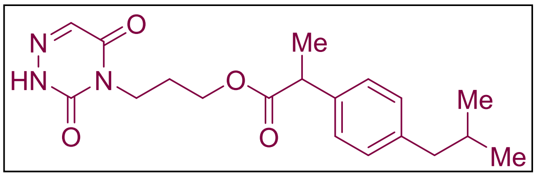


3-(4-(4-nitrobenzyl)-3,5-dioxo-4,5-dihydro-1,2,4-triazin-2(3H)-yl)propyl 5-(2,5 dimethylphenoxy)-2,2-dimethylpentanoate **(1v):** ^{1}H NMR (CDCl3, 400 MHz): δ 8.13 (d, J = 8.8 Hz, 2H), 7.59 (d, J = 8.4 Hz, 2H), 7.41 (s, 1H), 6.97 (d, J = 7.2 Hz, 1H), 6.64 (d, J = 7.2 Hz, 1H), 6.59 (s, 1H), 5.12 (s, 1H), 4.12- 4.05 (m, 4H), 3.91 (d, J = 5.6 Hz, 2H), 2.29 (s, 3H), 2.15 (s, 3H), 2.12-2.06 (m, 2H), 1.71 (d, J = 2.4 Hz, 4H), 1.22 (s, 6H); $^{13}C\{^1H\}$ NMR (100 MHz, $CDCl_3$): δ 177.6, 156.9, 155.7, 148.4, 147.7, 142.3, 136.5, 134.3, 130.3, 130.2, 123.8, 123.5, 120.8, 111.9, 67.9, 61.1, 48.9, 43.2, 42.2, 37.1, 27.4, 25.25, 25.21, 21.4, 15.8; HRMS (ESI-TOF) *m/z*: $[M + H]^+$ Calcd for $[C_{28}H_{35}N_4O_7]^+$: 539.2500; found: 539.2505.



3-(4-benzyl-3,5-dioxo-4,5-dihydro-1,2,4-triazin-2(3H)-yl)propyl 2-(4 isobutylphenyl)propanoate **(1w):** ^{1}H NMR (CDCl3, 400 MHz): δ 7.49- 7.46 (m, 2H), 7.34-7.28 (m, 4H), 7.18 (d, J = 8.0 Hz, 2H), 7.09 (d, J = 8.0 Hz, 2H), 5.06 (s, 2H), 4.12 (t, J = 6.4 Hz, 2H), 3.94 (t, J = 4.4 Hz, 2H), 3.67-3.62 (m, 1H), 2.44 (d, J = 7.2 Hz, 2H), 2.07-2.00 (m, 2H), 1.87-1.81 (m, 1H), 1.47 (d, J = 7.2 Hz, 3H), 0.89 (d, J = 6.8 Hz, 6H); $^{13}C\{^1H\}$ NMR (100

MHz, $CDCl_3$): δ 174.6, 155.9, 148.6, 140.6, 137.6, 135.4, 134.3, 129.5, 129.4, 128.7, 128.2, 127.2, 61.7, 49.0, 45.14, 45.12, 44.0, 30.2, 27.3, 22.4, 18.5; HRMS (ESI-TOF) *m/z*: $[M + H]^+$ Calcd for $[C_{26}H_{32}N_3O_4]^+$: 450.2387; found: 450.2381.



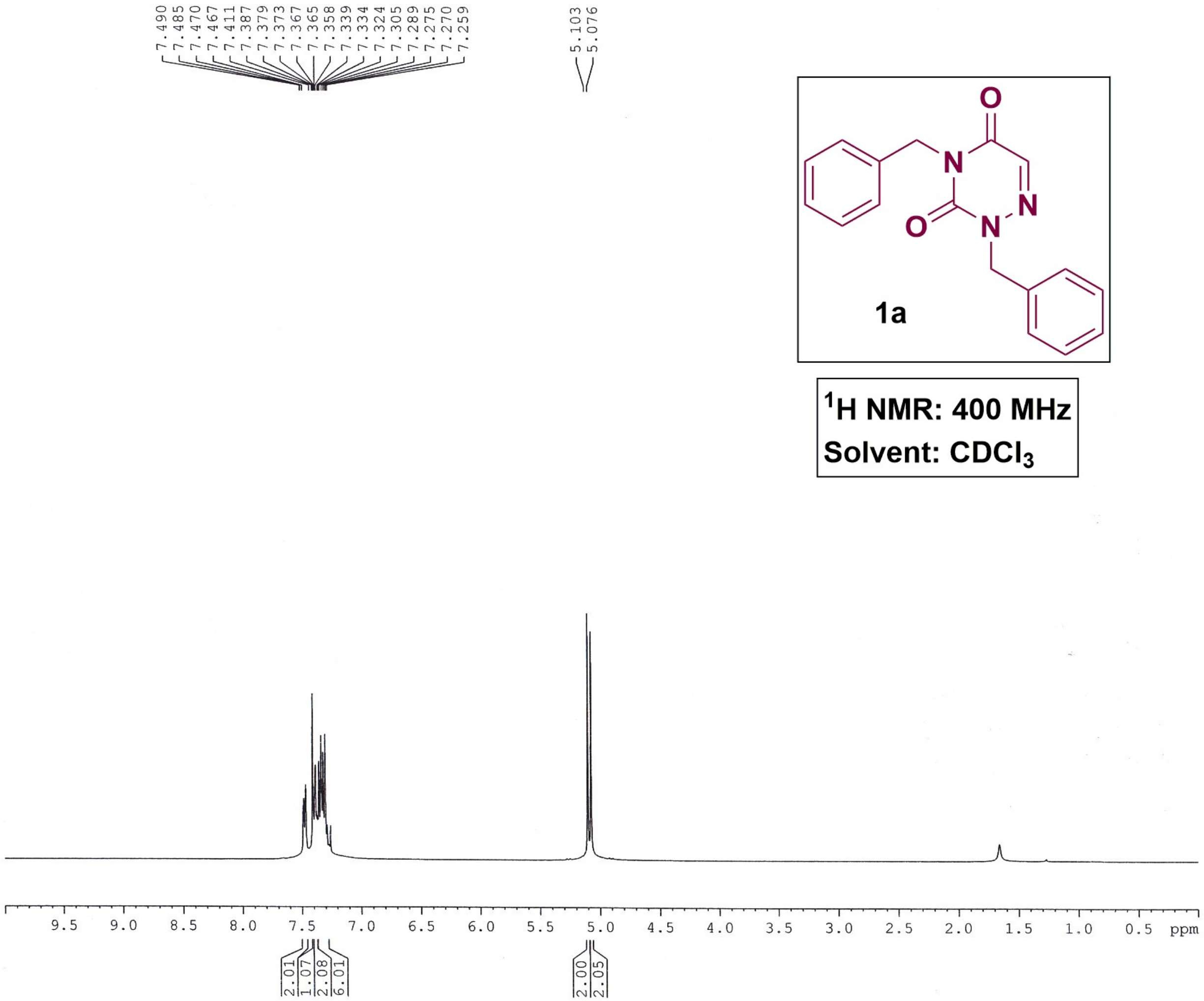
3-(3,5-dioxo-2,5-dihydro-1,2,4-triazin-4(3H)-yl)propyl 2-(4-isobutylphenyl)propanoate **(1x)**: ^1H NMR (CDCl3, 400 MHz): δ 10.29 (s, 1H), 7.36 (s, 1H), 7.19 (d, *J* = 8.0 Hz, 2H), 7.08 (d, *J* = 8.0 Hz, 2H), 4.15- 4.06 (m, 2H), 3.97- 3.90 (m, 2H), 3.27-3.66 (m, 1H), 2.43 (d, *J* = 8.2 Hz, 2H), 2.01-1.94 (m, 2H), 1.86-1.79 (m, 2H), 1.48 (d, *J* = 7.2 Hz, 3H), 0.88 (d, *J* = 6.8 Hz, 6H); $^{13}C\{^1H\}$ NMR (100 MHz, $CDCl_3$): δ 174.8, 156.0, 149.7, 140.4, 137.4, 135.2, 129.2, 127.1, 62.1, 45.0, 44.9, 37.2, 30.0, 26.4, 22.3, 18.3; HRMS (ESI-TOF) *m/z*: $[M + H]^+$ Calcd for $[C_{19}H_{26}N_3O_4]^+$: 360.1918; found: 360.1925.

9. References:

(1) (a) Huang, P.-J.; Lee, K.-H. Synthesis and antibacterial evaluation of 6-azapyrimidines with a-methylene-- (4-substituted phenyl) --butyrolactone pharmacophores. *Med. Chem. Res.* **2010**, *20*, 1081. (b) Hwang, L. C.; Yang, S. Y.; Chuang, C. L.; Lee, G. H.; An Optimized Synthesis, Molecular Structure and Characterization of Benzylic Derivatives of 1,2,4-Triazin-3,5(2*H*,4*H*)-dione. *Molecules*. **2017**, *22*, 1924.

(2) (a) Cabrera-Afonso, M. J.; Sookezian, A.; Badir, S. O.; Khatib, M. E.; Molander, G. A. Photoinduced 1,2-dicarbofunctionalization of alkenes with organotrifluoroborate nucleophiles *via* radical/polar crossover. *Chem. Sci.* **2021**, *12*, 9189. (b) Sookezian, A.; Molander, G. A. Photoinduced Vicinal 1,2-Difunctionalization of Olefins for the Synthesis of Alkyl Sulfonamides. *Org. Lett.* **2023**, *25*, 1014.

10. NMR spectra [^{1}H, ^{13}C{1H} and ^{19}F] of synthesized products:



1a

^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

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EXPNO                  636
PROCNO                   1

F2 - Acquisition Parameters
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Time_                11.33
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PULPROG               zg30
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                   77.59
DW                  60.800 usec
DE                    6.50 usec
TE                   296.4 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1           400.1524711 MHz
NUC1                    1H
P1                   14.75 usec
PLW1           12.00000000 W

F2 - Processing parameters
SI                   16384
SF             400.1500097 MHz
WDW                     EM
SSB       0
LB                    0.30 Hz
GB        0
PC                    1.00
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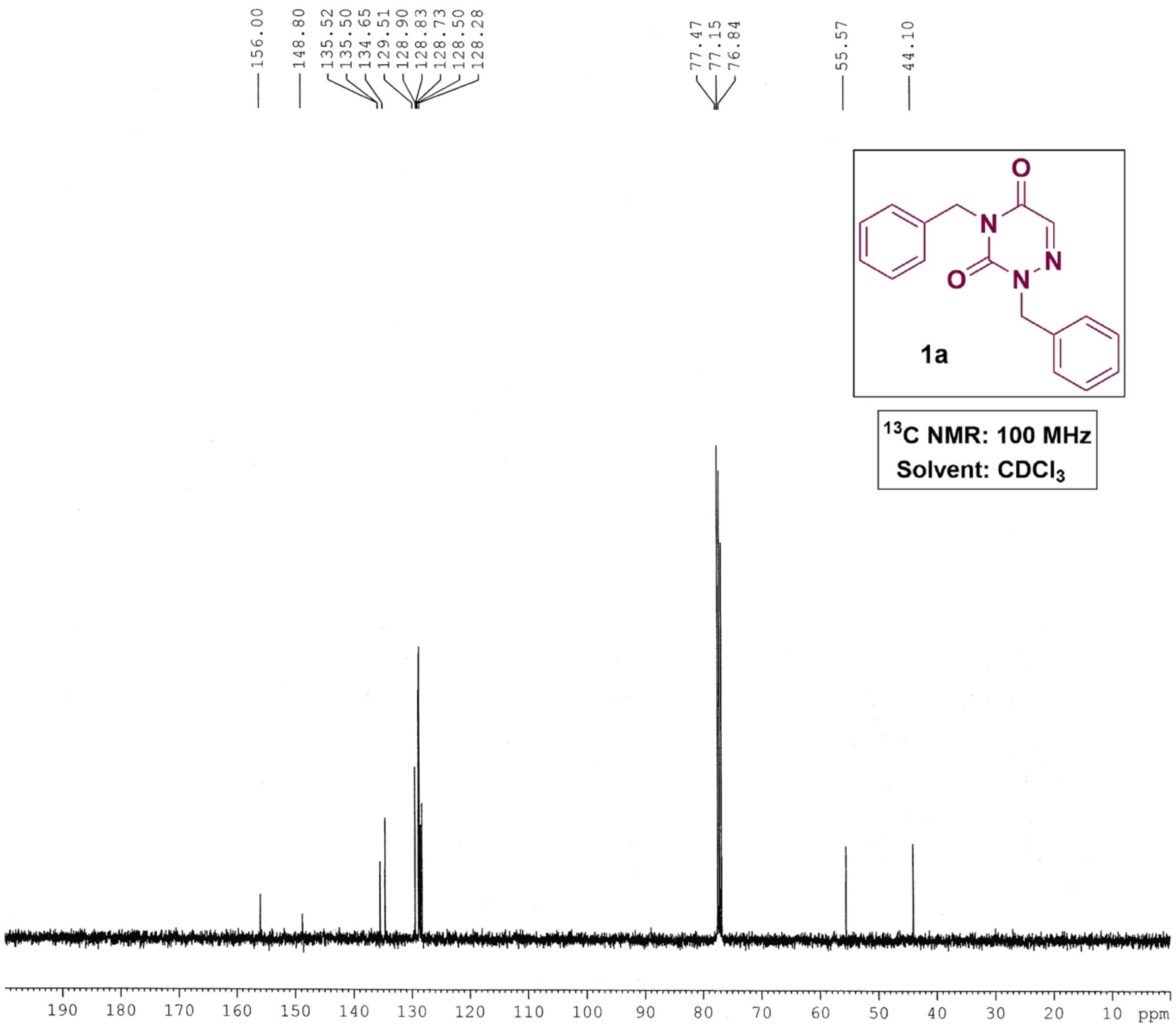

1a

^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME     Dr. A HAJRA-2025-13C
EXPNO                  74
PROCNO                  1

F2 - Acquisition Parameters
Date_            20250219
Time                 9.07
INSTRUM             spect
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PULPROG           zgpg30
TD                 32768
SOLVENT            CDCl3
NS                   130
DS                     2
SWH            24038.461 Hz
FIDRES          0.733596 Hz
AQ             0.6815744 sec
RG                186.42
DW                20.800 usec
DE                  6.50 usec
TE                 297.8 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         100.6278588 MHz
NUC1                 13C
P1                  8.90 usec
PLW1         54.00000000 W

======== CHANNEL f2 ========
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NUC2                  1H
CPDPRG[2         waltz16
PCPD2              90.00 usec
PLW2         12.00000000 W
PLW12         0.32231000 W
PLW13         0.16212000 W

F2 - Processing parameters
SI                 16384
SF           100.6177858 MHz
WDW                   EM
SSB      0
LB                  1.00 Hz
GB       0
PC                  1.40
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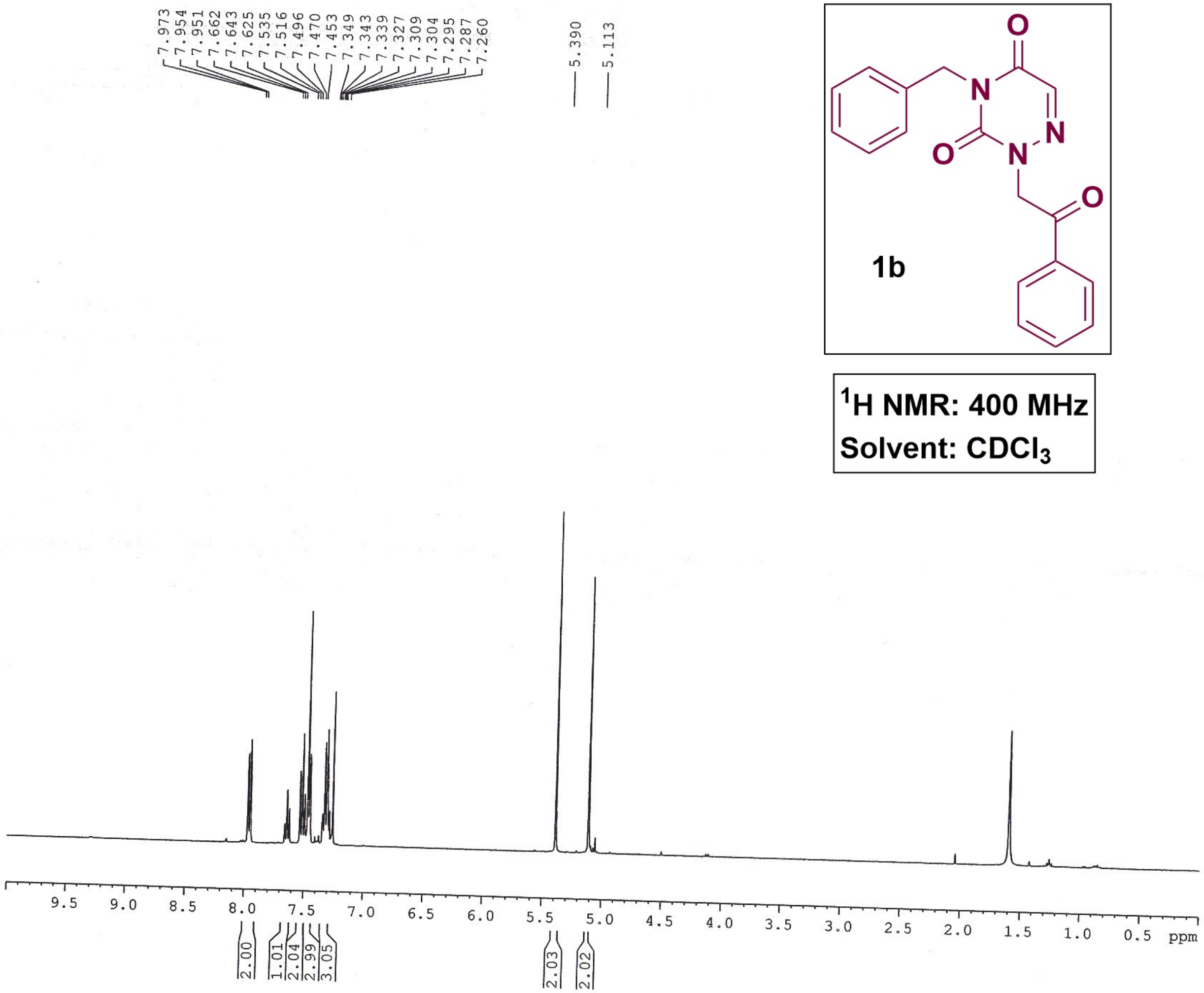

1b

^{1}H NMR: 400 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME         Dr. A HAJRA 2024 1H
EXPNO                    400
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240516
Time                    8.54
INSTRUM                spect
PROBHD      5 mm PABBO BB/
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         2
SWH                 8223.685 Hz
FIDRES              0.250967 Hz
AQ                 1.9922944 sec
RG                    148.91
DW                    60.800 usec
DE                      6.50 usec
TE                     296.2 K
D1                1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
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NUC1                      1H
P1                     14.75 usec
PLW1             12.00000000 W

F2 - Processing parameters
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WDW                       EM
SSB       0
LB                      0.30 Hz
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PC                      1.00
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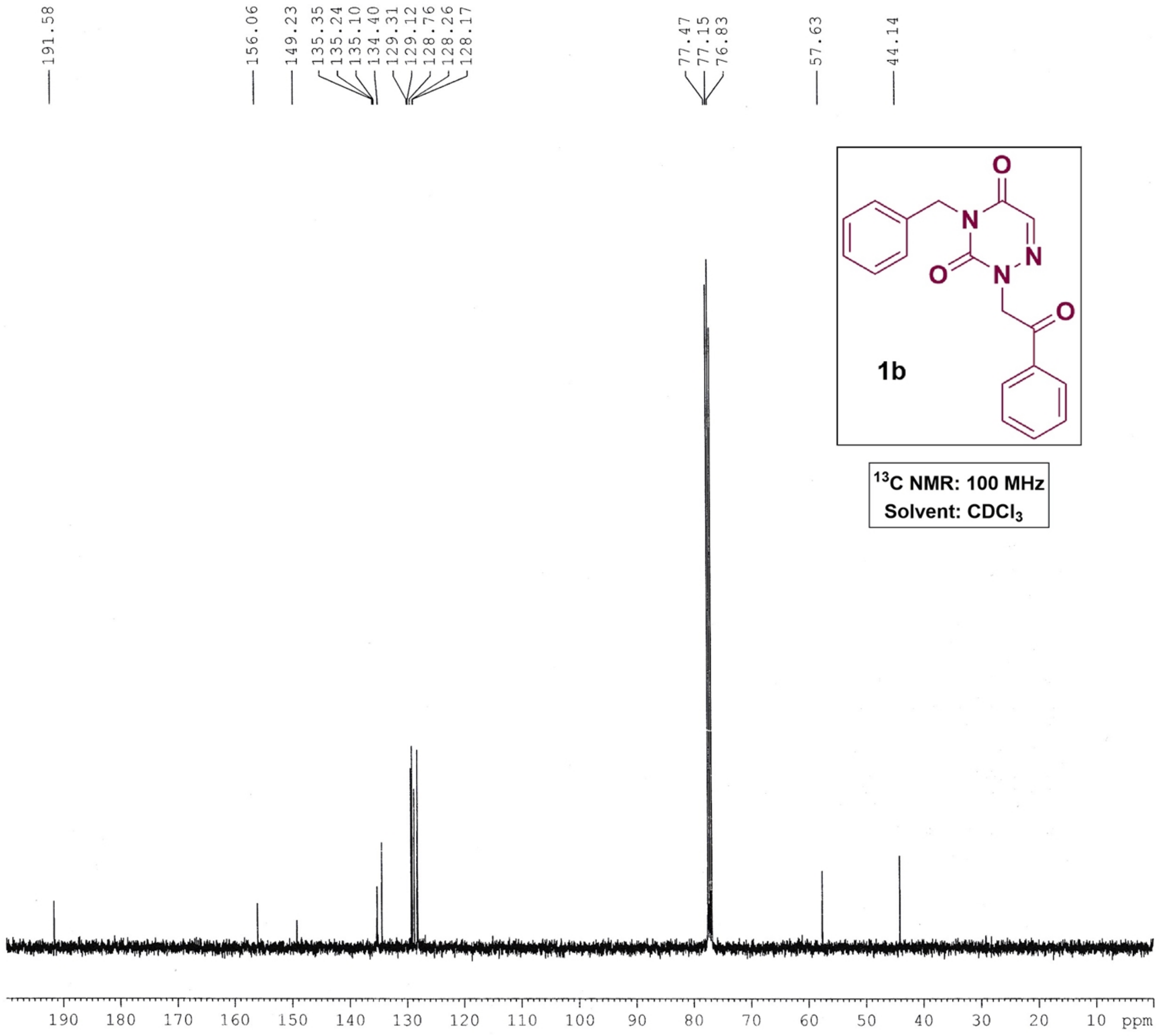

^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

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Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                     82
PROCNO                     1

F2 - Acquisition Parameters
Date_               20250219
Time                   12.17
INSTRUM                spect
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PULPROG               zgpg30
TD                     32768
SOLVENT                CDCl3
NS                       240
DS                         2
SWH                24038.461 Hz
FIDRES              0.733596 Hz
AQ                 0.6815744 sec
RG                    186.42
DW                    20.800 usec
DE                      6.50 usec
TE                     295.2 K
D1                2.00000000 sec
D11               0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
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NUC1                     13C
P1                      8.90 usec
PLW1             54.00000000 W

======== CHANNEL f2 ========
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NUC2                      1H
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PCPD2                  90.00 usec
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PLW12             0.32231000 W
PLW13             0.16212000 W

F2 - Processing parameters
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SF               100.6177858 MHz
WDW                       EM
SSB      0
LB                      1.00 Hz
GB       0
PC                      1.40
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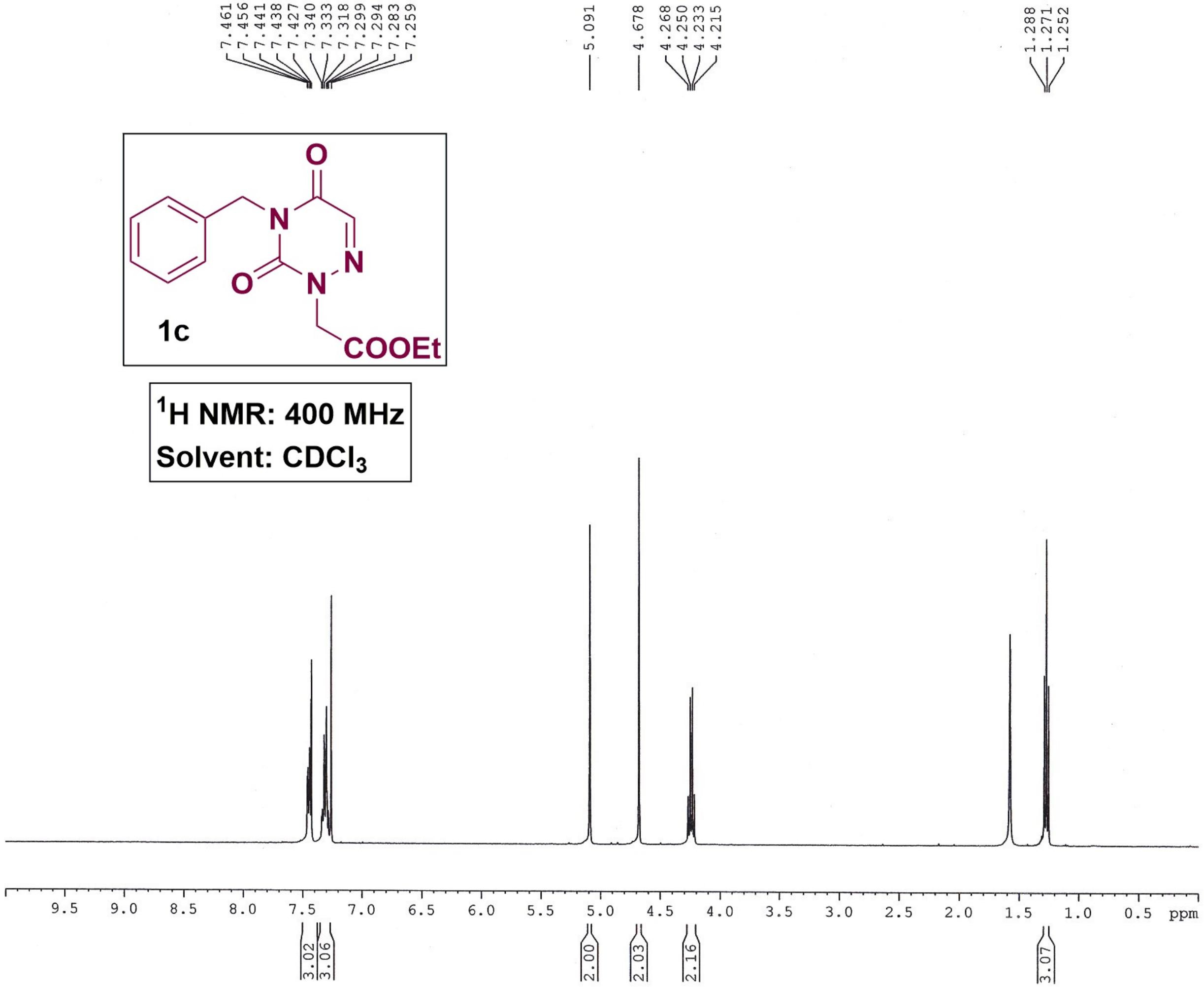

1c

^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

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Current Data Parameters
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EXPNO                   351
PROCNO                    1

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Time                  12.06
INSTRUM               spect
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PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
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DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                   186.42
DW                   60.800 usec
DE                     6.50 usec
TE                    296.3 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500097 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
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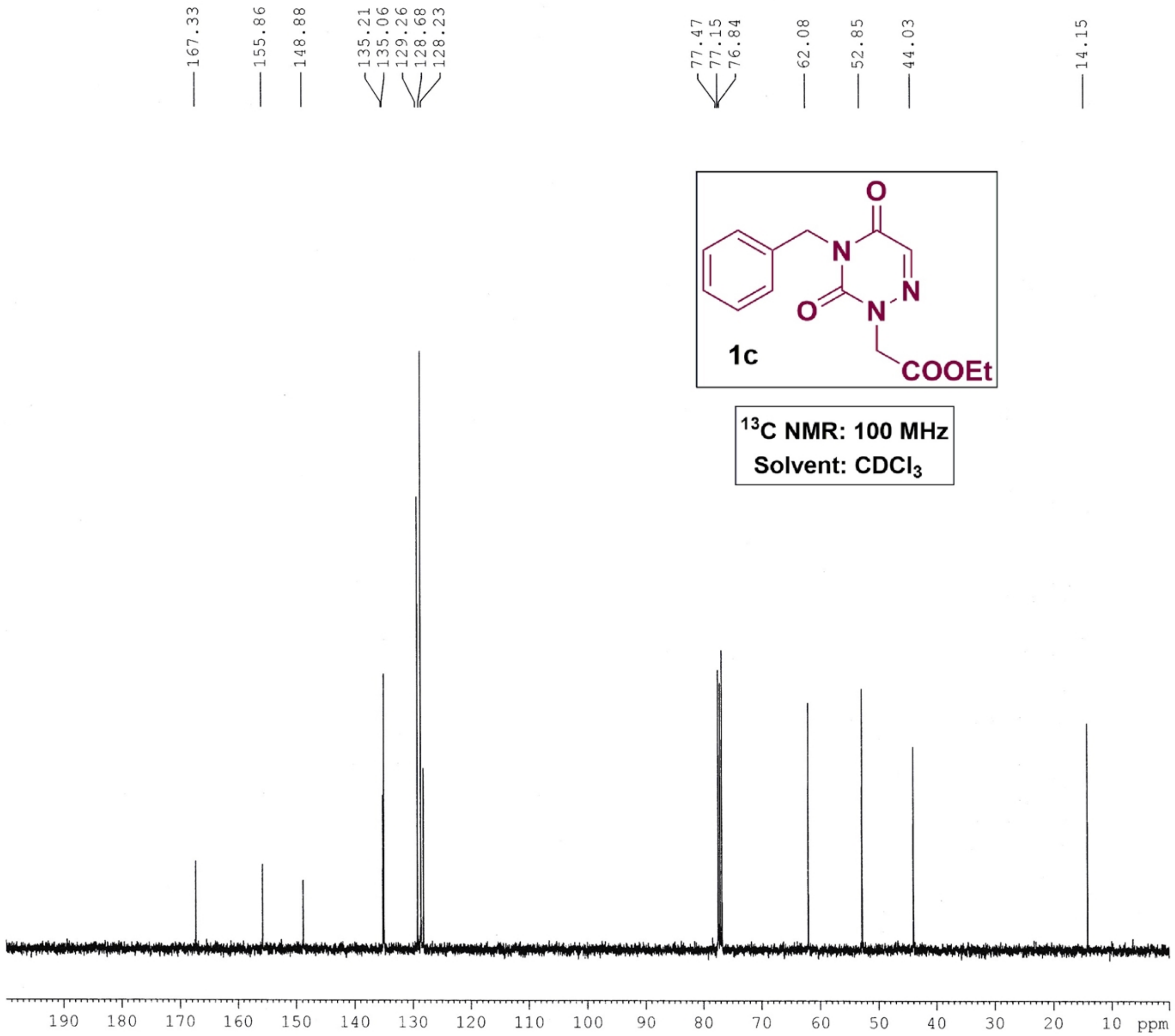

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Current Data Parameters
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EXPNO                   81
PROCNO                   1

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Time                 12.01
INSTRUM              spect
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PULPROG            zgpg30
TD                   32768
SOLVENT              CDCl3
NS                      60
DS                       2
SWH              24038.461 Hz
FIDRES            0.733596 Hz
AQ               0.6815744 sec
RG                  186.42
DW                  20.800 usec
DE                    6.50 usec
TE                   295.2 K
D1              2.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
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NUC1                   13C
P1                    8.90 usec
PLW1           54.00000000 W

======== CHANNEL f2 ========
SFO2           400.1516006 MHz
NUC2                    1H
CPDPRG[2           waltz16
PCPD2                90.00 usec
PLW2           12.00000000 W
PLW12           0.32231000 W
PLW13           0.16212000 W

F2 - Processing parameters
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WDW                     EM
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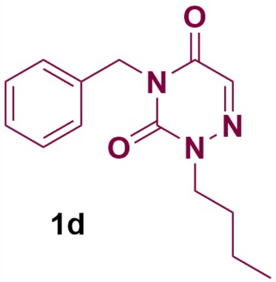
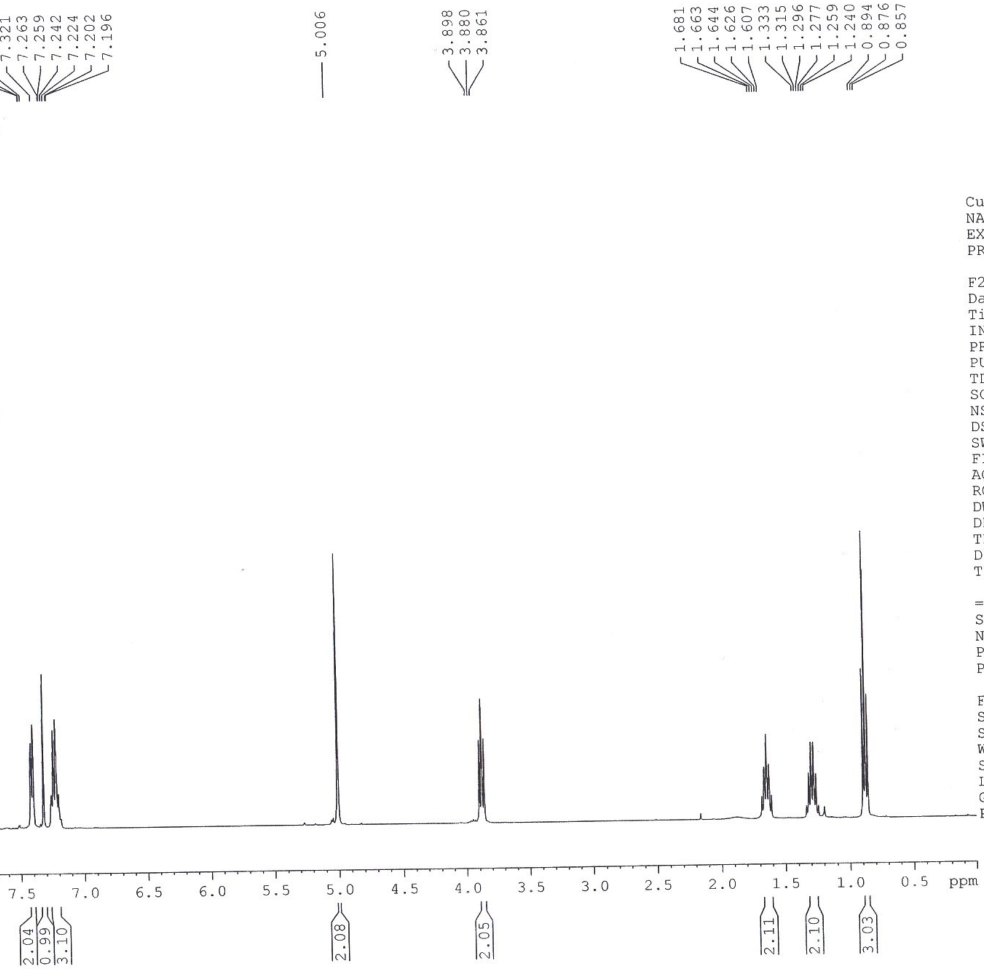


1d

^{1}H NMR: 400 MHz

Solvent: $CDCl_3$



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EXPNO                  656
PROCNO                   1

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Time                 11.01
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PULPROG               zg30
TD                   32768
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DS                       2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                   19.02
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DE                    6.50 usec
TE                   291.1 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
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NUC1                    1H
P1                   14.75 usec
PLW1           12.00000000 W

F2 - Processing parameters
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LB                    0.30 Hz
GB       0
PC                    1.00
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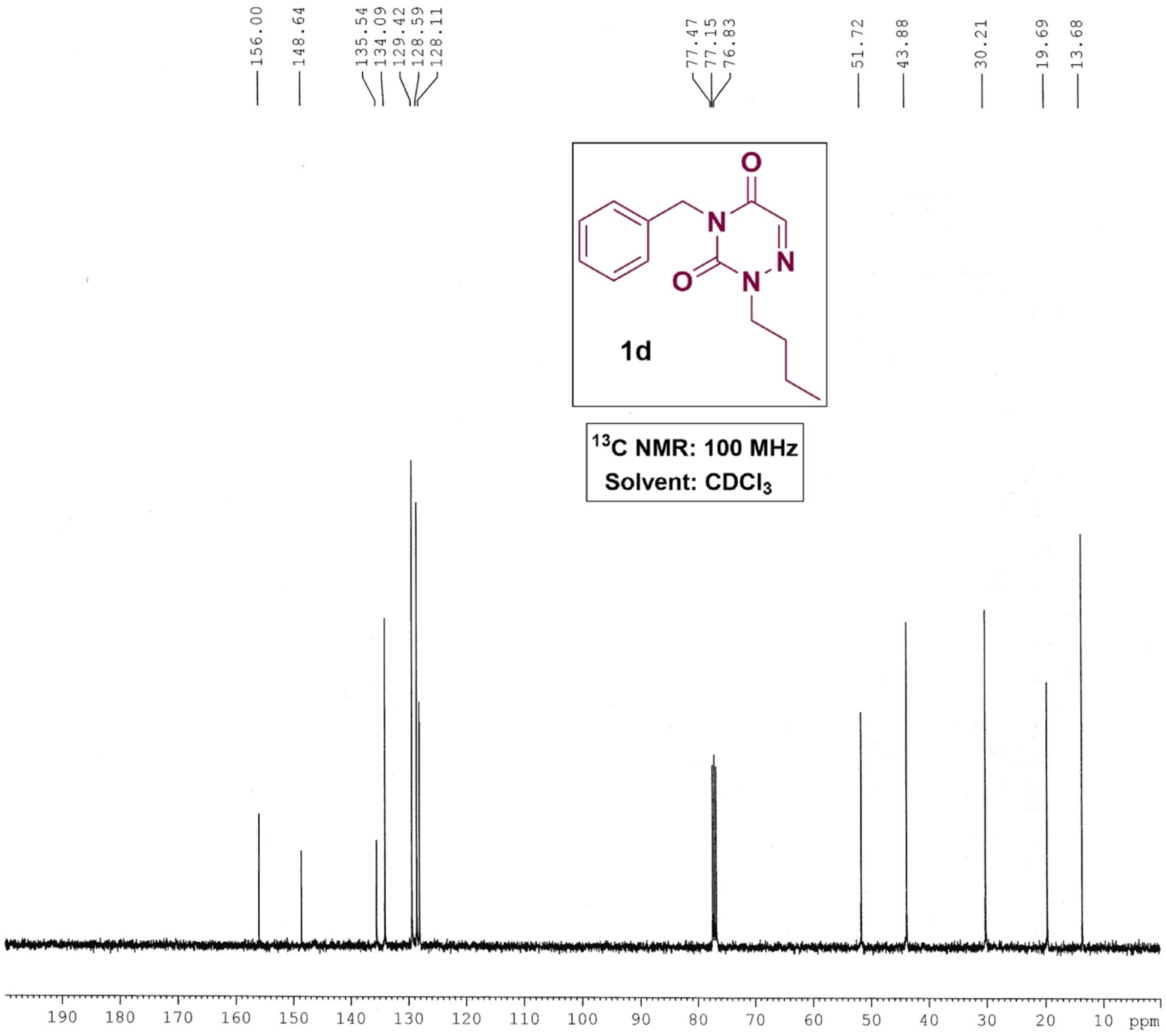
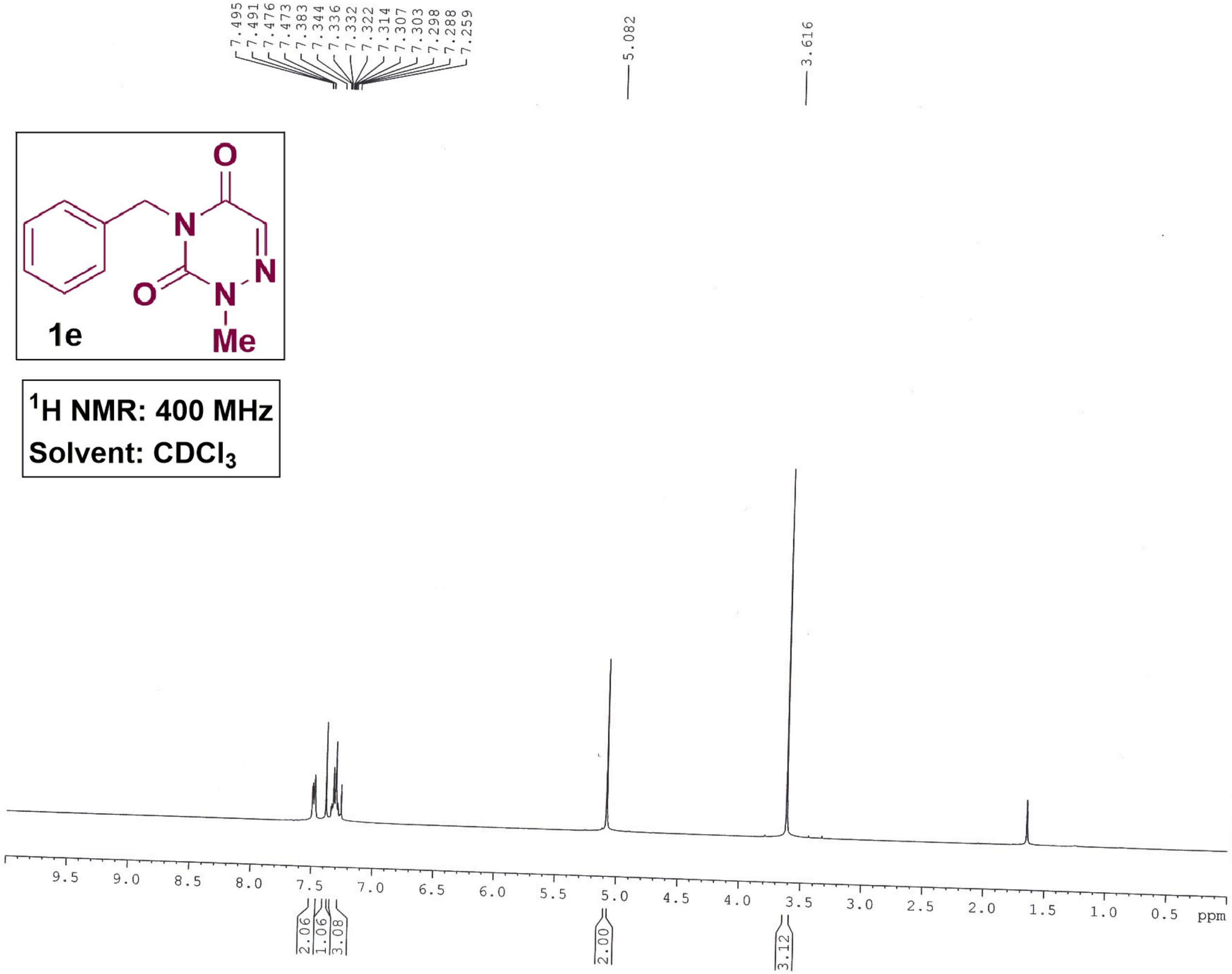


^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

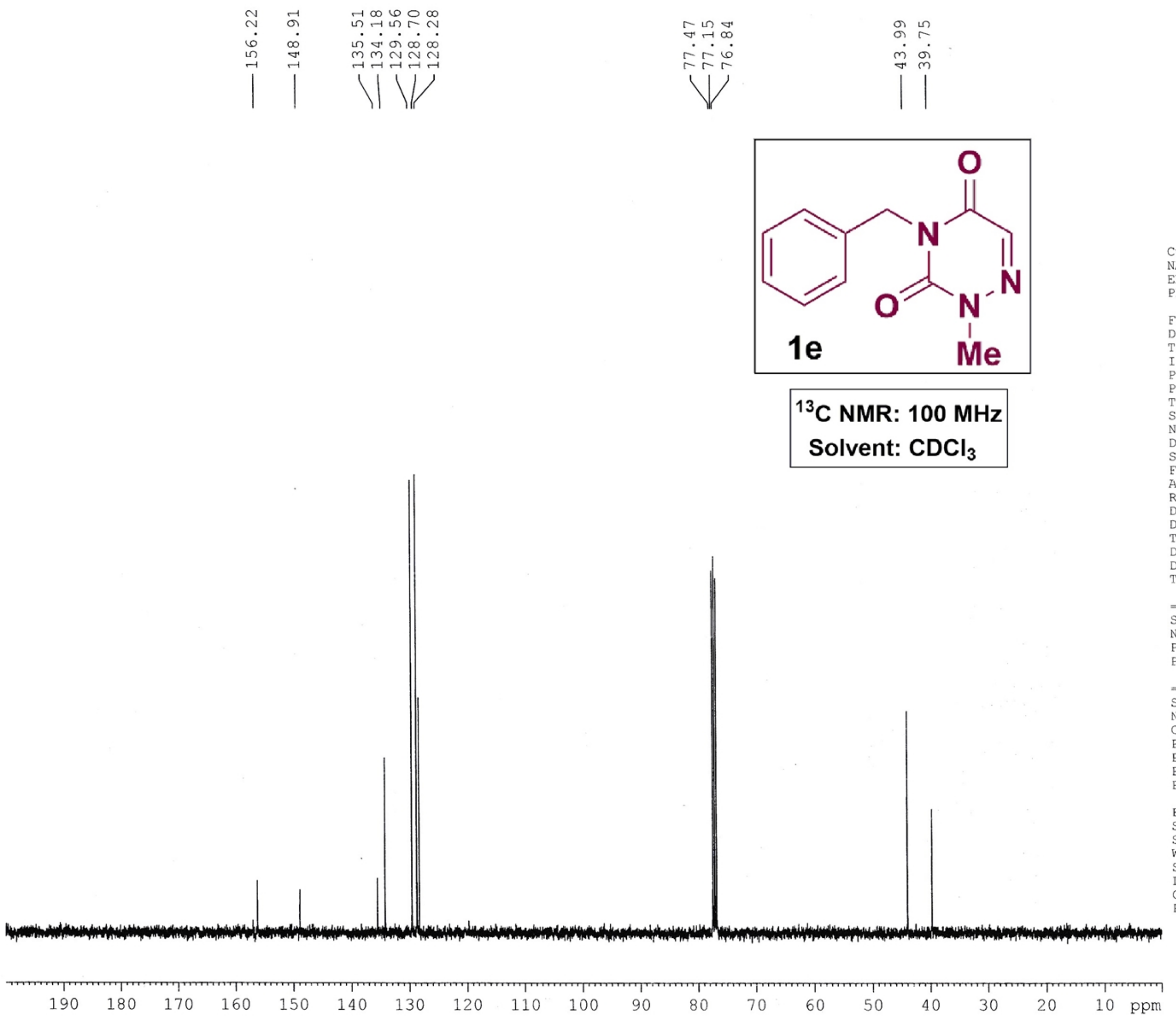
```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                   94
PROCNO                   1

F2 - Acquisition Parameters
Date_             20250221
Time                 11.05
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                  32768
SOLVENT             CDCl3
NS                     60
DS                      2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                 186.42
DW                 20.800 usec
DE                   6.50 usec
TE                  296.5 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1          100.6278588 MHz
NUC1                  13C
P1                   8.90 usec
PLW1          54.00000000 W

======== CHANNEL f2 ========
SFO2          400.1516006 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2               90.00 usec
PLW2          12.00000000 W
PLW12          0.32231000 W
PLW13          0.16212000 W

F2 - Processing parameters
SI                  16384
SF            100.6177960 MHz
WDW                    EM
SSB        0
LB                   1.00 Hz
GB         0
PC                   1.40
```



1e

^{1}H NMR: 400 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                     212
PROCNO                      1

F2 - Acquisition Parameters
Date_              20240319
Time                  10.54
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                   106.66
DW                   60.800 usec
DE                     6.50 usec
TE                    290.7 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500097 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```

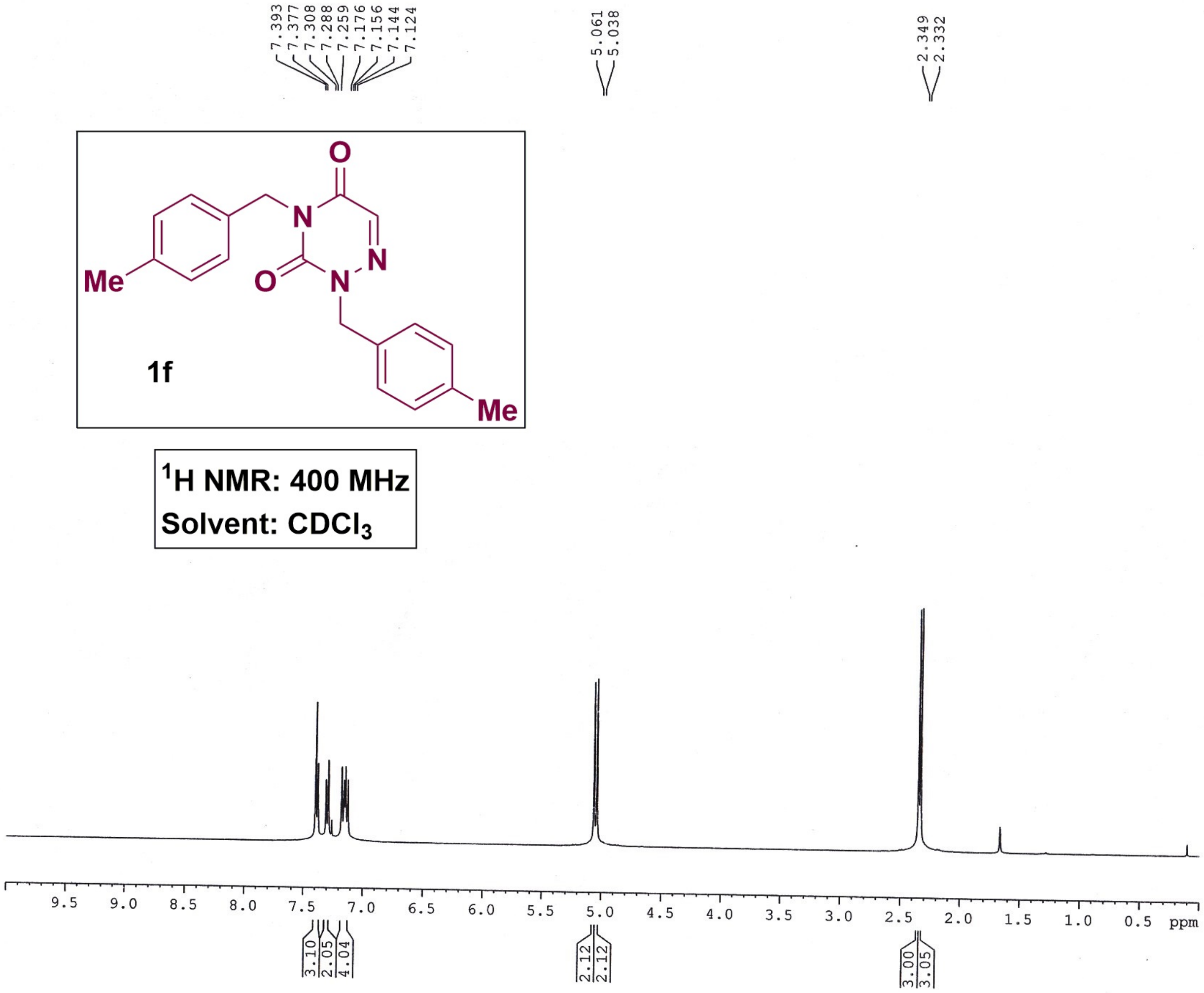


1e

^{13}C NMR: 100 MHz

Solvent: $CDCl_3$

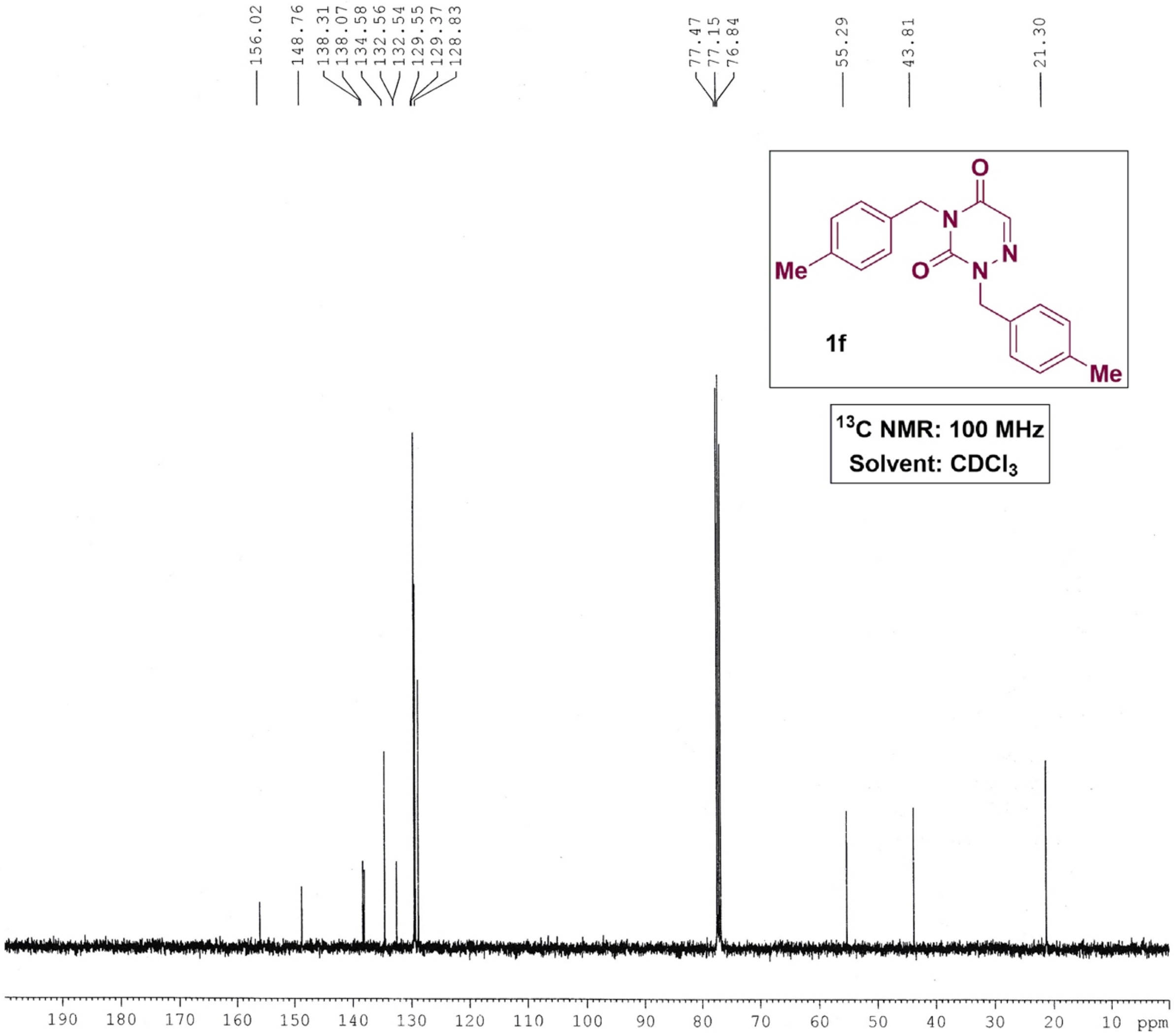
```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                     73
PROCNO                     1

F2 - Acquisition Parameters
Date_             20250219
Time                  8.55
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                  32768
SOLVENT             CDCl3
NS                    100
DS                      2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                 186.42
DW                 20.800 usec
DE                   6.50 usec
TE                  298.2 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1         100.6278588 MHz
NUC1                 13C
P1                  8.90 usec
PLW1         54.00000000 W

======== CHANNEL f2 ========
SFO2         400.1516006 MHz
NUC2                  1H
CPDPRG[2          waltz16
PCPD2              90.00 usec
PLW2         12.00000000 W
PLW12         0.32231000 W
PLW13         0.16212000 W

F2 - Processing parameters
SI                 16384
SF           100.6177872 MHz
WDW                   EM
SSB      0
LB                  1.00 Hz
GB       0
PC                  1.40
```



1f

^{1}H NMR: 400 MHz
Solvent: $CDCl_3$

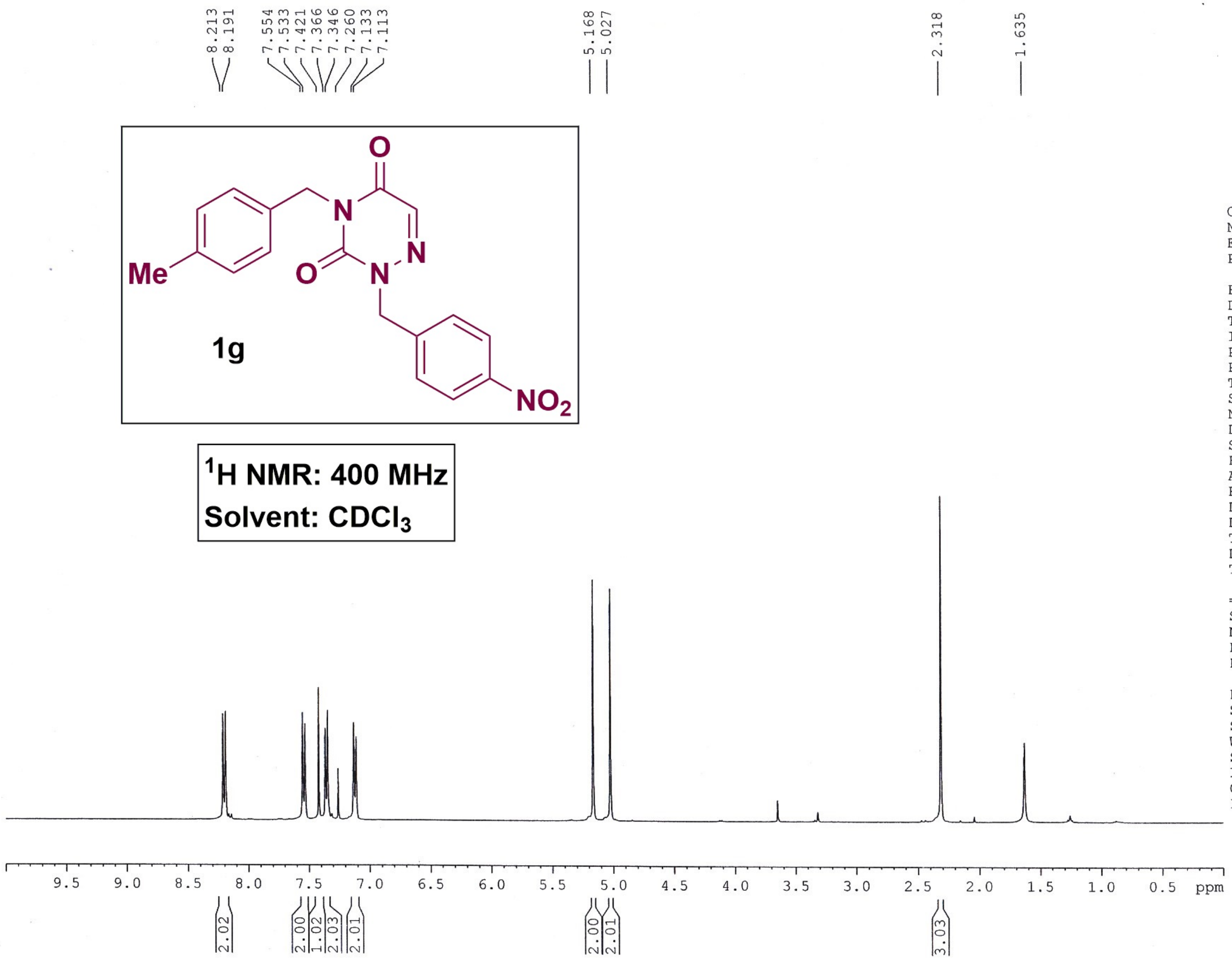
```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                    220
PROCNO                     1

F2 - Acquisition Parameters
Date_              20240320
Time                  10.34
INSTRUM               spect
PROBHD     5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                    62.69
DW                   60.800 usec
DE                     6.50 usec
TE                    296.9 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500098 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```



1f

^{13}C NMR: 100 MHz
Solvent: CDCl$_3$

```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                   88
PROCNO                   1

F2 - Acquisition Parameters
Date_             20250220
Time                 11.42
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                  32768
SOLVENT             CDCl3
NS                    160
DS                      2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                 186.42
DW                 20.800 usec
DE                   6.50 usec
TE                  295.8 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1          100.6278588 MHz
NUC1                  13C
P1                   8.90 usec
PLW1          54.00000000 W

======== CHANNEL f2 ========
SFO2          400.1516006 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2               90.00 usec
PLW2          12.00000000 W
PLW12          0.32231000 W
PLW13          0.16212000 W

F2 - Processing parameters
SI                  16384
SF            100.6177872 MHz
WDW                    EM
SSB       0
LB                   1.00 Hz
GB        0
PC                   1.40
```

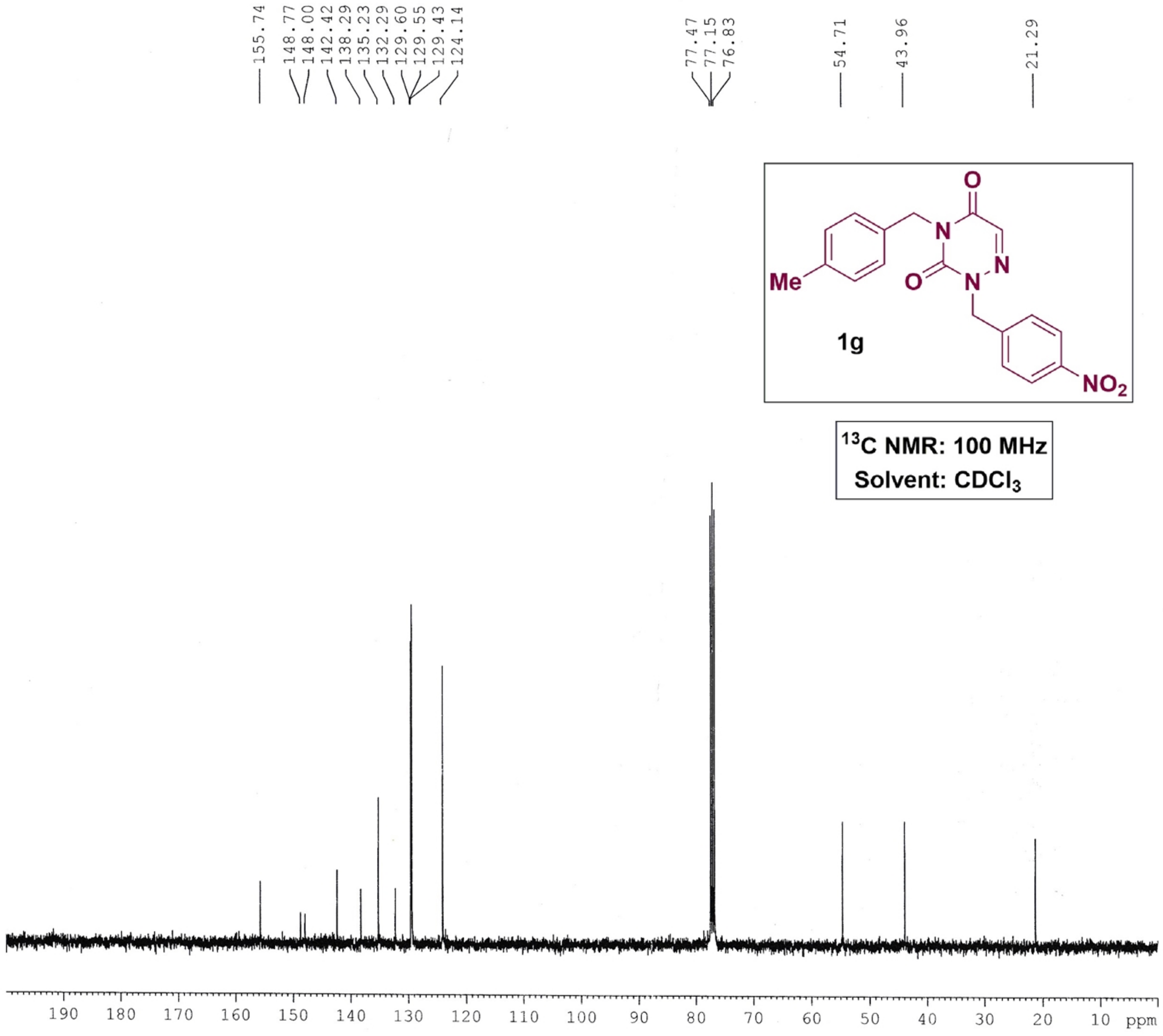


1g

^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                  638
PROCNO                   1

F2 - Acquisition Parameters
Date_           20240823
Time               11.59
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG             zg30
TD                 32768
SOLVENT            CDCl3
NS                     8
DS                     2
SWH             8223.685 Hz
FIDRES          0.250967 Hz
AQ             1.9922944 sec
RG                120.16
DW                60.800 usec
DE                  6.50 usec
TE                 295.9 K
D1            1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         400.1524711 MHz
NUC1                  1H
P1                 14.75 usec
PLW1         12.00000000 W

F2 - Processing parameters
SI                 16384
SF           400.1500097 MHz
WDW                   EM
SSB      0
LB                  0.30 Hz
GB       0
PC                  1.00
```



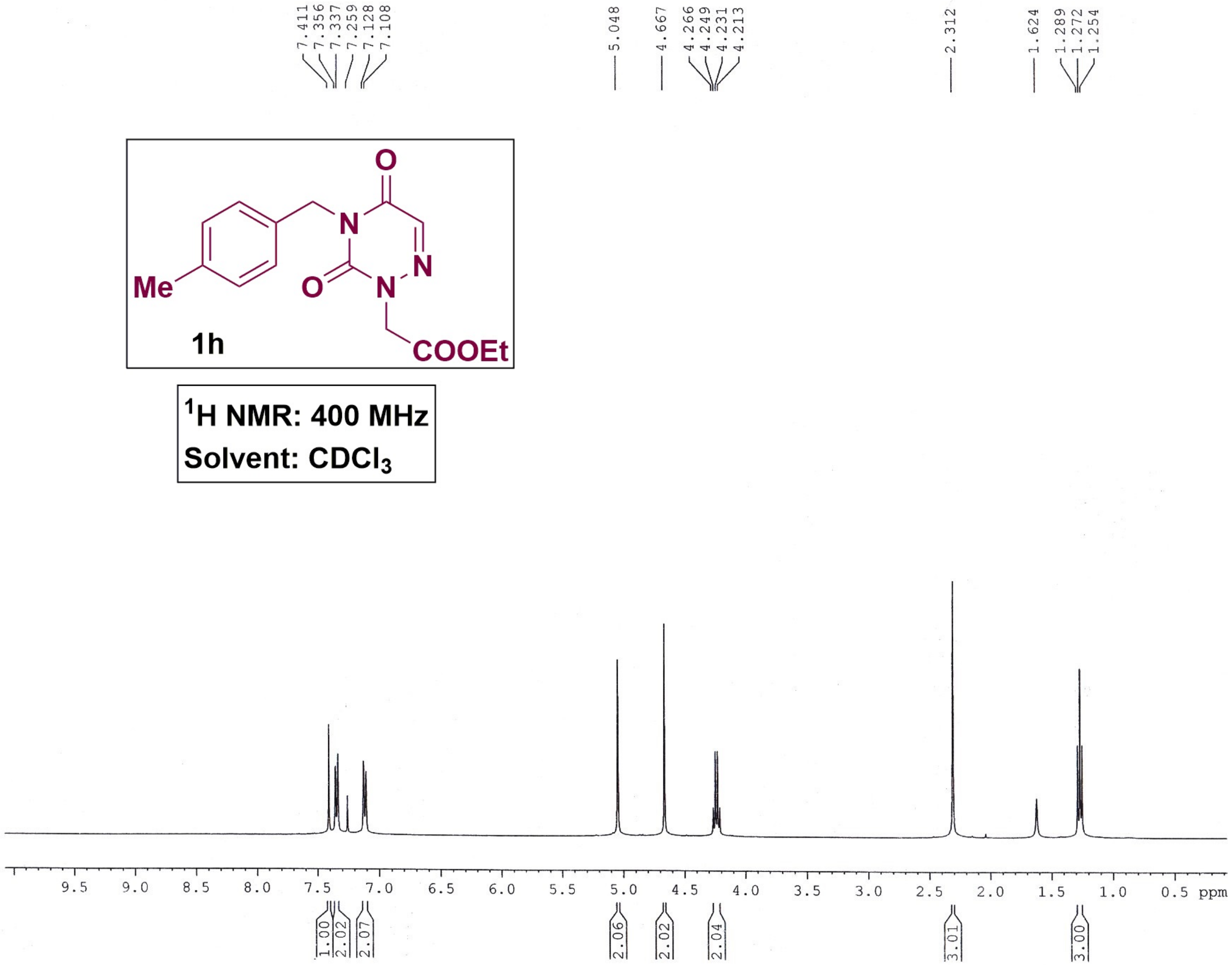
1g

^{13}C NMR: 100 MHz
Solvent: CDCl$_3$

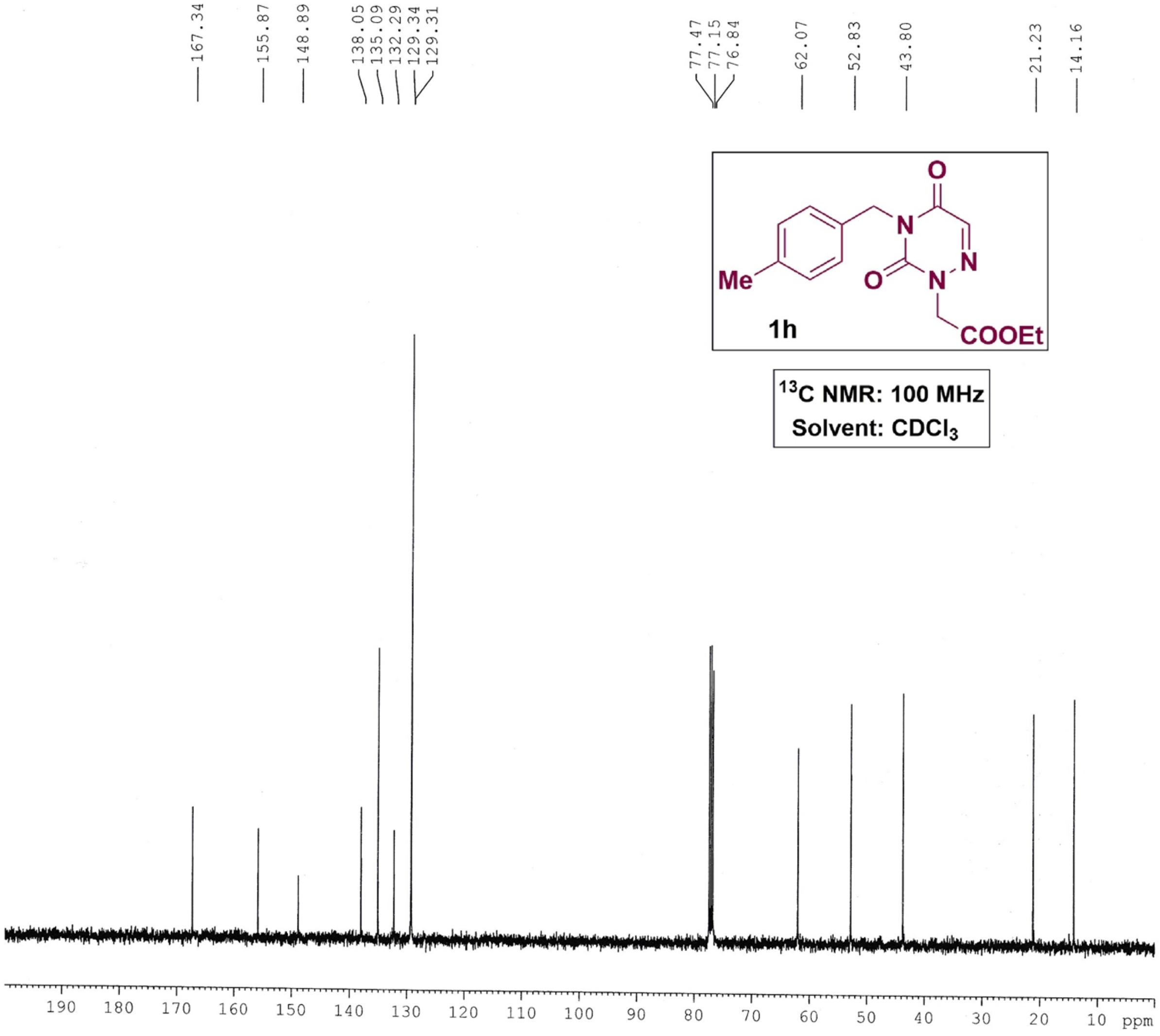
```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                     83
PROCNO                     1

F2 - Acquisition Parameters
Date_               20250220
Time                   10.41
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG               zgpg30
TD                     32768
SOLVENT                CDCl3
NS                       220
DS                         2
SWH                24038.461 Hz
FIDRES              0.733596 Hz
AQ                 0.6815744 sec
RG                    186.42
DW                    20.800 usec
DE                      6.50 usec
TE                     296.5 K
D1                2.00000000 sec
D11               0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1             100.6278588 MHz
NUC1                     13C
P1                      8.90 usec
PLW1             54.00000000 W

======== CHANNEL f2 ========
SFO2             400.1516006 MHz
NUC2                      1H
CPDPRG[2             waltz16
PCPD2                  90.00 usec
PLW2             12.00000000 W
PLW12             0.32231000 W
PLW13             0.16212000 W

F2 - Processing parameters
SI                     16384
SF               100.6177872 MHz
WDW                       EM
SSB       0
LB                      1.00 Hz
GB        0
PC                      1.40
```

1h

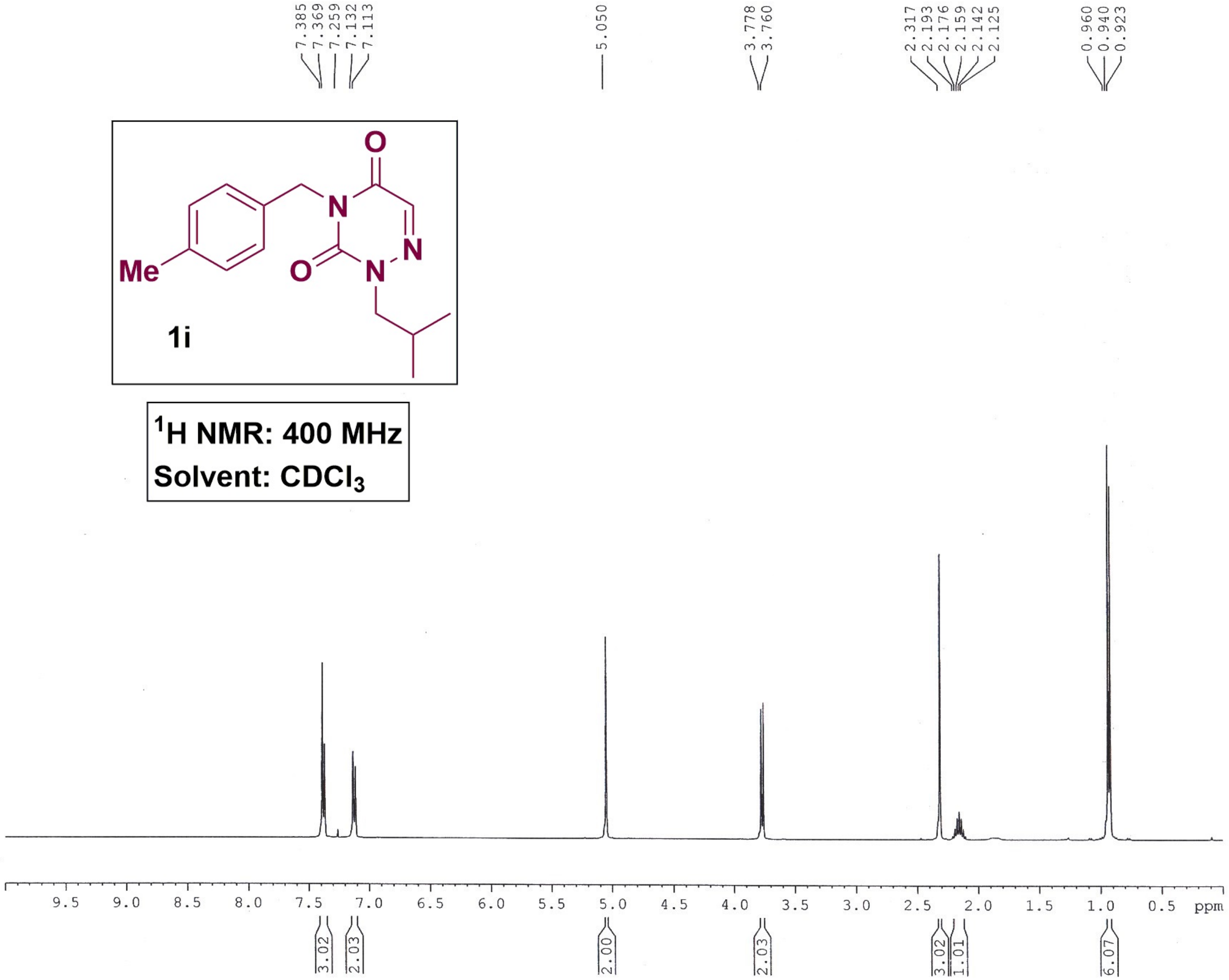
^{1}H NMR: 400 MHz
Solvent: $CDCl_3$



```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                      584
PROCNO                       1

F2 - Acquisition Parameters
Date_                 20240717
Time                     20.50
INSTRUM                  spect
PROBHD     5 mm PABBO BB/
PULPROG                   zg30
TD                       32768
SOLVENT                  CDCl3
NS                           8
DS                           2
SWH                   8223.685 Hz
FIDRES                0.250967 Hz
AQ                   1.9922944 sec
RG                       93.46
DW                      60.800 usec
DE                        6.50 usec
TE                       296.8 K
D1                  1.00000000 sec
TD0                          1

======== CHANNEL f1 ========
SFO1               400.1524711 MHz
NUC1                        1H
P1                       14.75 usec
PLW1               12.00000000 W

F2 - Processing parameters
SI                       16384
SF                 400.1500097 MHz
WDW                         EM
SSB        0
LB                        0.30 Hz
GB         0
PC                        1.00
```



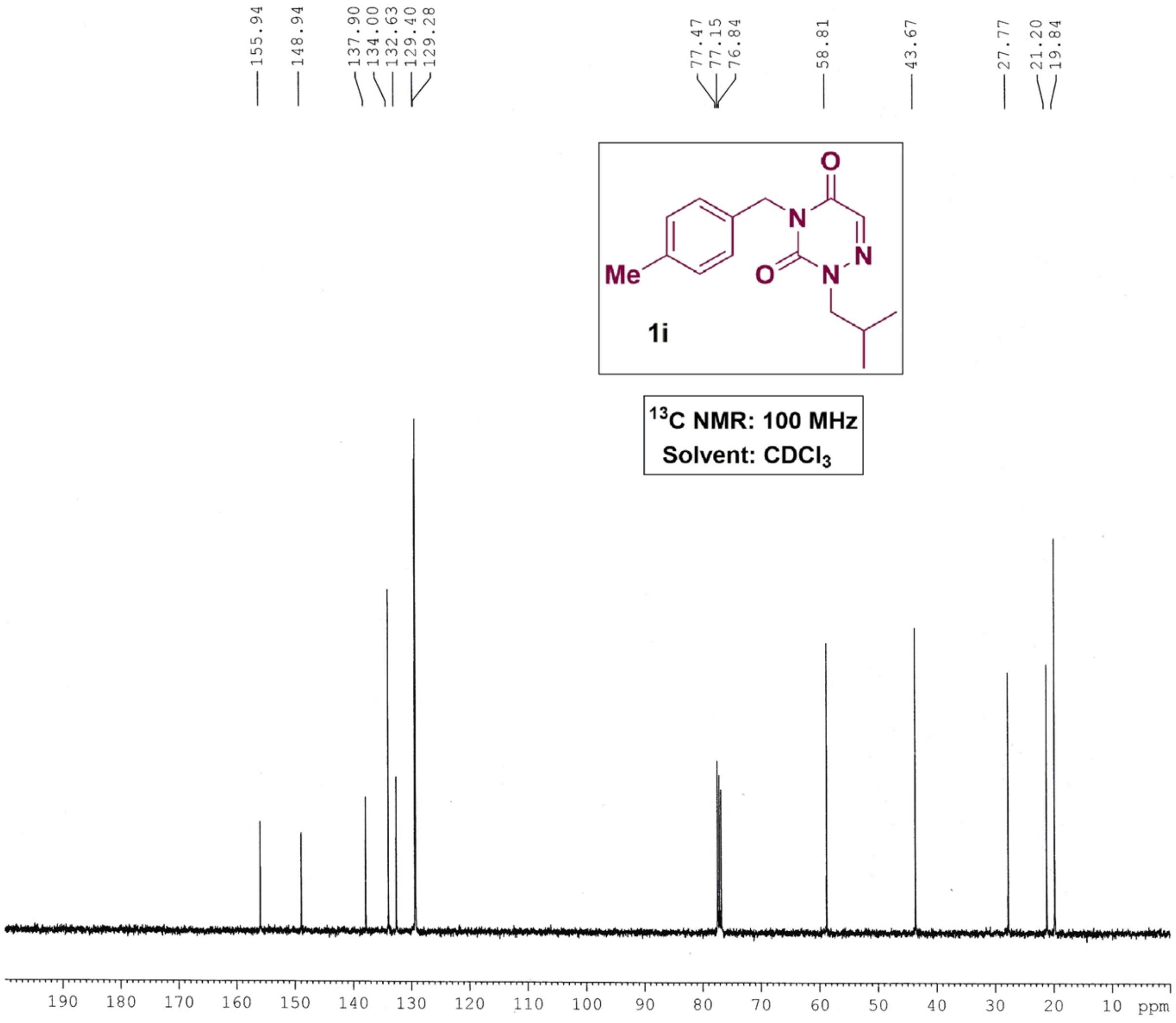
```
Current Data Parameters
NAME        Dr. A HAJRA-2025-13C
EXPNO                   79
PROCNO                   1

F2 - Acquisition Parameters
Date_             20250219
Time                 11.21
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                   32768
SOLVENT              CDCl3
NS                      70
DS                       2
SWH              24038.461 Hz
FIDRES            0.733596 Hz
AQ               0.6815744 sec
RG                  186.42
DW                  20.800 usec
DE                    6.50 usec
TE                   295.5 K
D1              2.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1          100.6278588 MHz
NUC1                  13C
P1                   8.90 usec
PLW1          54.00000000 W

======== CHANNEL f2 ========
SFO2          400.1516006 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2               90.00 usec
PLW2          12.00000000 W
PLW12          0.32231000 W
PLW13          0.16212000 W

F2 - Processing parameters
SI                  16384
SF            100.6177917 MHz
WDW                    EM
SSB      0
LB                   1.00 Hz
GB       0
PC                   1.40
```



1i

^{1}H NMR: 400 MHz
Solvent: $CDCl_3$

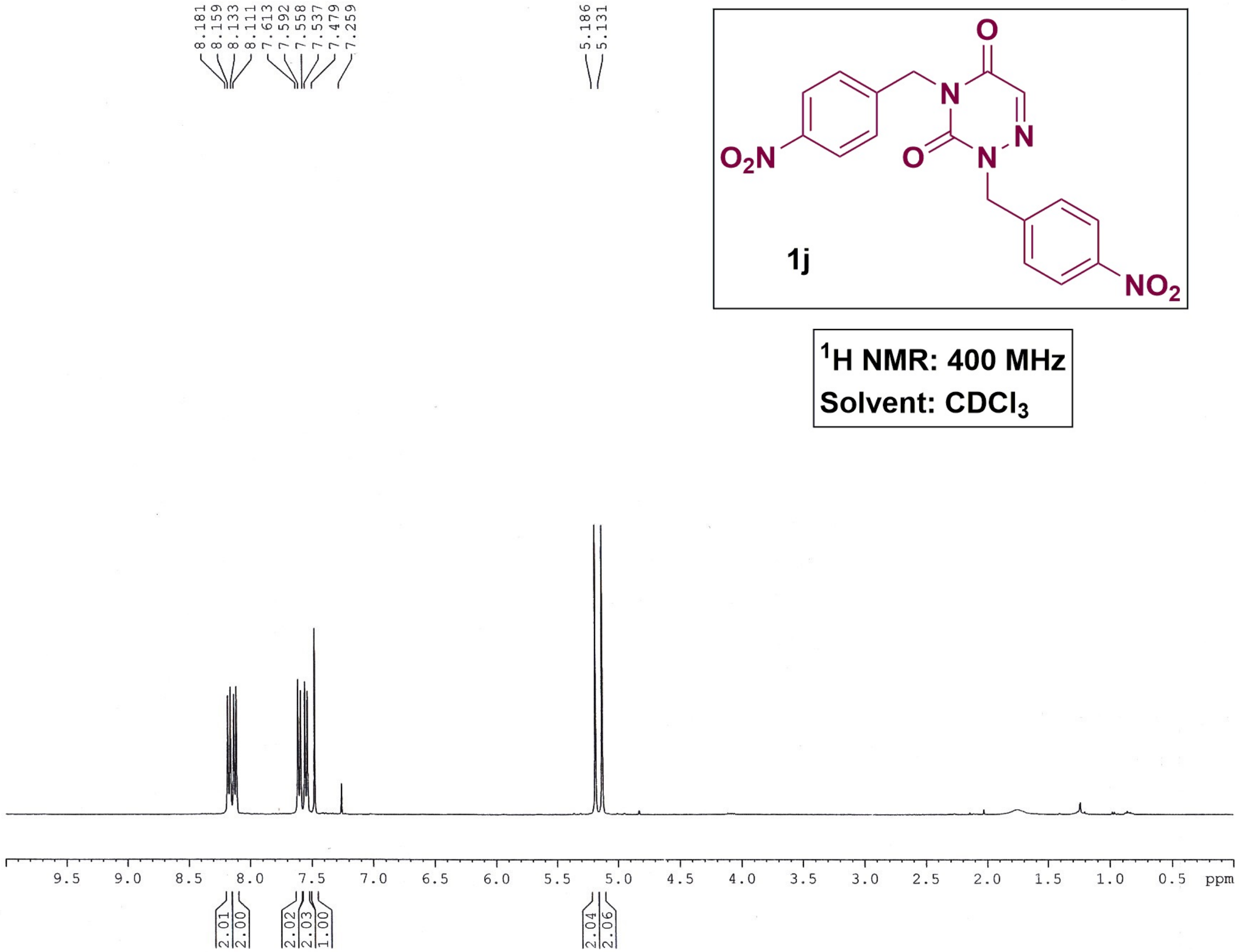
```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   654
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240828
Time                  10.38
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                    20.64
DW                   60.800 usec
DE                     6.50 usec
TE                    291.4 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500092 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```



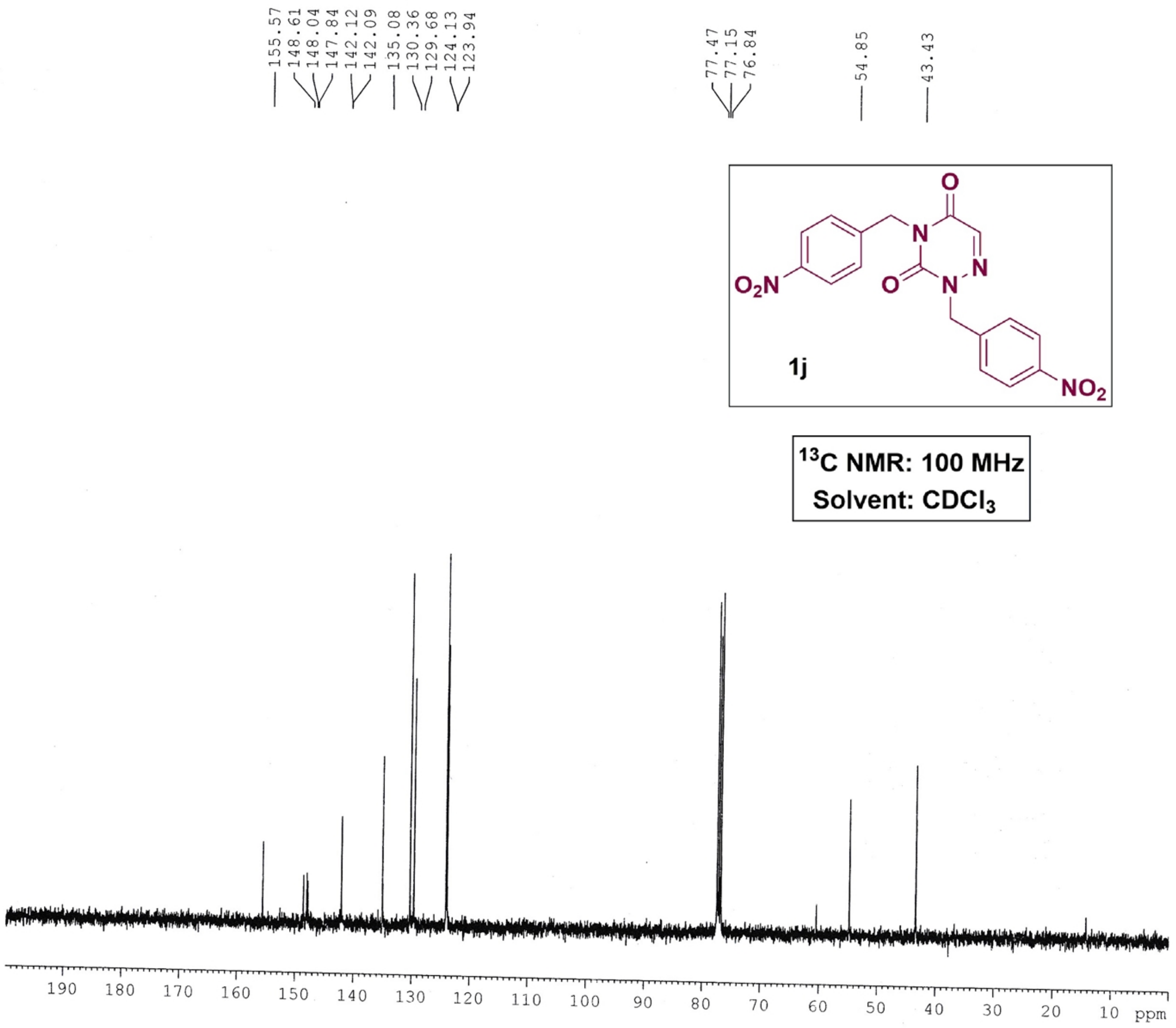
1i

^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                   93
PROCNO                   1

F2 - Acquisition Parameters
Date_           20250221
Time               10.55
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG           zgpg30
TD                 32768
SOLVENT            CDC13
NS                    72
DS                     2
SWH            24038.461 Hz
FIDRES          0.733596 Hz
AQ             0.6815744 sec
RG                186.42
DW                20.800 usec
DE                  6.50 usec
TE                 296.8 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         100.6278588 MHz
NUC1                 13C
P1                  8.90 usec
PLW1         54.00000000 W

======== CHANNEL f2 ========
SFO2         400.1516006 MHz
NUC2                  1H
CPDPRG[2         waltz16
PCPD2              90.00 usec
PLW2         12.00000000 W
PLW12         0.32231000 W
PLW13         0.16212000 W

F2 - Processing parameters
SI                 16384
SF           100.6177949 MHz
WDW                   EM
SSB       0
LB                  1.00 Hz
GB        0
PC                  1.40
```



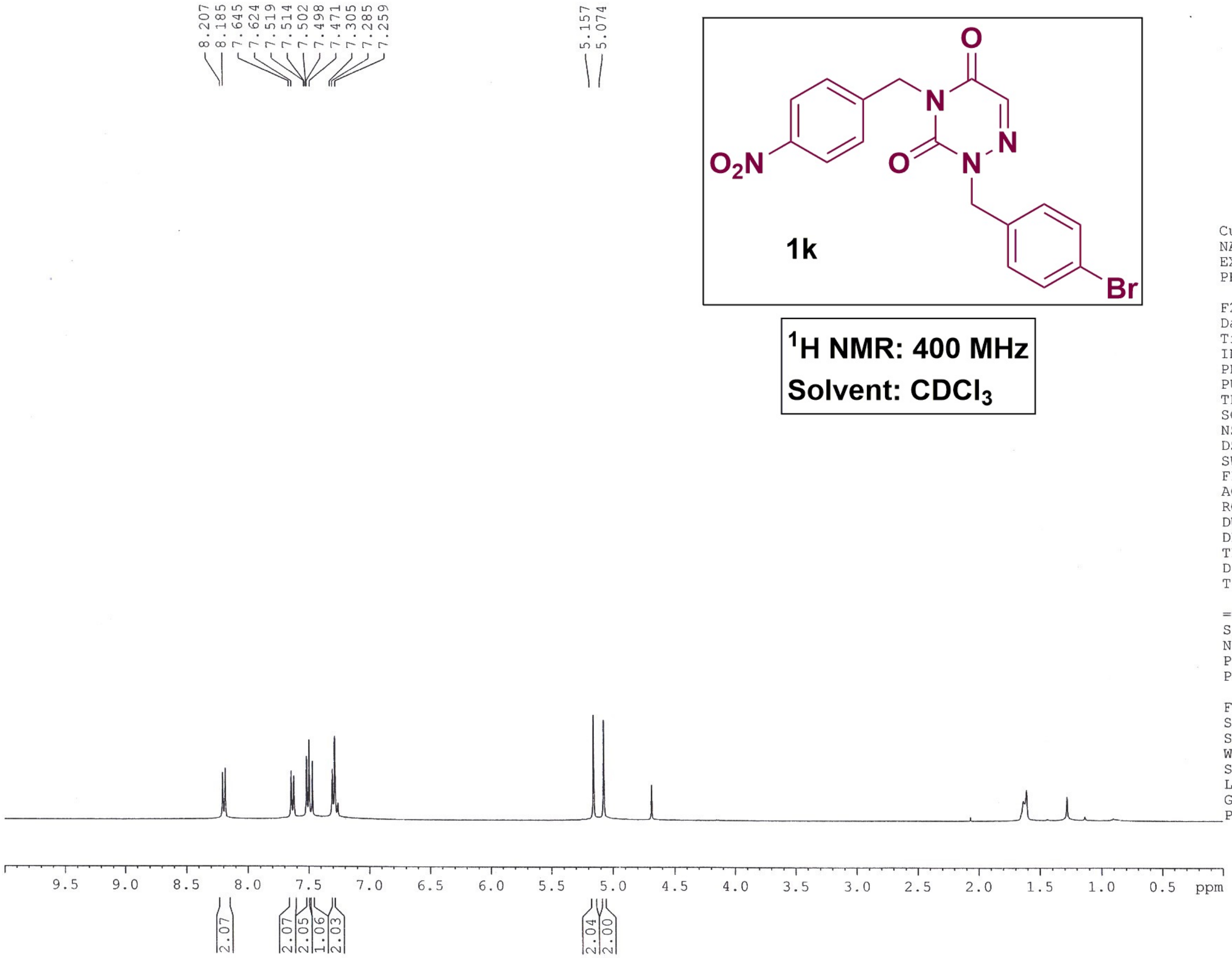
```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                  687
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240919
Time                 10.36
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG               zg30
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                   67.81
DW                  60.800 usec
DE                    6.50 usec
TE                   294.8 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1         400.1524711 MHz
NUC1                  1H
P1                  14.75 usec
PLW1         12.00000000 W

F2 - Processing parameters
SI                   16384
SF             400.1500097 MHz
WDW                     EM
SSB      0
LB                    0.30 Hz
GB       0
PC                    1.00
```



1j

^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME        Dr. A HAJRA-2025-13C
EXPNO                    72
PROCNO                    1

F2 - Acquisition Parameters
Date_              20250219
Time                   8.43
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG             zgpg30
TD                    32768
SOLVENT               CDCl3
NS                       90
DS                        2
SWH               24038.461 Hz
FIDRES             0.733596 Hz
AQ                0.6815744 sec
RG                   186.42
DW                   20.800 usec
DE                     6.50 usec
TE                    298.5 K
D1               2.00000000 sec
D11              0.03000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            100.6278588 MHz
NUC1                    13C
P1                     8.90 usec
PLW1            54.00000000 W

======== CHANNEL f2 ========
SFO2            400.1516006 MHz
NUC2                     1H
CPDPRG[2            waltz16
PCPD2                 90.00 usec
PLW2            12.00000000 W
PLW12            0.32231000 W
PLW13            0.16212000 W

F2 - Processing parameters
SI                    16384
SF              100.6177879 MHz
WDW                      EM
SSB       0
LB                     1.00 Hz
GB        0
PC                     1.40
```

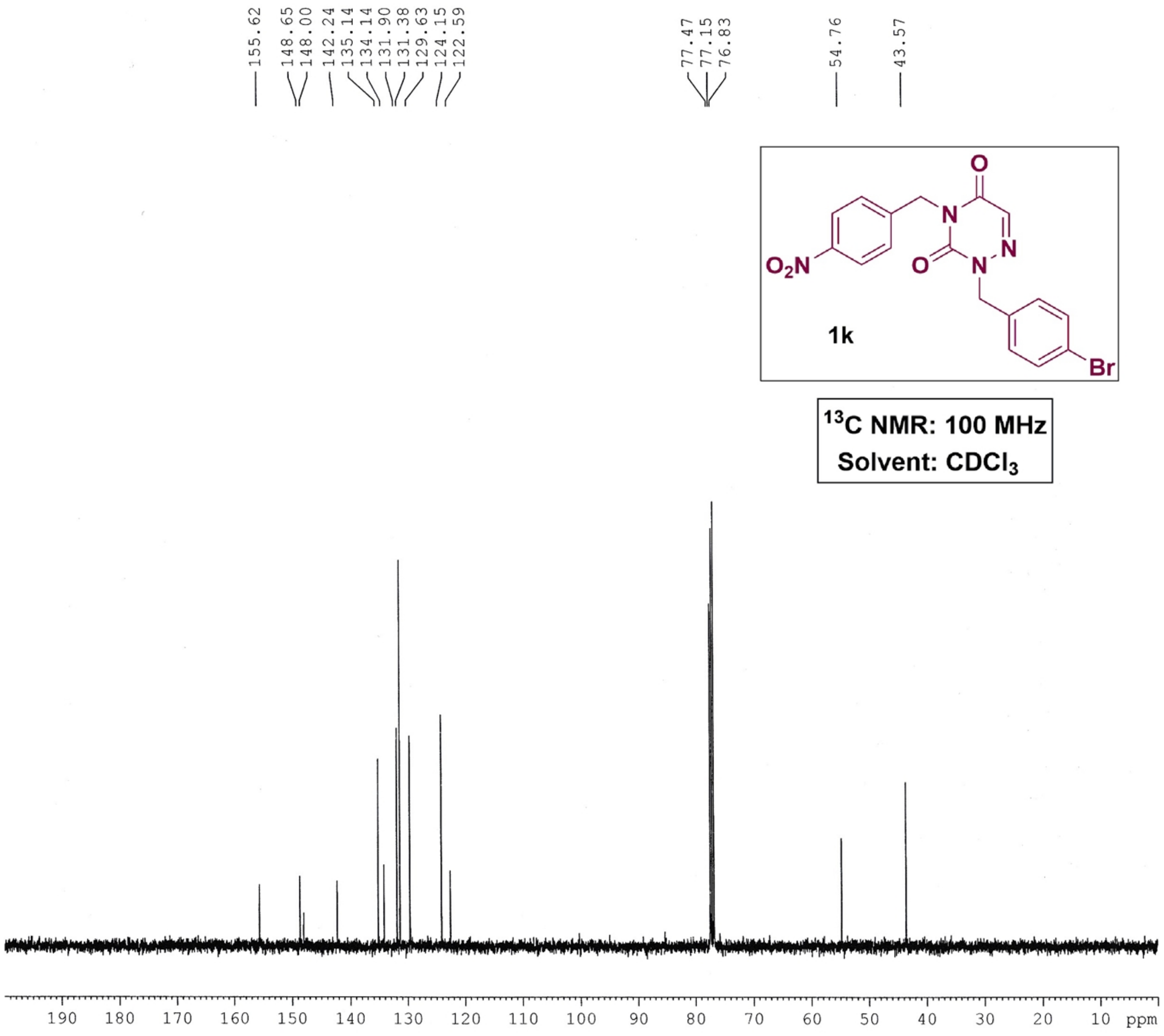


1k

^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

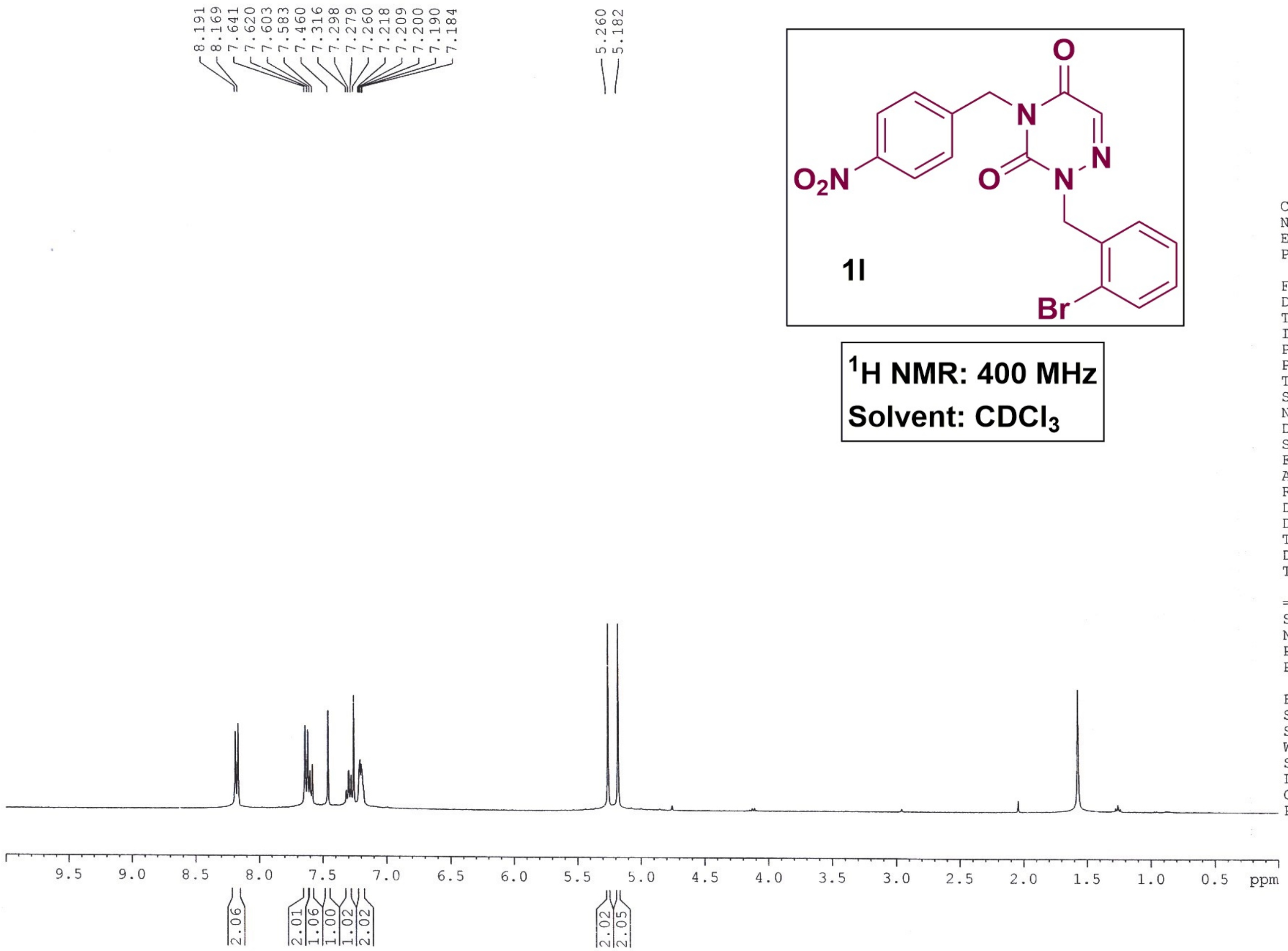
```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                  391
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240514
Time                 18.52
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG               zg30
TD                   32768
SOLVENT              CDC13
NS                       8
DS                       2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                   135.7
DW                  60.800 usec
DE                    6.50 usec
TE                   297.8 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1          400.1524711 MHz
NUC1                   1H
P1                   14.75 usec
PLW1          12.00000000 W

F2 - Processing parameters
SI                   16384
SF            400.1499992 MHz
WDW                     EM
SSB      0
LB                    0.30 Hz
GB       0
PC                    1.00
```



^{13}C NMR: 100 MHz

Solvent: $CDCl_3$

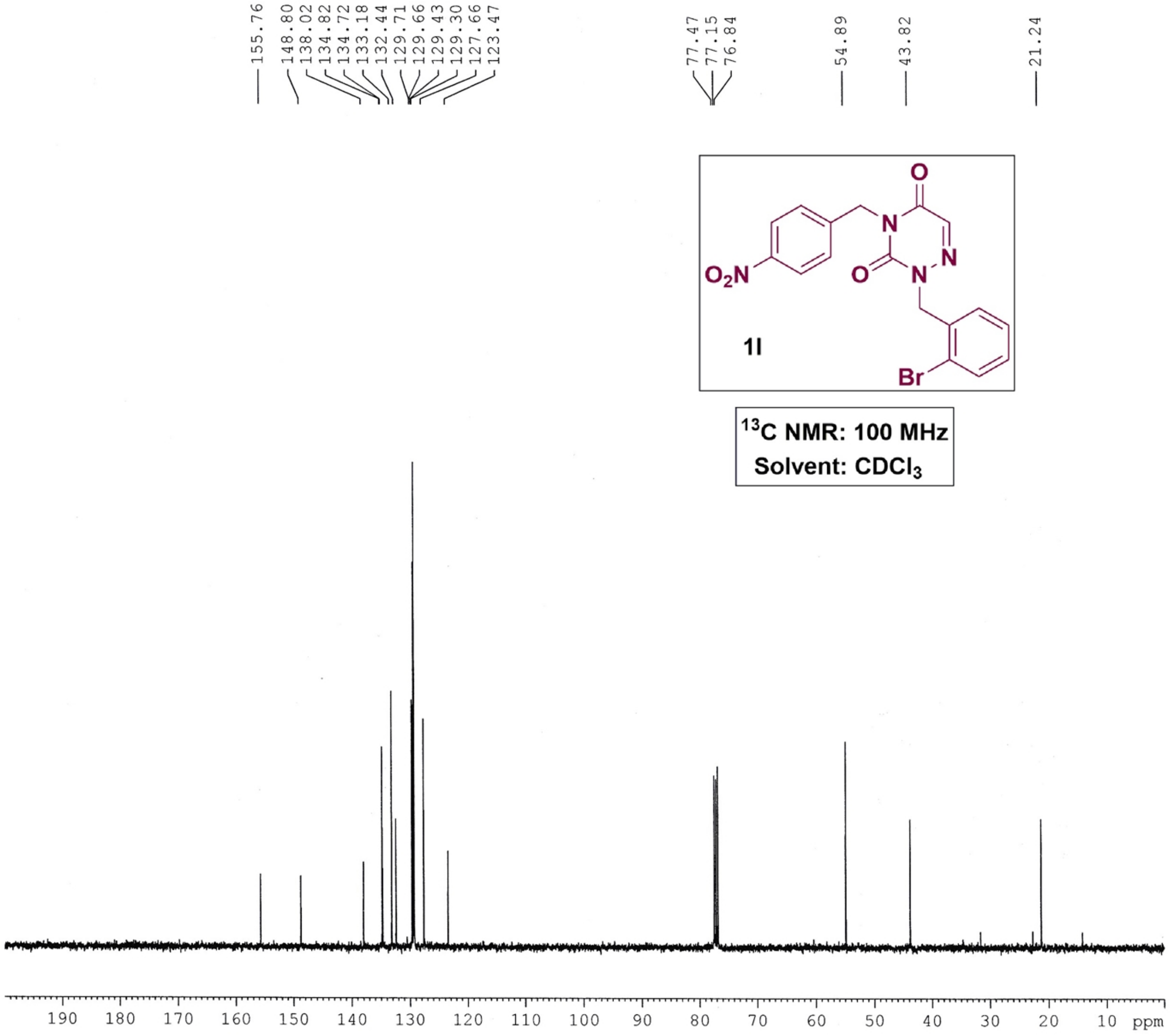
```
Current Data Parameters
NAME       Dr. A HAJRA-2025-13C
EXPNO                     106
PROCNO                      1

F2 - Acquisition Parameters
Date_               20250224
Time                   12.49
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG              zgpg30
TD                    32768
SOLVENT               CDCl3
NS                      100
DS                        2
SWH               24038.461 Hz
FIDRES             0.733596 Hz
AQ                0.6815744 sec
RG                   186.42
DW                   20.800 usec
DE                     6.50 usec
TE                    294.5 K
D1               2.00000000 sec
D11              0.03000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            100.6278588 MHz
NUC1                    13C
P1                     8.90 usec
PLW1            54.00000000 W

======== CHANNEL f2 ========
SFO2            400.1516006 MHz
NUC2                     1H
CPDPRG[2            waltz16
PCPD2                 90.00 usec
PLW2            12.00000000 W
PLW12            0.32231000 W
PLW13            0.16212000 W

F2 - Processing parameters
SI                    16384
SF              100.6177887 MHz
WDW                      EM
SSB          0
LB                     1.00 Hz
GB           0
PC                     1.40
```



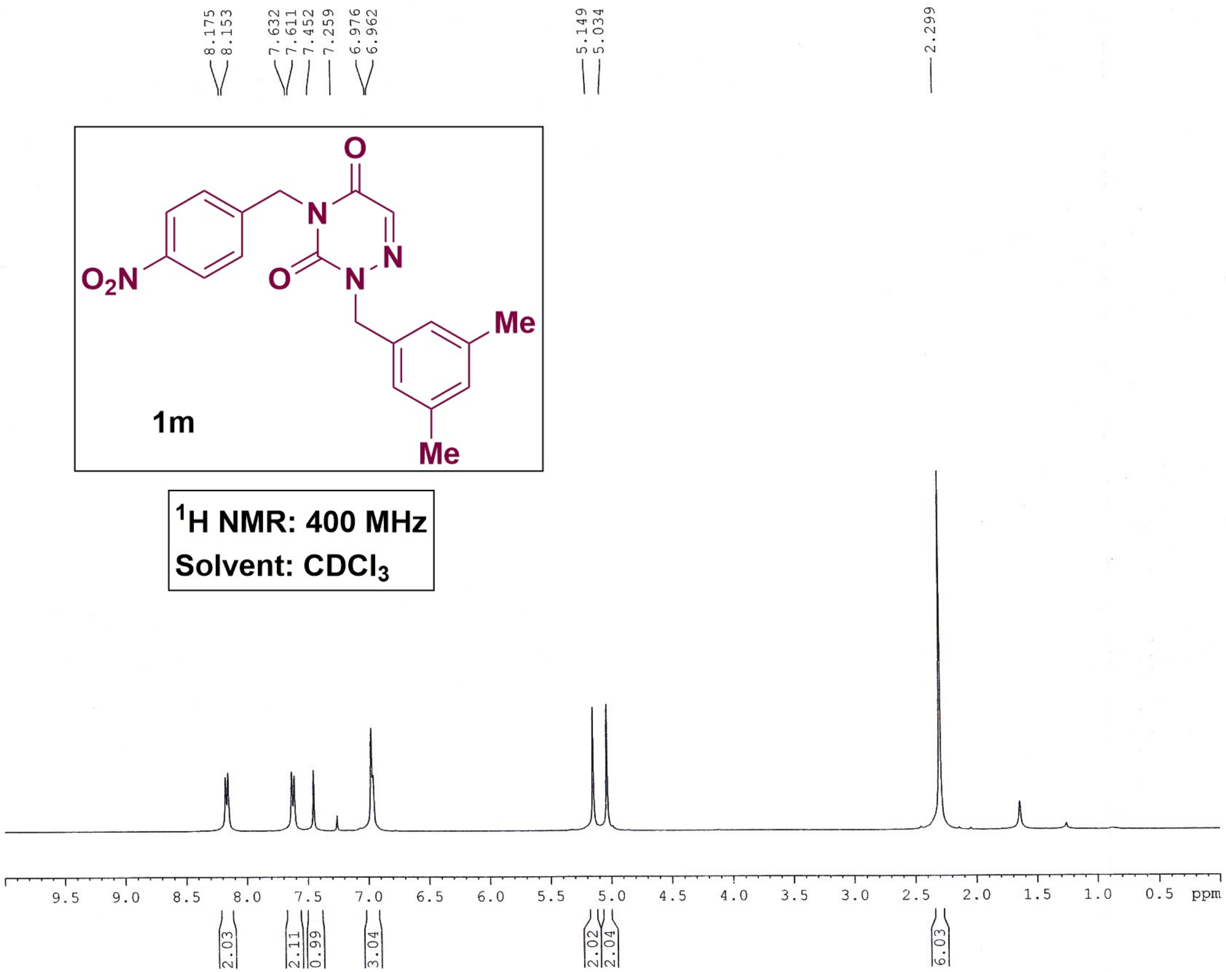
1l

^{1}H NMR: 400 MHz
Solvent: CDCl$_3$

```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                   398
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240515
Time                  20.00
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                   186.42
DW                   60.800 usec
DE                     6.50 usec
TE                    298.2 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500098 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```



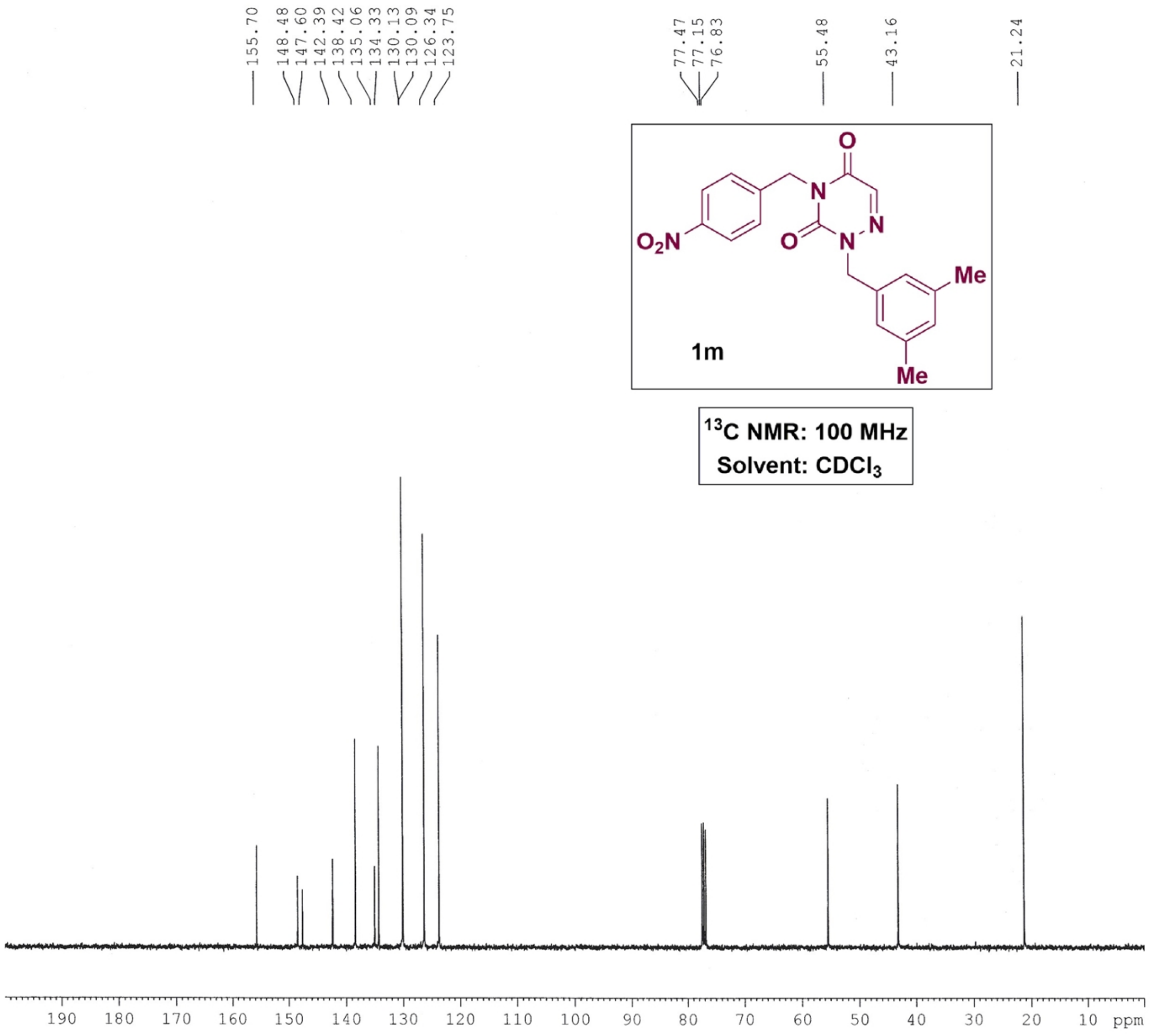
```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                    105
PROCNO                     1

F2 - Acquisition Parameters
Date_               20250224
Time                   12.37
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG              zgpg30
TD                    32768
SOLVENT               CDCl3
NS                       40
DS                        2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                   186.42
DW                   20.800 usec
DE                     6.50 usec
TE                    294.5 K
D1               2.00000000 sec
D11              0.03000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1          100.6278588 MHz
NUC1                   13C
P1                     8.90 usec
PLW1           54.00000000 W

======== CHANNEL f2 ========
SFO2          400.1516006 MHz
NUC2                    1H
CPDPRG[2            waltz16
PCPD2                 90.00 usec
PLW2           12.00000000 W
PLW12           0.32231000 W
PLW13           0.16212000 W

F2 - Processing parameters
SI                    16384
SF            100.6177983 MHz
WDW                      EM
SSB       0
LB                     1.00 Hz
GB        0
PC                     1.40
```



1m

^{1}H NMR: 400 MHz
Solvent: $CDCl_3$

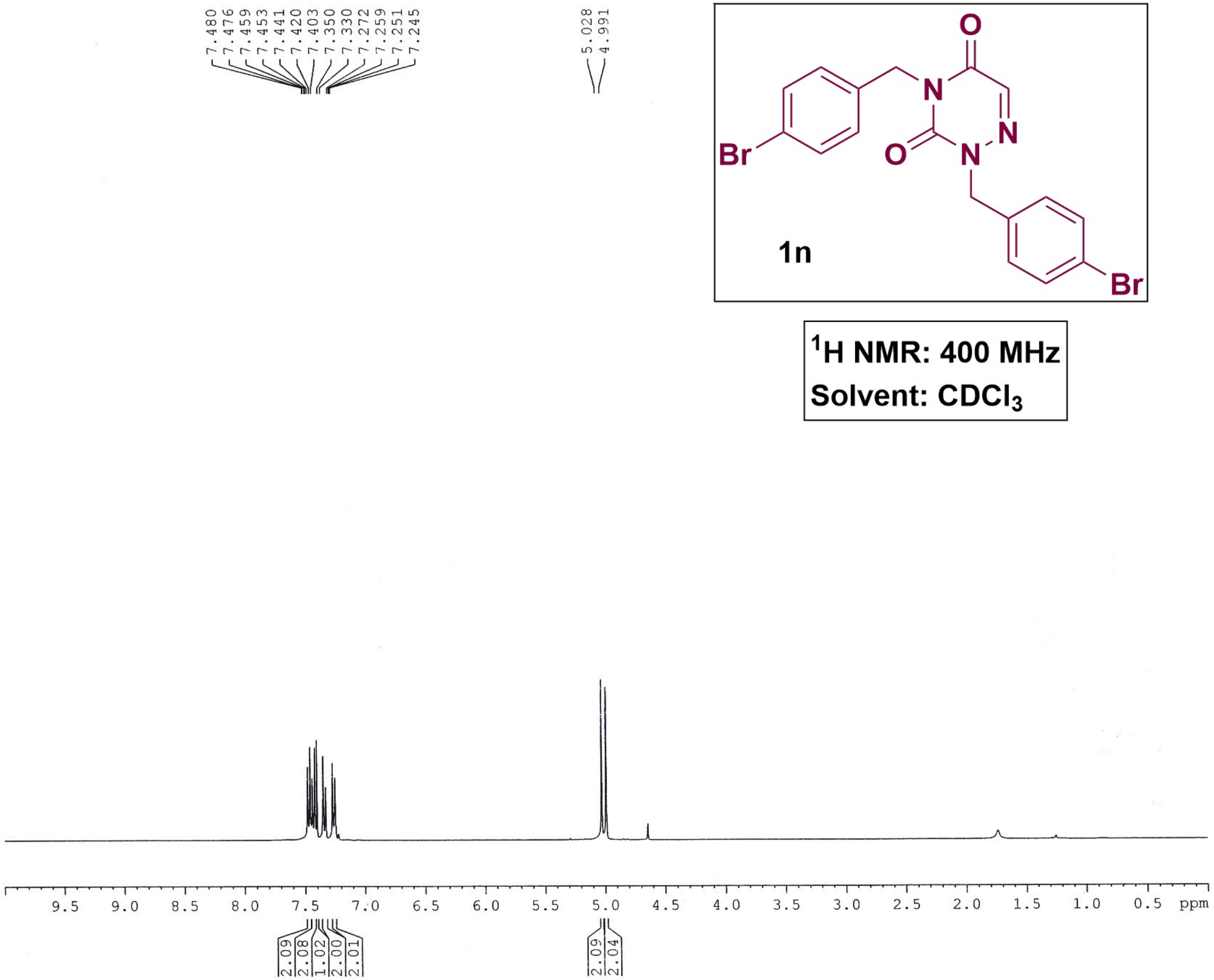
```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                   637
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240823
Time                  11.47
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                    77.59
DW                   60.800 usec
DE                     6.50 usec
TE                    296.2 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500099 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```



1m

^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                   78
PROCNO                   1

F2 - Acquisition Parameters
Date_             20250219
Time                 11.10
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                  32768
SOLVENT             CDCl3
NS                     95
DS                      2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                 186.42
DW                 20.800 usec
DE                   6.50 usec
TE                  295.6 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1          100.6278588 MHz
NUC1                  13C
P1                   8.90 usec
PLW1          54.00000000 W

======== CHANNEL f2 ========
SFO2          400.1516006 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2               90.00 usec
PLW2          12.00000000 W
PLW12          0.32231000 W
PLW13          0.16212000 W

F2 - Processing parameters
SI                  16384
SF            100.6178021 MHz
WDW                    EM
SSB      0
LB                   1.00 Hz
GB       0
PC                   1.40
```

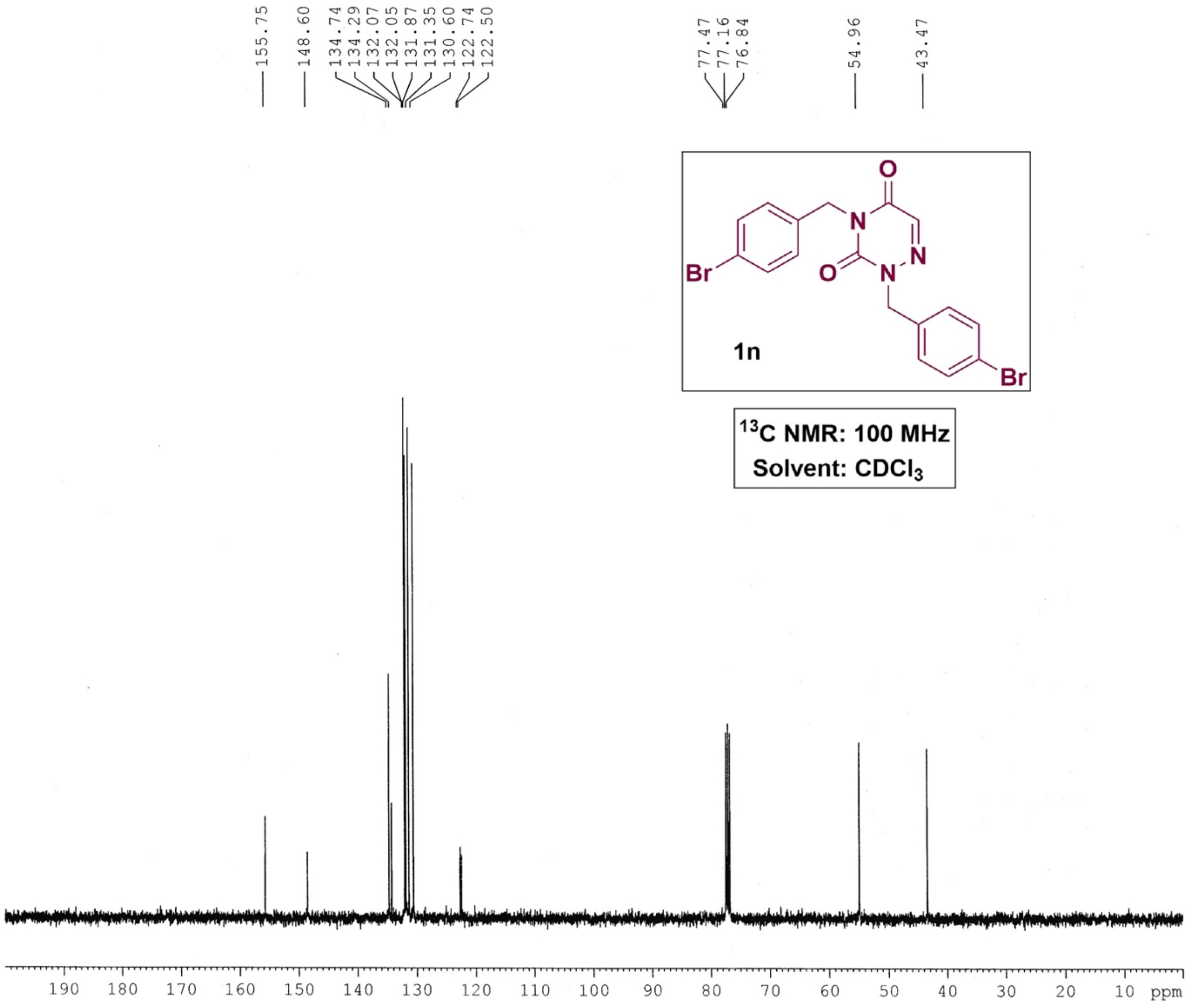


1n

^{1}H NMR: 400 MHz

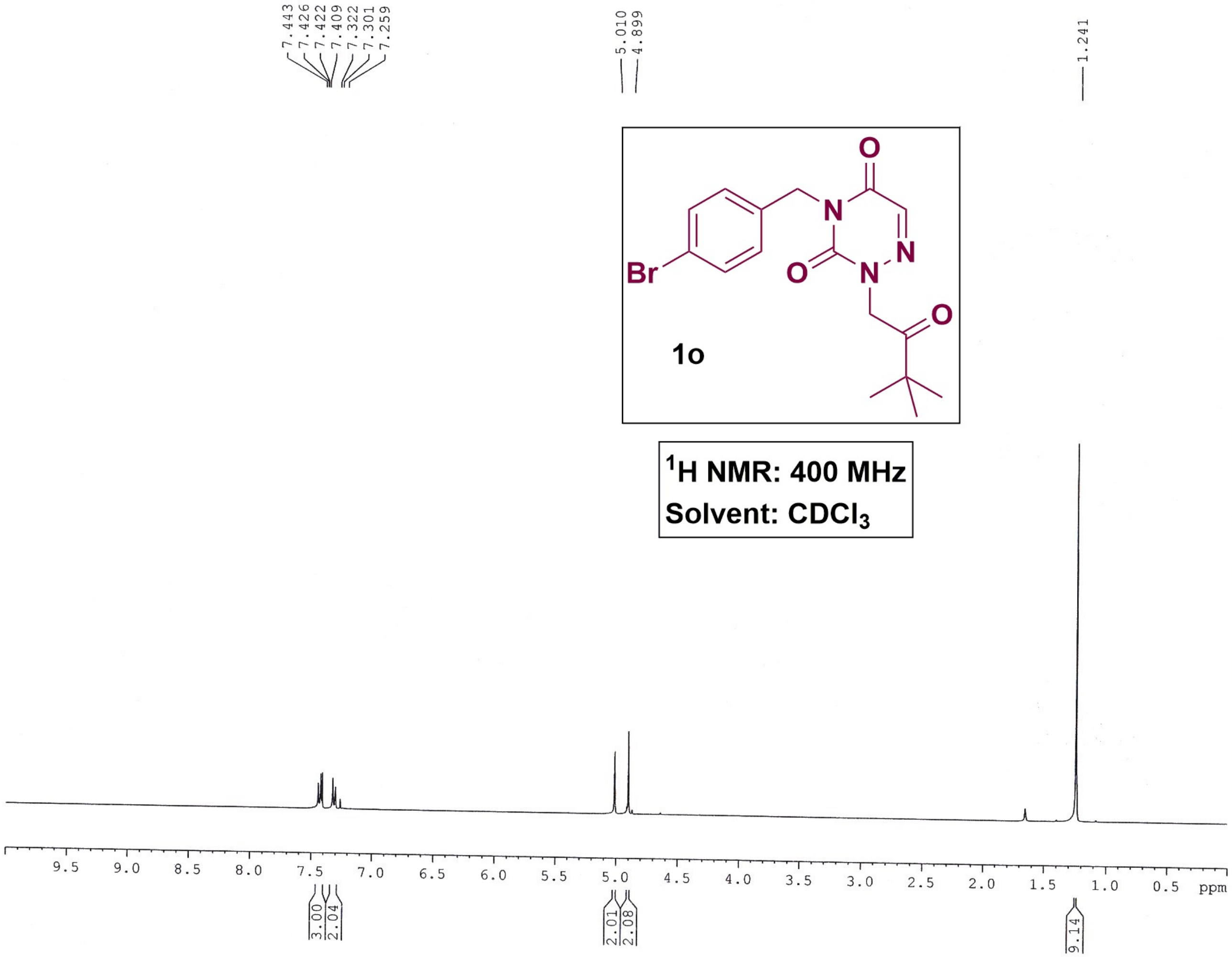
Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                 655
PROCNO                  1

F2 - Acquisition Parameters
Date_            20240828
Time                10.49
INSTRUM             spect
PROBHD   5 mm PABBO BB/
PULPROG              zg30
TD                  32768
SOLVENT             CDCl3
NS                      8
DS                      2
SWH              8223.685 Hz
FIDRES           0.250967 Hz
AQ              1.9922944 sec
RG                  67.81
DW                 60.800 usec
DE                   6.50 usec
TE                  291.2 K
D1            1.00000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1          400.1524711 MHz
NUC1                   1H
P1                  14.75 usec
PLW1          12.00000000 W

F2 - Processing parameters
SI                  16384
SF            400.1500096 MHz
WDW                    EM
SSB      0
LB                   0.30 Hz
GB       0
PC                   1.00
```



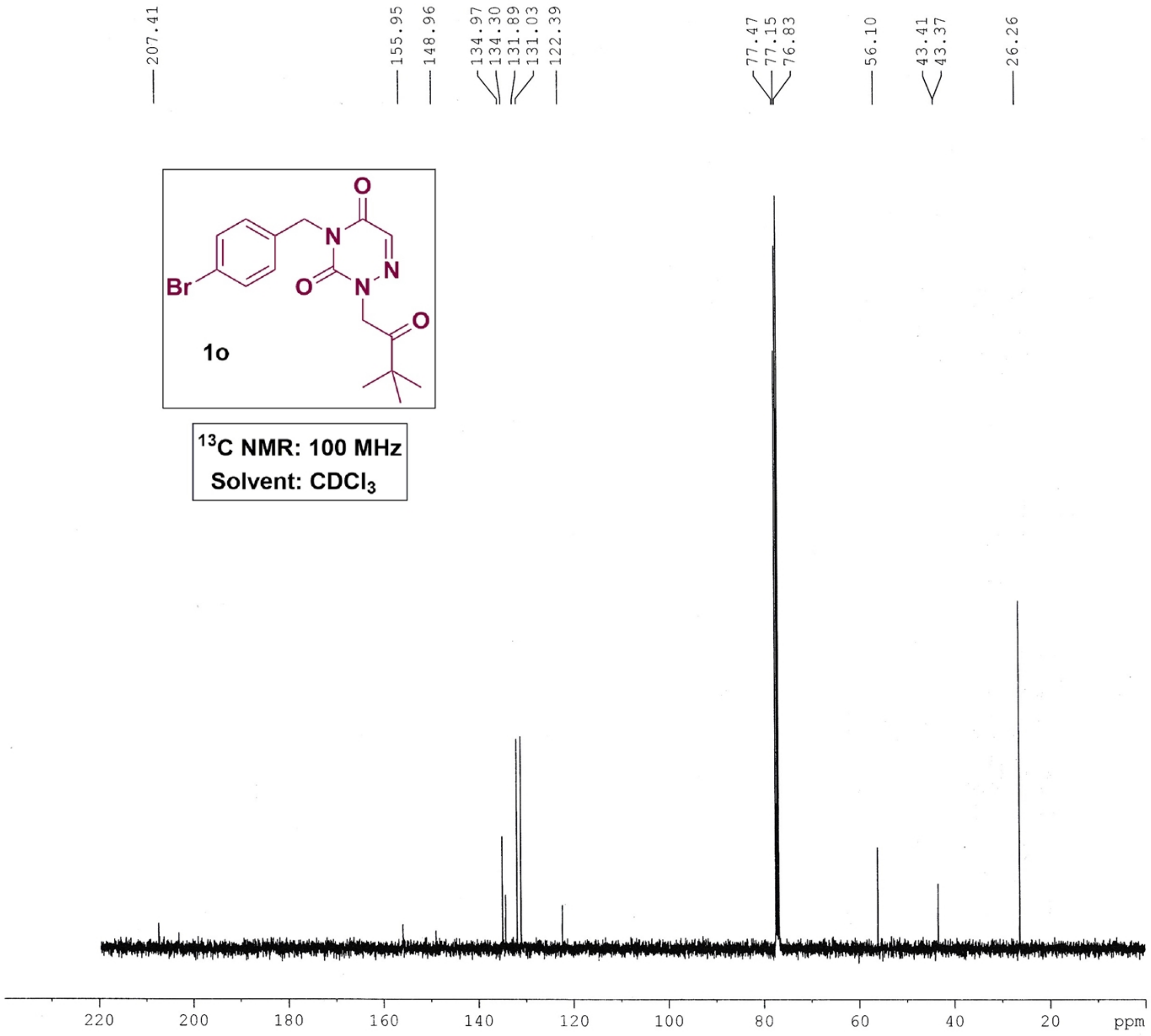
^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                     77
PROCNO                     1

F2 - Acquisition Parameters
Date_             20250219
Time                 10.58
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                  32768
SOLVENT             CDCl3
NS                    100
DS                      2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                 186.42
DW                 20.800 usec
DE                   6.50 usec
TE                  295.8 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1          100.6278588 MHz
NUC1                  13C
P1                   8.90 usec
PLW1          54.00000000 W

======== CHANNEL f2 ========
SFO2          400.1516006 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2               90.00 usec
PLW2          12.00000000 W
PLW12          0.32231000 W
PLW13          0.16212000 W

F2 - Processing parameters
SI                  16384
SF            100.6177887 MHz
WDW                    EM
SSB      0
LB                   1.00 Hz
GB       0
PC                   1.40
```



^{1}H NMR: 400 MHz
Solvent: CDCl$_3$

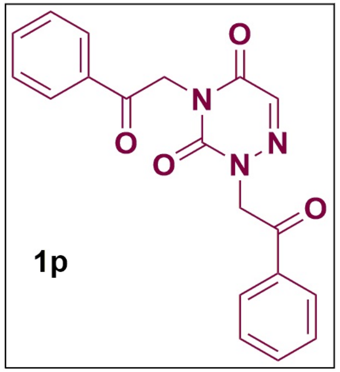
```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   662
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240830
Time                  12.35
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                    67.81
DW                   60.800 usec
DE                     6.50 usec
TE                    298.8 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500097 MHz
WDW                      EM
SSB       0
LB                     0.30 Hz
GB        0
PC                     1.00
```



1o

^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME     Dr. A HAJRA-2025-13C
EXPNO                  89
PROCNO                  1

F2 - Acquisition Parameters
Date_           20250220
Time               12.01
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG           zgpg30
TD                 32768
SOLVENT            CDCl3
NS                   230
DS                     2
SWH            24038.461 Hz
FIDRES          0.733596 Hz
AQ             0.6815744 sec
RG                186.42
DW                20.800 usec
DE                  6.50 usec
TE                 295.5 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         100.6278588 MHz
NUC1                 13C
P1                  8.90 usec
PLW1         54.00000000 W

======== CHANNEL f2 ========
SFO2         400.1516006 MHz
NUC2                  1H
CPDPRG[2         waltz16
PCPD2              90.00 usec
PLW2         12.00000000 W
PLW12         0.32231000 W
PLW13         0.16212000 W

F2 - Processing parameters
SI                 16384
SF           100.6177856 MHz
WDW                   EM
SSB      0
LB                  1.00 Hz
GB       0
PC                  1.40
```

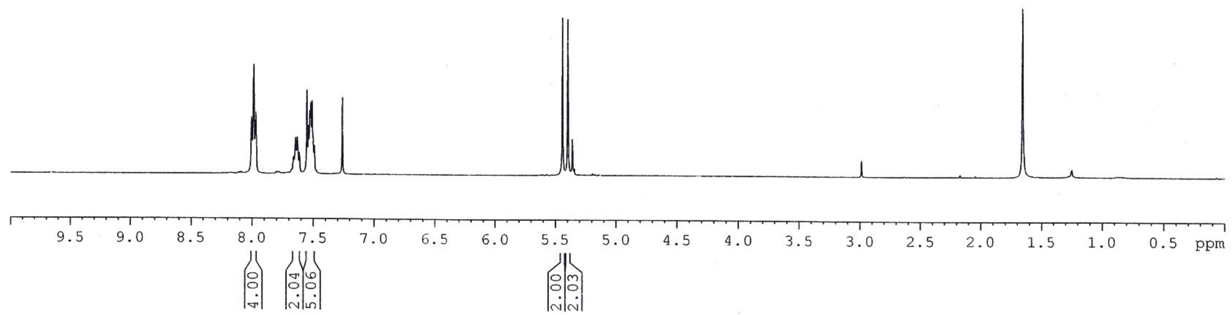


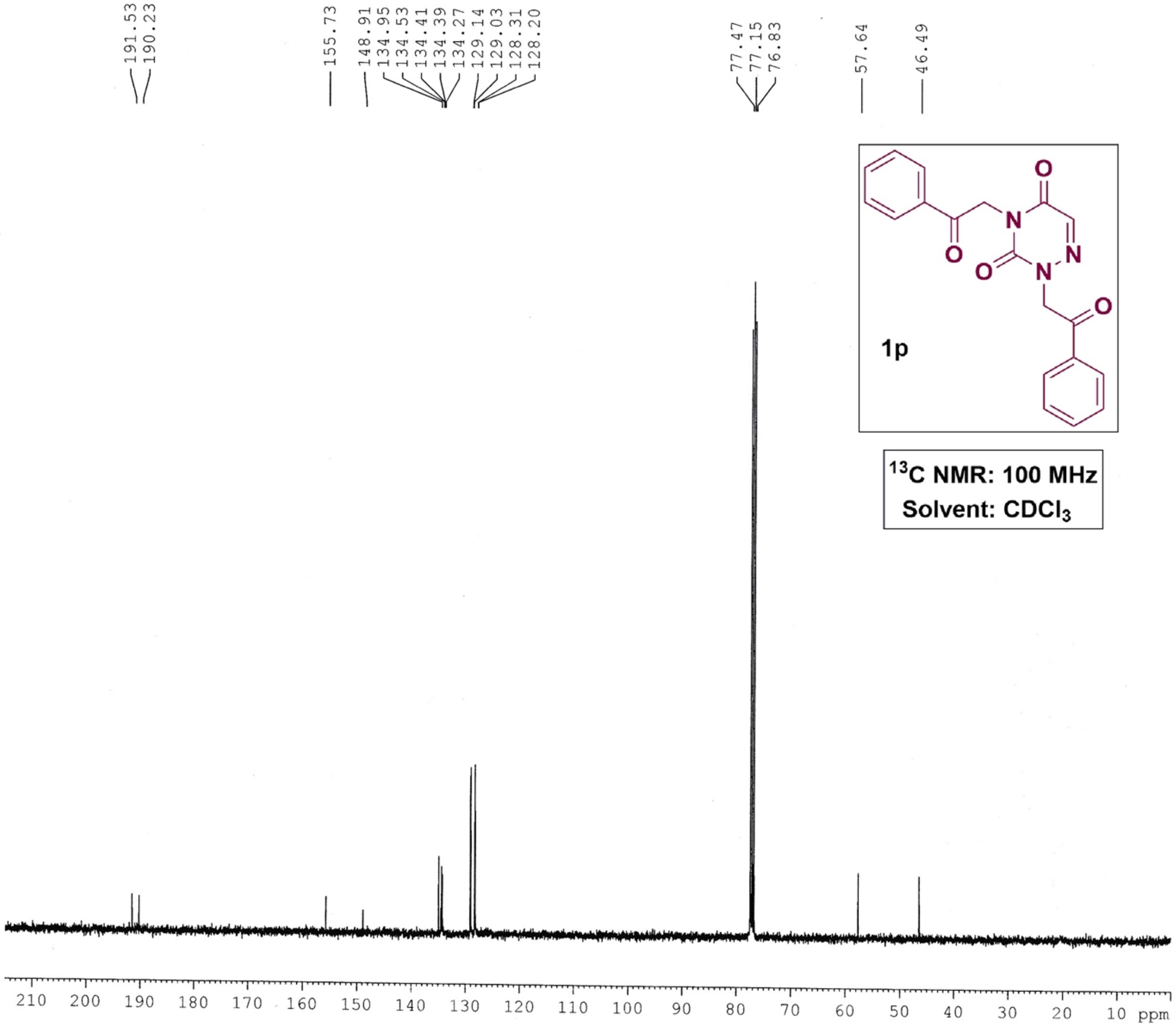
1p

^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                     574
PROCNO                      1

F2 - Acquisition Parameters
Date_                20240713
Time                    12.05
INSTRUM                 spect
PROBHD     5 mm PABBO BB/
PULPROG                  zg30
TD                      32768
SOLVENT                 CDCl3
NS                          8
DS                          2
SWH                  8223.685 Hz
FIDRES               0.250967 Hz
AQ                  1.9922944 sec
RG                      135.7
DW                     60.800 usec
DE                       6.50 usec
TE                      292.8 K
D1                 1.00000000 sec
TD0                         1

======== CHANNEL f1 ========
SFO1              400.1524711 MHz
NUC1                       1H
P1                      14.75 usec
PLW1              12.00000000 W

F2 - Processing parameters
SI                      16384
SF                400.1500097 MHz
WDW                        EM
SSB      0
LB                       0.30 Hz
GB       0
PC                       1.00
```

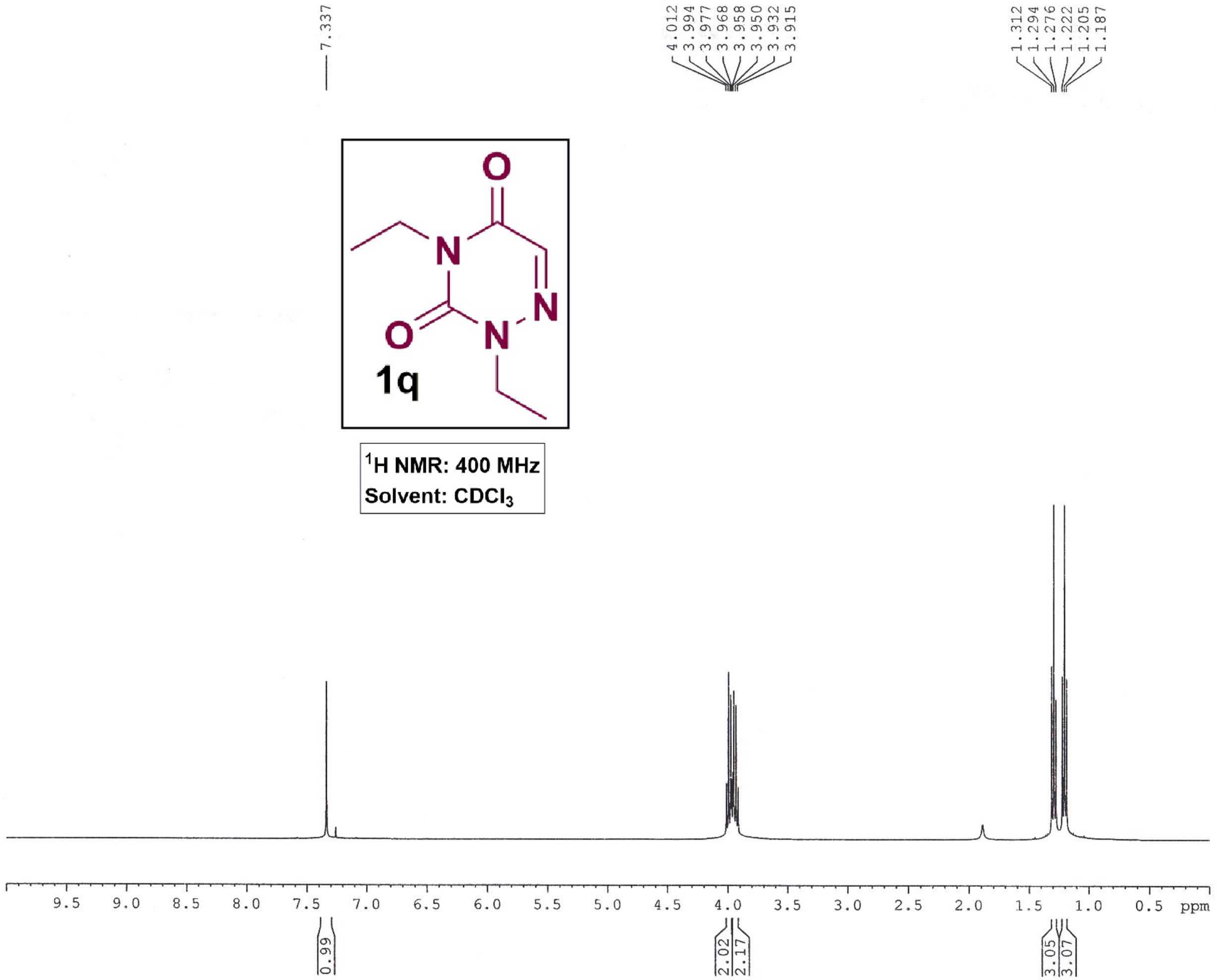




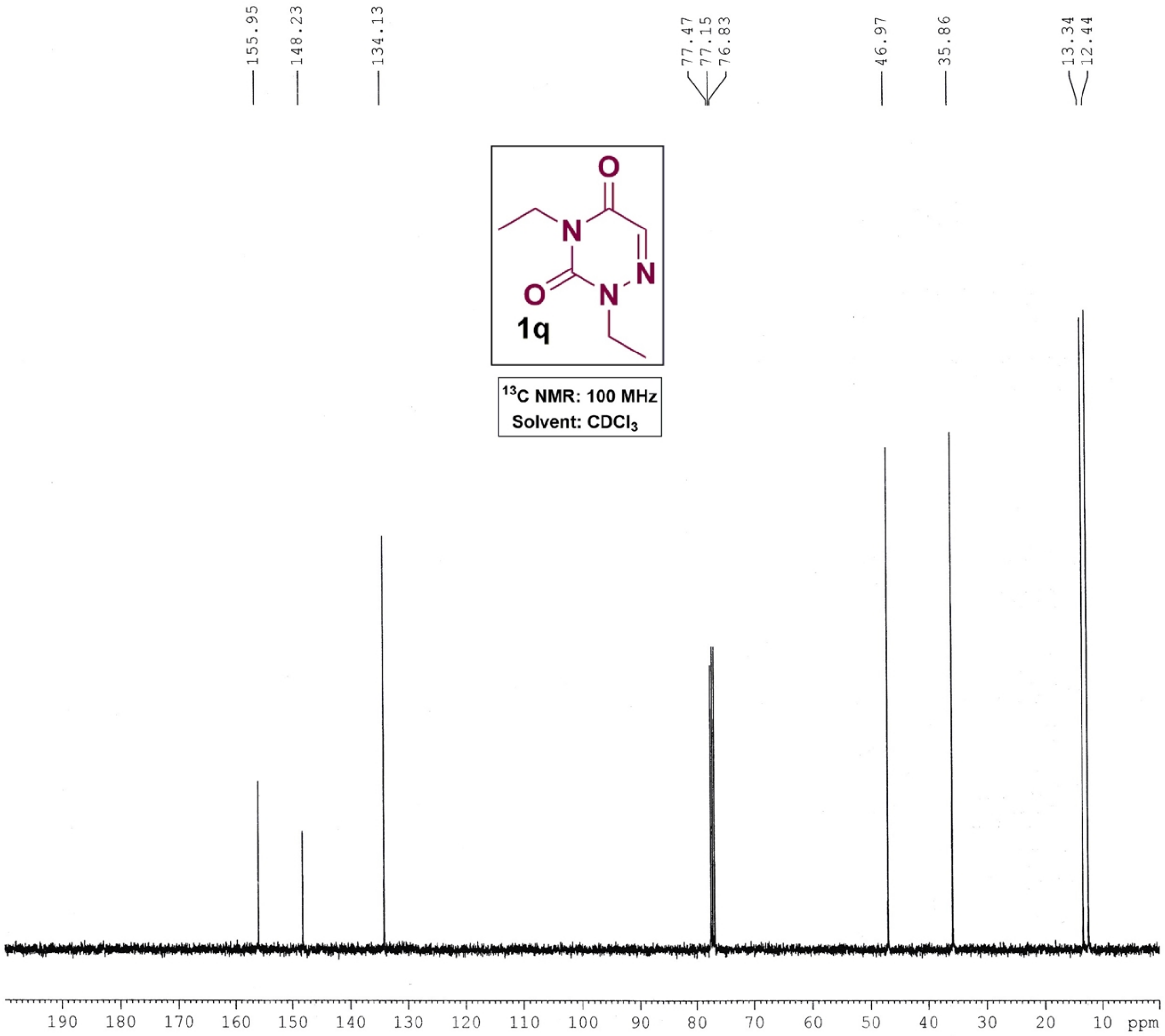
1p

^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

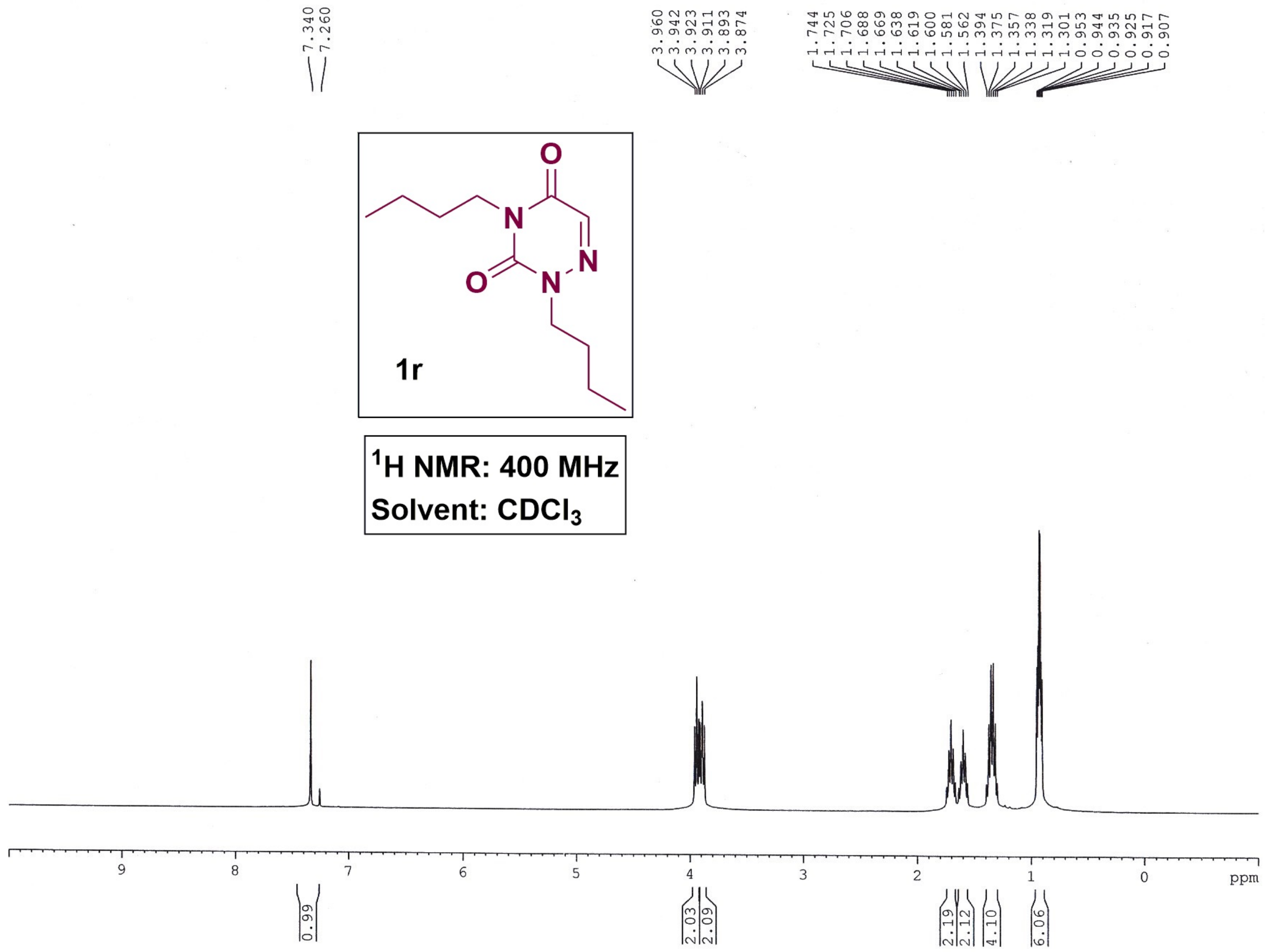
```
Current Data Parameters
NAME       Dr. A HAJRA-2025-13C
EXPNO                     80
PROCNO                     1

F2 - Acquisition Parameters
Date_              20250219
Time                  11.51
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG             zgpg30
TD                   32768
SOLVENT              CDC13
NS                     480
DS                       2
SWH              24038.461 Hz
FIDRES            0.733596 Hz
AQ               0.6815744 sec
RG                  186.42
DW                  20.800 usec
DE                    6.50 usec
TE                   295.4 K
D1              2.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1           100.6278588 MHz
NUC1                   13C
P1                    8.90 usec
PLW1           54.00000000 W

======== CHANNEL f2 ========
SFO2           400.1516006 MHz
NUC2                    1H
CPDPRG[2           waltz16
PCPD2                90.00 usec
PLW2           12.00000000 W
PLW12           0.32231000 W
PLW13           0.16212000 W

F2 - Processing parameters
SI                   16384
SF             100.6177858 MHz
WDW                     EM
SSB       0
LB                    1.00 Hz
GB        0
PC                    1.40
```



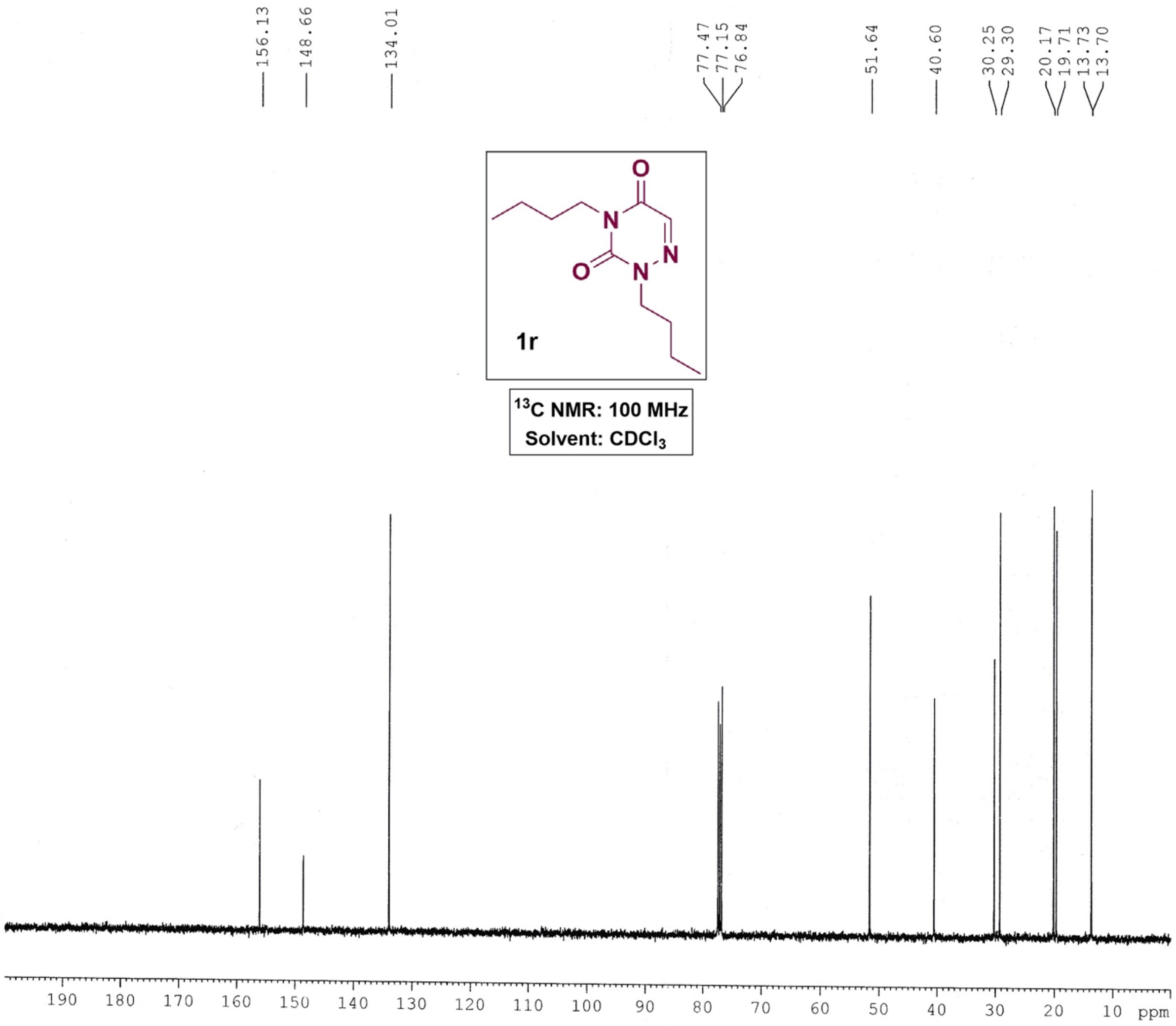
```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                 465
PROCNO                  1

F2 - Acquisition Parameters
Date_            20240529
Time                20.02
INSTRUM             spect
PROBHD   5 mm PABBO BB/
PULPROG              zg30
TD                  32768
SOLVENT             CDCl3
NS                      8
DS                      2
SWH              8223.685 Hz
FIDRES           0.250967 Hz
AQ              1.9922944 sec
RG                  54.07
DW                 60.800 usec
DE                   6.50 usec
TE                  295.6 K
D1             1.00000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1          400.1524711 MHz
NUC1                   1H
P1                  14.75 usec
PLW1          12.00000000 W

F2 - Processing parameters
SI                  16384
SF            400.1500096 MHz
WDW                    EM
SSB      0
LB                   0.30 Hz
GB       0
PC                   1.00
```



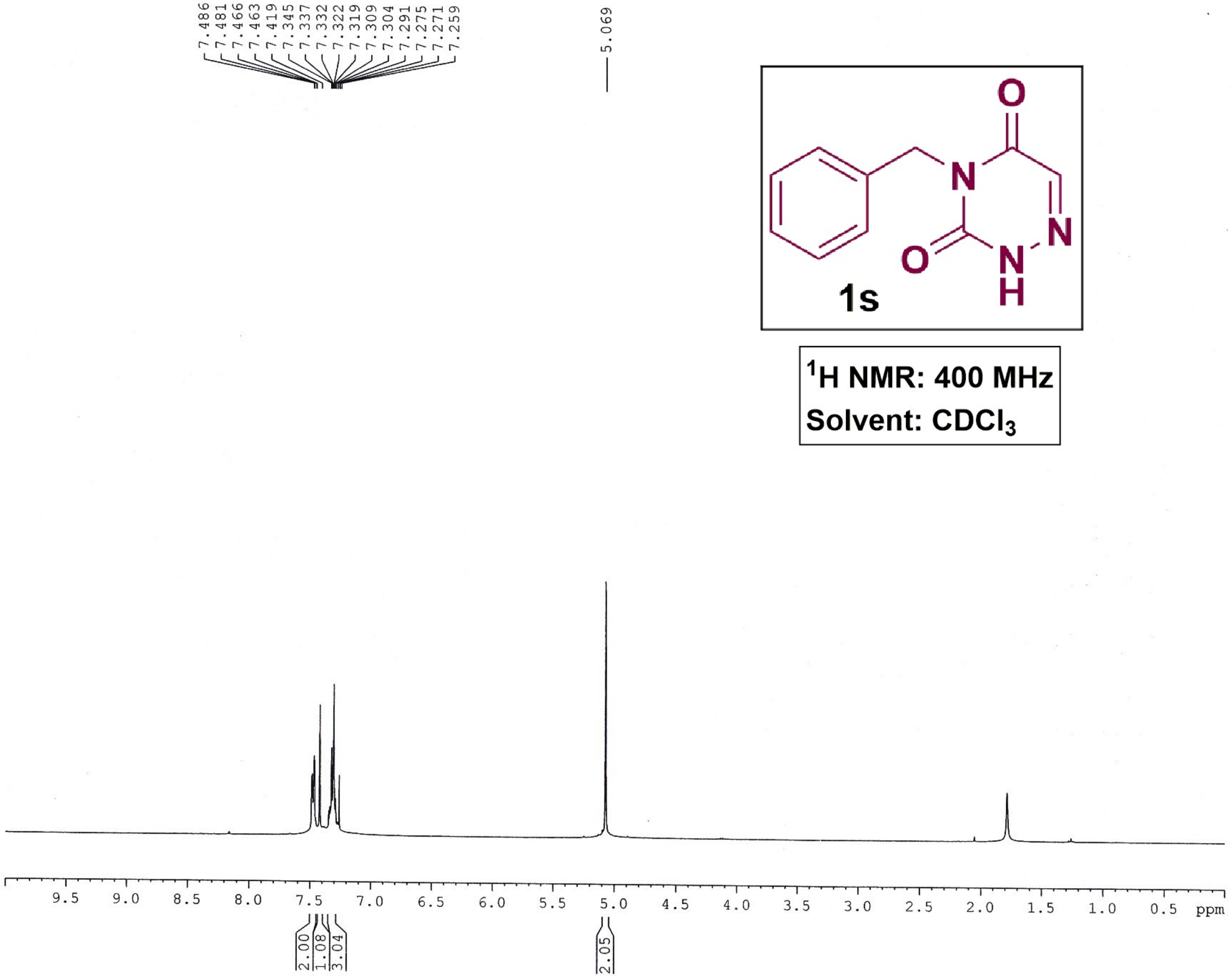
```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                   96
PROCNO                   1

F2 - Acquisition Parameters
Date_             20250221
Time                 11.25
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                  32768
SOLVENT             CDCl3
NS                     60
DS                      2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                 186.42
DW                 20.800 usec
DE                   6.50 usec
TE                  295.9 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1          100.6278588 MHz
NUC1                  13C
P1                   8.90 usec
PLW1          54.00000000 W

======== CHANNEL f2 ========
SFO2          400.1516006 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2               90.00 usec
PLW2          12.00000000 W
PLW12          0.32231000 W
PLW13          0.16212000 W

F2 - Processing parameters
SI                  16384
SF            100.6177931 MHz
WDW                    EM
SSB      0
LB                   1.00 Hz
GB       0
PC                   1.40
```



```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   396
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240515
Time                  18.05
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                    54.07
DW                   60.800 usec
DE                     6.50 usec
TE                    299.2 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500096 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```



```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                   87
PROCNO                   1

F2 - Acquisition Parameters
Date_           20250220
Time               11.29
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG          zgpg30
TD                32768
SOLVENT           CDCl3
NS                   70
DS                    2
SWH           24038.461 Hz
FIDRES         0.733596 Hz
AQ            0.6815744 sec
RG               186.42
DW               20.800 usec
DE                 6.50 usec
TE                296.1 K
D1           2.00000000 sec
D11          0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1        100.6278588 MHz
NUC1                13C
P1                 8.90 usec
PLW1        54.00000000 W

======== CHANNEL f2 ========
SFO2        400.1516006 MHz
NUC2                 1H
CPDPRG[2         waltz16
PCPD2             90.00 usec
PLW2        12.00000000 W
PLW12        0.32231000 W
PLW13        0.16212000 W

F2 - Processing parameters
SI                16384
SF          100.6177895 MHz
WDW                  EM
SSB      0
LB                 1.00 Hz
GB       0
PC                 1.40
```

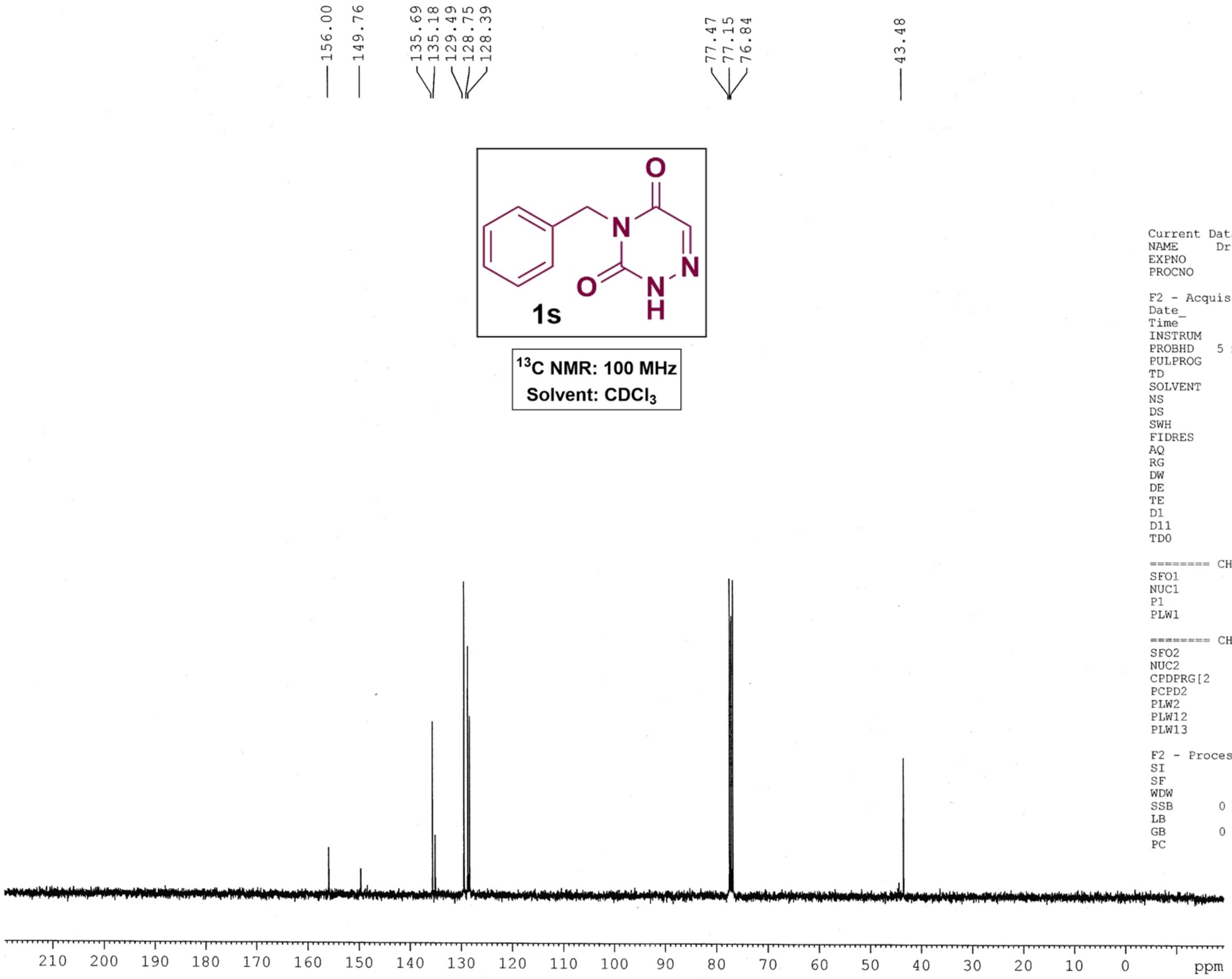


1s

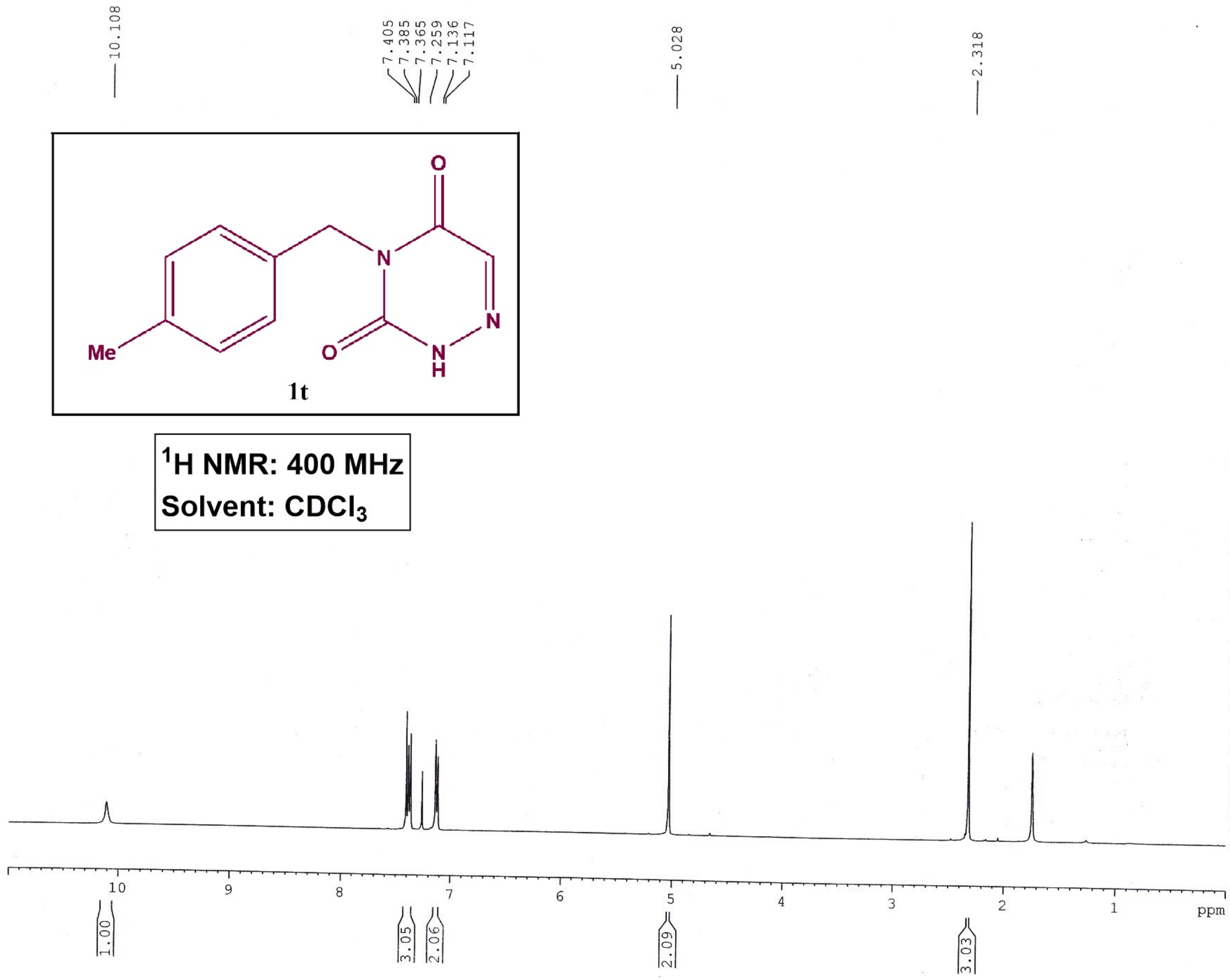
^1H NMR: 400 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                  639
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240823
Time                 12.10
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG               zg30
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                  120.16
DW                  60.800 usec
DE                    6.50 usec
TE                   295.8 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1           400.1524711 MHz
NUC1                    1H
P1                   14.75 usec
PLW1           12.00000000 W

F2 - Processing parameters
SI                   16384
SF             400.1500098 MHz
WDW                     EM
SSB       0
LB                    0.30 Hz
GB        0
PC                    1.00
```



```
Current Data Parameters
NAME       Dr. A HAJRA-2025-13
EXPNO                    84
PROCNO                    1

F2 - Acquisition Parameters
Date_              20250220
Time                  10.54
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG              zgpg30
TD                    32768
SOLVENT               CDC13
NS                      130
DS                        2
SWH               24038.461 Hz
FIDRES             0.733596 Hz
AQ                0.6815744 sec
RG                   186.42
DW                   20.800 usec
DE                     6.50 usec
TE                    296.4 K
D1               2.00000000 sec
D11              0.03000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1          100.6278588 MHz
NUC1                  13C
P1                   8.90 usec
PLW1          54.00000000 W

======== CHANNEL f2 ========
SFO2          400.1516006 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2               90.00 usec
PLW2          12.00000000 W
PLW12          0.32231000 W
PLW13          0.16212000 W

F2 - Processing parameters
SI                  16384
SF            100.6177880 MHz
WDW                    EM
SSB      0
LB                   1.00 Hz
GB       0
PC                   1.40
```

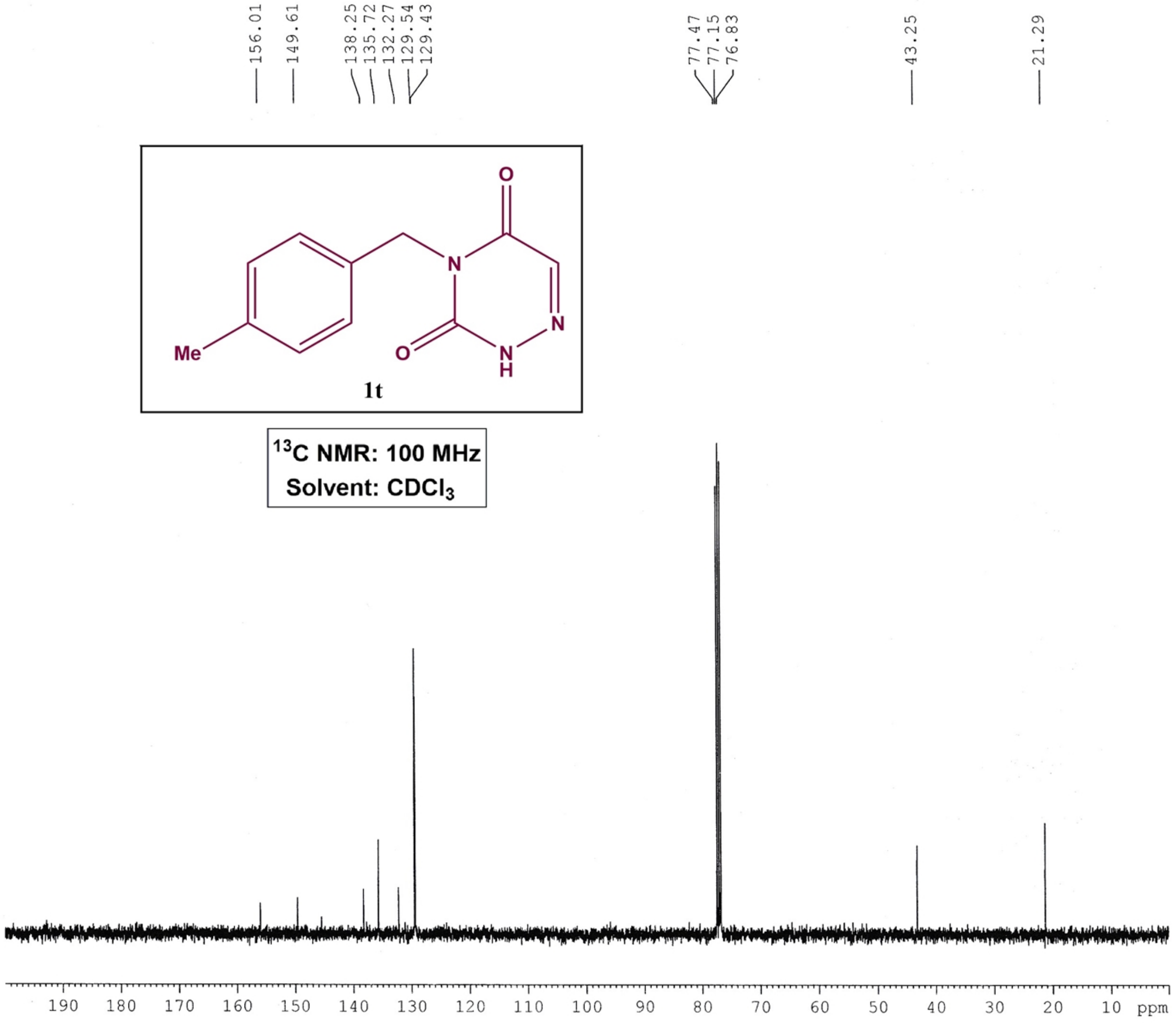


1t

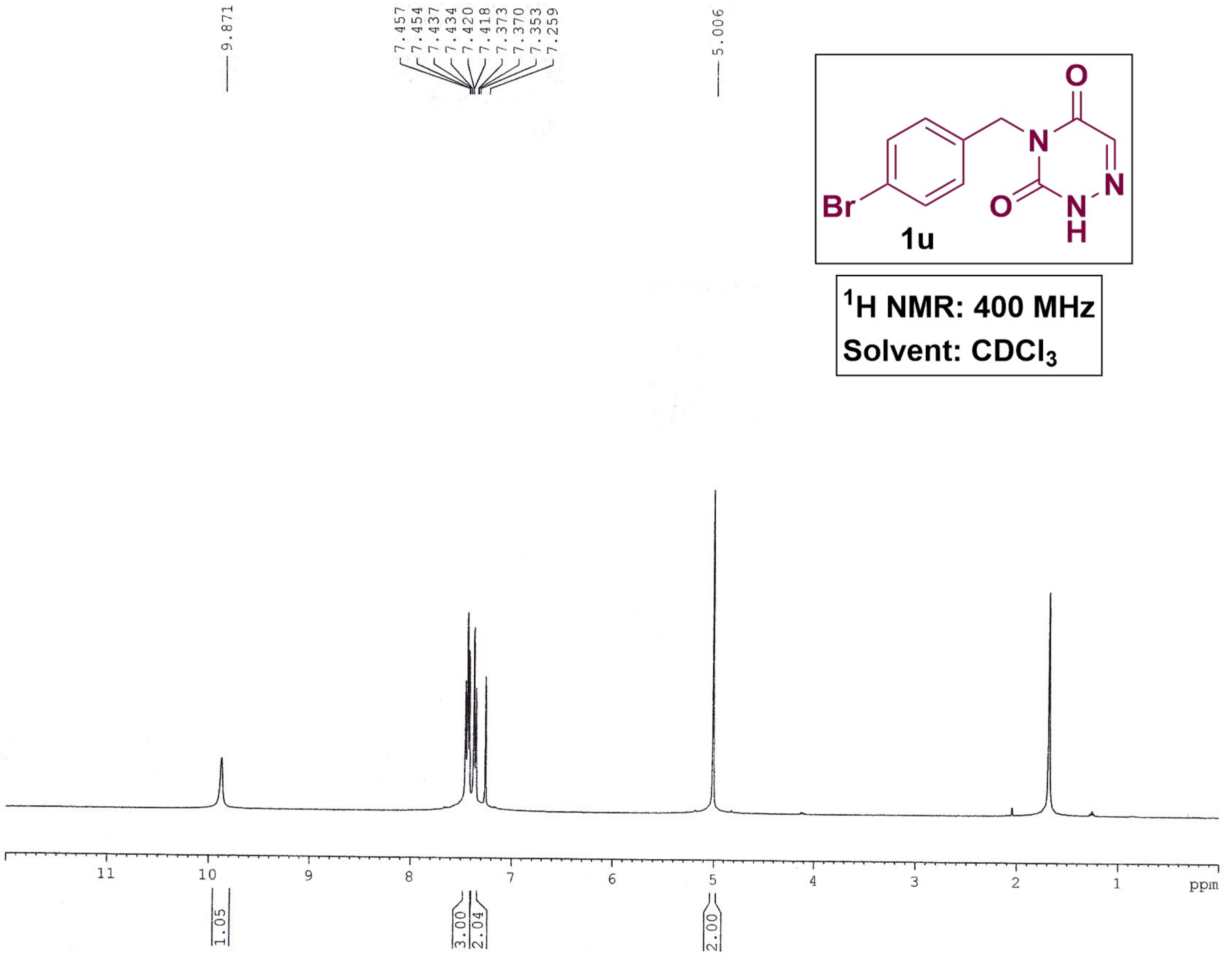
^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME        Dr. A HAJRA 2024 1H
EXPNO                   575
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240713
Time                  12.18
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                    135.7
DW                   60.800 usec
DE                     6.50 usec
TE                    292.9 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1           400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500097 MHz
WDW                      EM
SSB         0
LB                     0.30 Hz
GB          0
PC                     1.00
```



```
Current Data Parameters
NAME     Dr. A HAJRA-2025-13C
EXPNO                    75
PROCNO                    1

F2 - Acquisition Parameters
Date_              20250219
Time                   9.19
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG             zgpg30
TD                   32768
SOLVENT              CDCl3
NS                     110
DS                       2
SWH              24038.461 Hz
FIDRES            0.733596 Hz
AQ               0.6815744 sec
RG                  186.42
DW                  20.800 usec
DE                    6.50 usec
TE                   297.4 K
D1              2.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1         100.6278588 MHz
NUC1                 13C
P1                  8.90 usec
PLW1         54.00000000 W

======== CHANNEL f2 ========
SFO2         400.1516006 MHz
NUC2                  1H
CPDPRG[2          waltz16
PCPD2              90.00 usec
PLW2         12.00000000 W
PLW12         0.32231000 W
PLW13         0.16212000 W

F2 - Processing parameters
SI                 16384
SF           100.6177859 MHz
WDW                   EM
SSB      0
LB                  1.00 Hz
GB       0
PC                  1.40
```

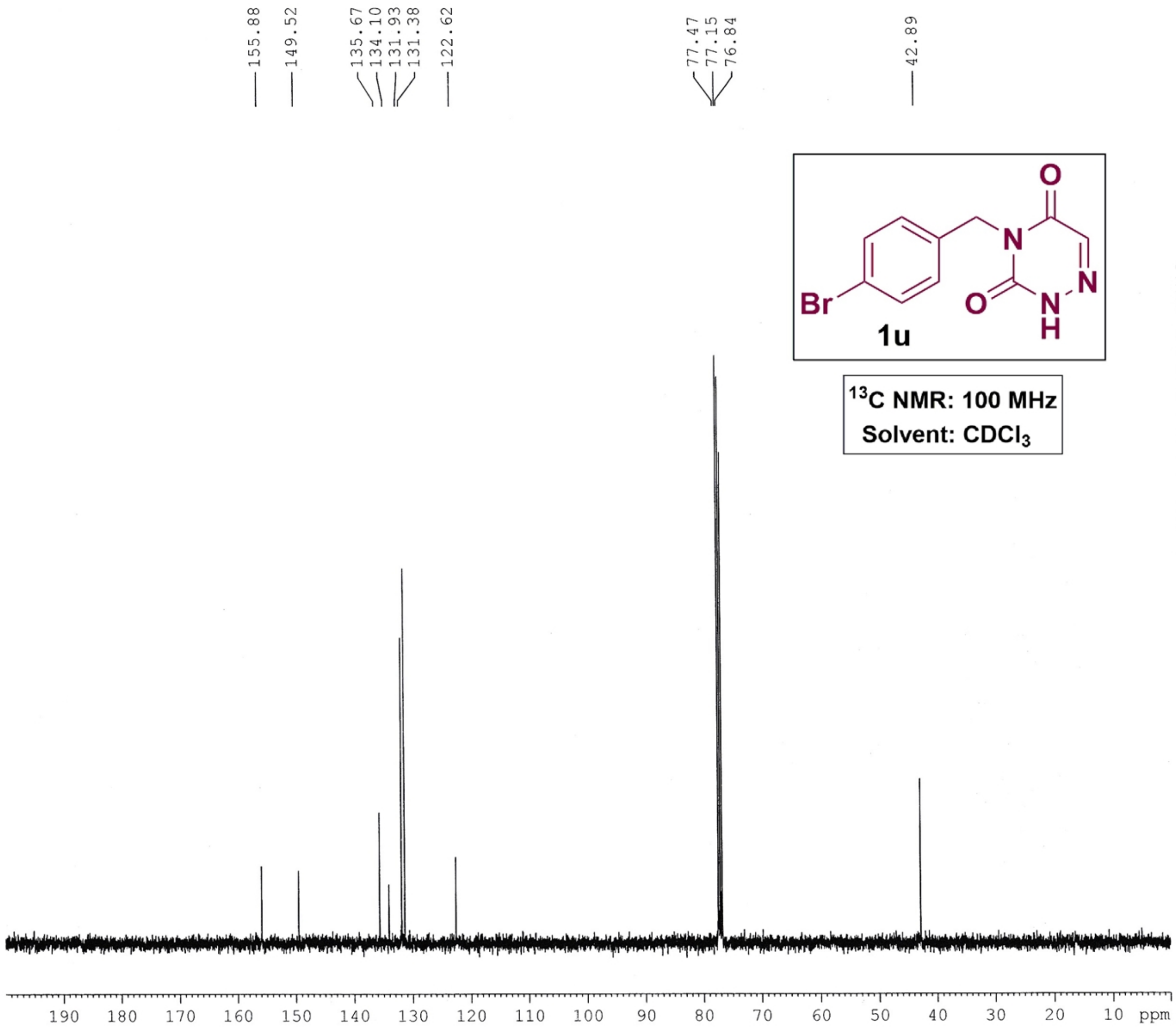


1u

^{1}H NMR: 400 MHz

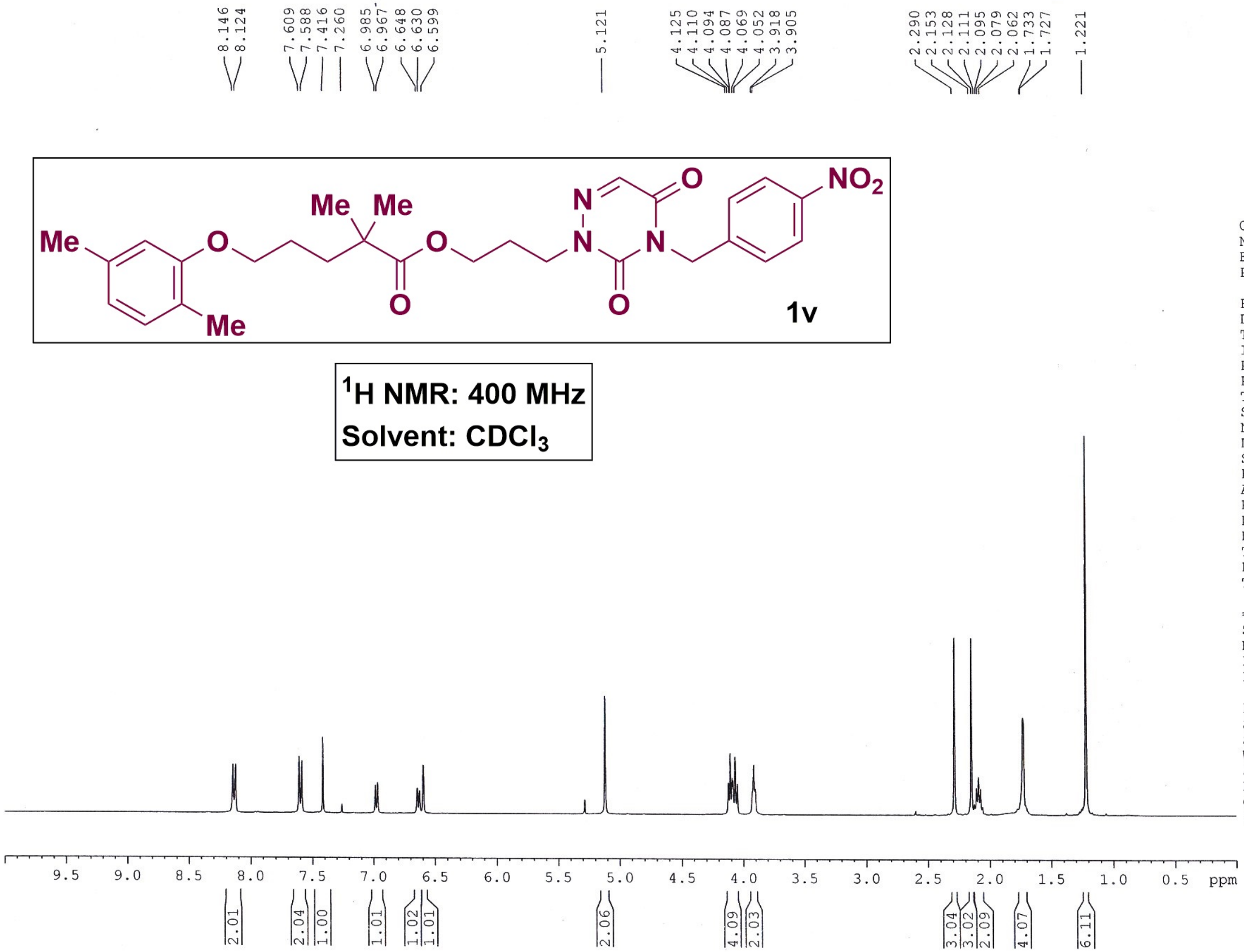
Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                 470
PROCNO                  1

F2 - Acquisition Parameters
Date_            20240603
Time                 9.42
INSTRUM             spect
PROBHD    5 mm PABBO BB/
PULPROG              zg30
TD                  32768
SOLVENT             CDCl3
NS                      8
DS                      2
SWH              8223.685 Hz
FIDRES           0.250967 Hz
AQ              1.9922944 sec
RG                 186.42
DW                 60.800 usec
DE                   6.50 usec
TE                  289.0 K
D1             1.00000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1          400.1524711 MHz
NUC1                   1H
P1                  14.75 usec
PLW1          12.00000000 W

F2 - Processing parameters
SI                  16384
SF            400.1500102 MHz
WDW                    EM
SSB       0
LB                   0.30 Hz
GB        0
PC                   1.00
```



^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                   98
PROCNO                   1

F2 - Acquisition Parameters
Date_            20250221
Time                12.29
INSTRUM             spect
PROBHD   5 mm PABBO BB/
PULPROG           zgpg30
TD                 32768
SOLVENT            CDCl3
NS                   150
DS                     2
SWH            24038.461 Hz
FIDRES          0.733596 Hz
AQ             0.6815744 sec
RG                186.42
DW                20.800 usec
DE                  6.50 usec
TE                 295.2 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         100.6278588 MHz
NUC1                 13C
P1                  8.90 usec
PLW1         54.00000000 W

======== CHANNEL f2 ========
SFO2         400.1516006 MHz
NUC2                  1H
CPDPRG[2          waltz16
PCPD2              90.00 usec
PLW2         12.00000000 W
PLW12         0.32231000 W
PLW13         0.16212000 W

F2 - Processing parameters
SI                 16384
SF           100.6177859 MHz
WDW                   EM
SSB      0
LB                  1.00 Hz
GB       0
PC                  1.40
```

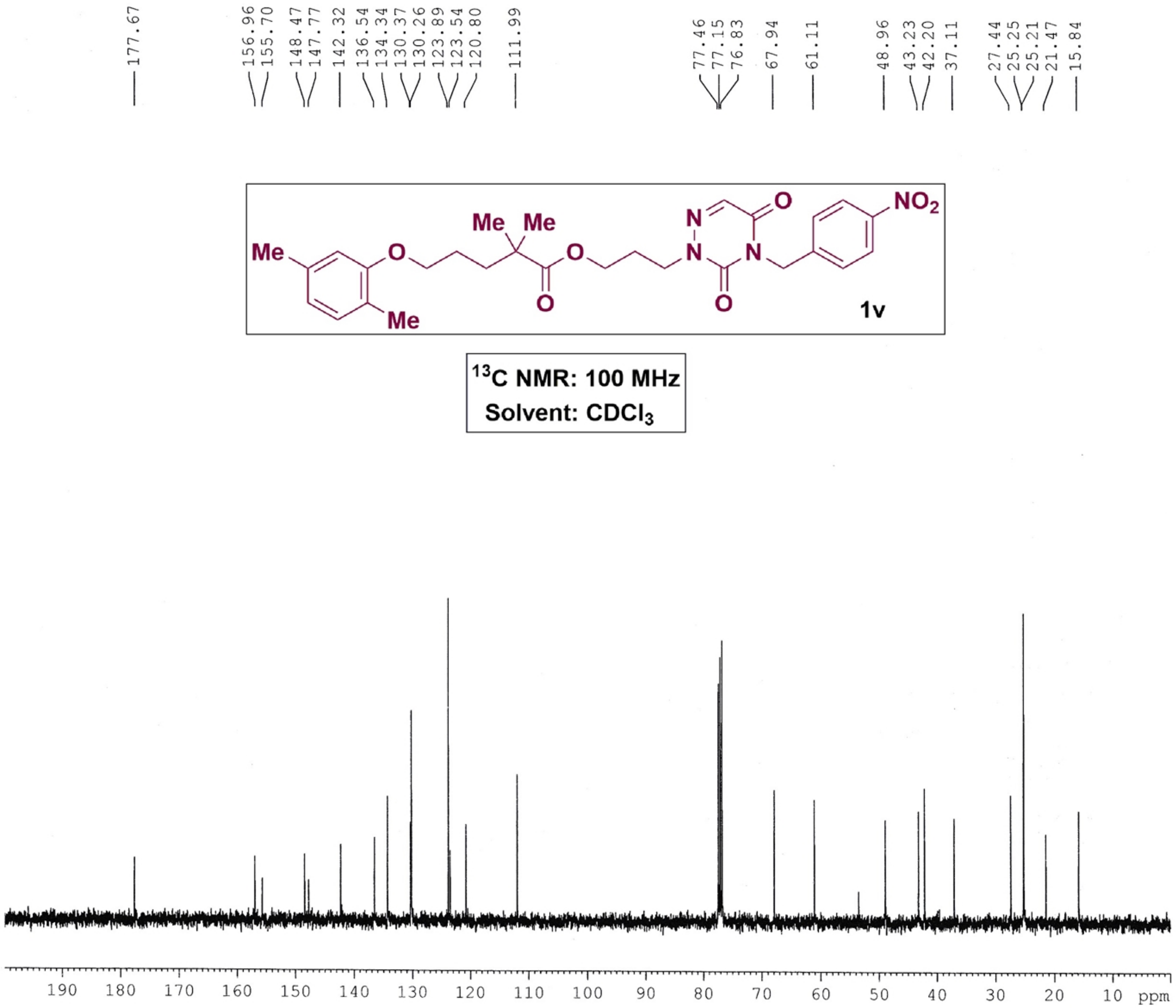


1v

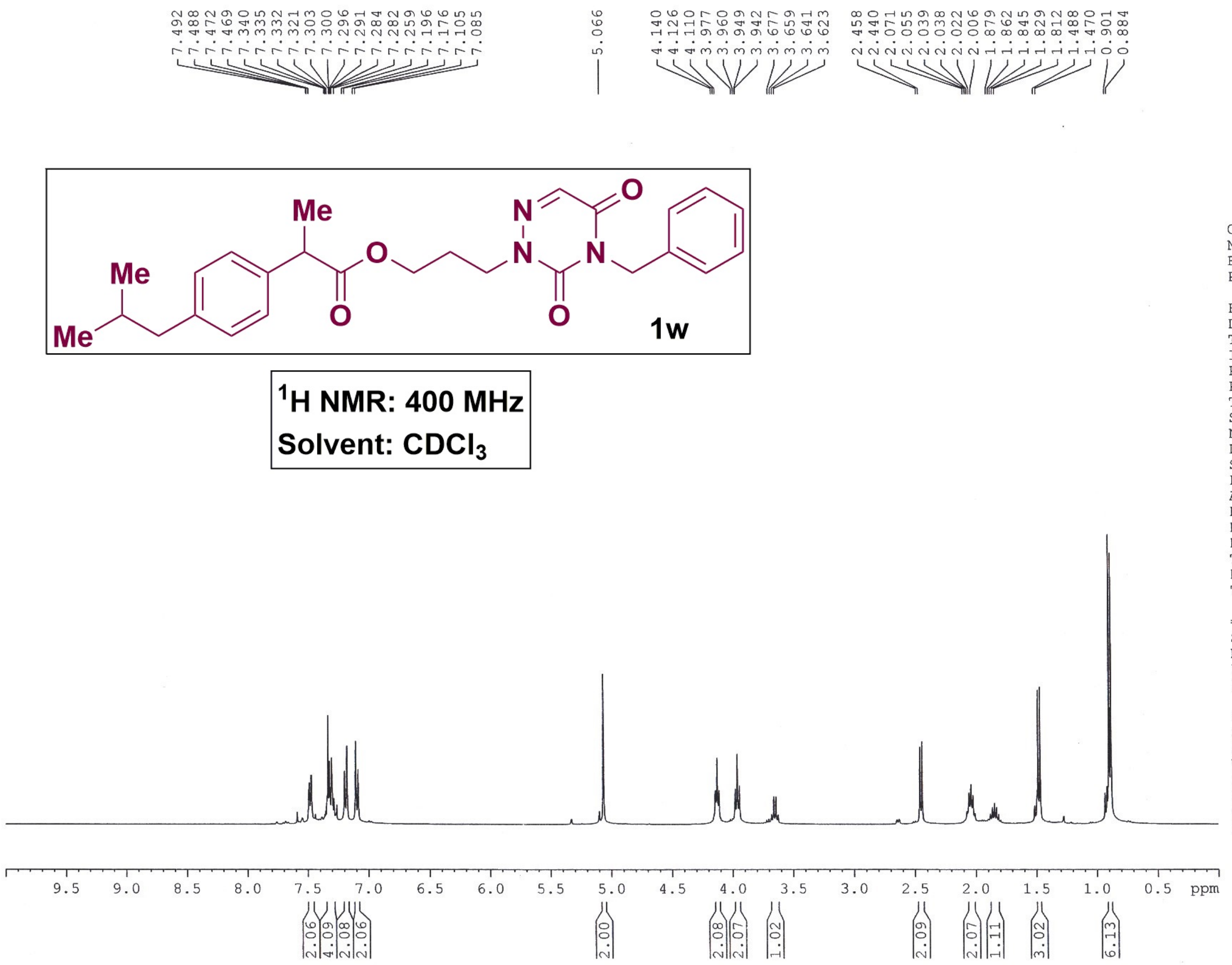
^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

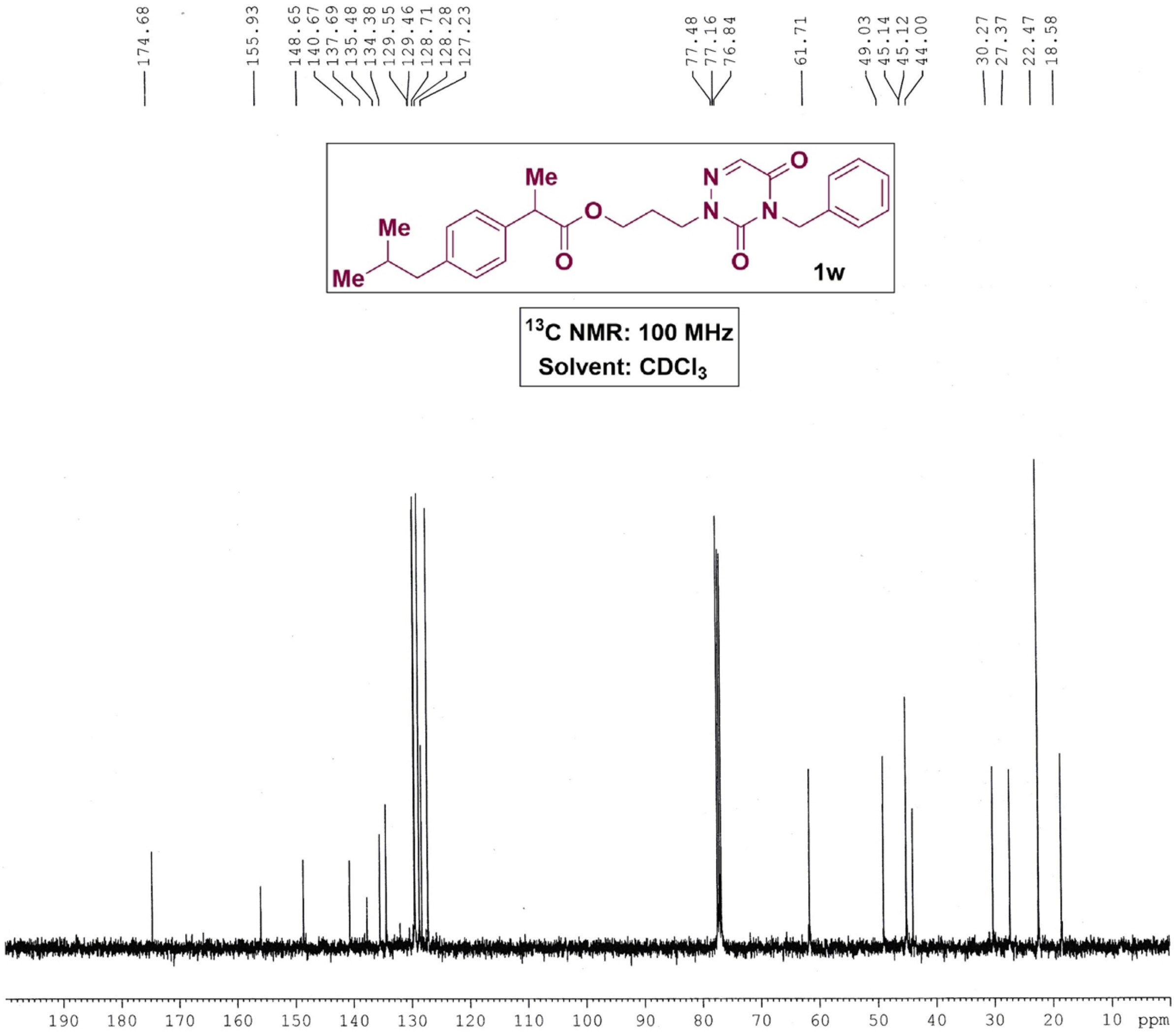
```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                  664
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240831
Time                 11.13
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG               zg30
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                   23.55
DW                  60.800 usec
DE                    6.50 usec
TE                   295.4 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1         400.1524711 MHz
NUC1                  1H
P1                 14.75 usec
PLW1         12.00000000 W

F2 - Processing parameters
SI                   16384
SF           400.1500094 MHz
WDW                     EM
SSB      0
LB                    0.30 Hz
GB       0
PC                    1.00
```



```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                    92
PROCNO                    1

F2 - Acquisition Parameters
Date_              20250221
Time                  10.41
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG             zgpg30
TD                   32768
SOLVENT              CDCl3
NS                      45
DS                       2
SWH              24038.461 Hz
FIDRES            0.733596 Hz
AQ               0.6815744 sec
RG                  186.42
DW                  20.800 usec
DE                    6.50 usec
TE                   297.2 K
D1              2.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1           100.6278588 MHz
NUC1                   13C
P1                    8.90 usec
PLW1           54.00000000 W

======== CHANNEL f2 ========
SFO2           400.1516006 MHz
NUC2                    1H
CPDPRG[2           waltz16
PCPD2                90.00 usec
PLW2           12.00000000 W
PLW12           0.32231000 W
PLW13           0.16212000 W

F2 - Processing parameters
SI                   16384
SF             100.6177917 MHz
WDW                     EM
SSB       0
LB                    1.00 Hz
GB        0
PC                    1.40
```



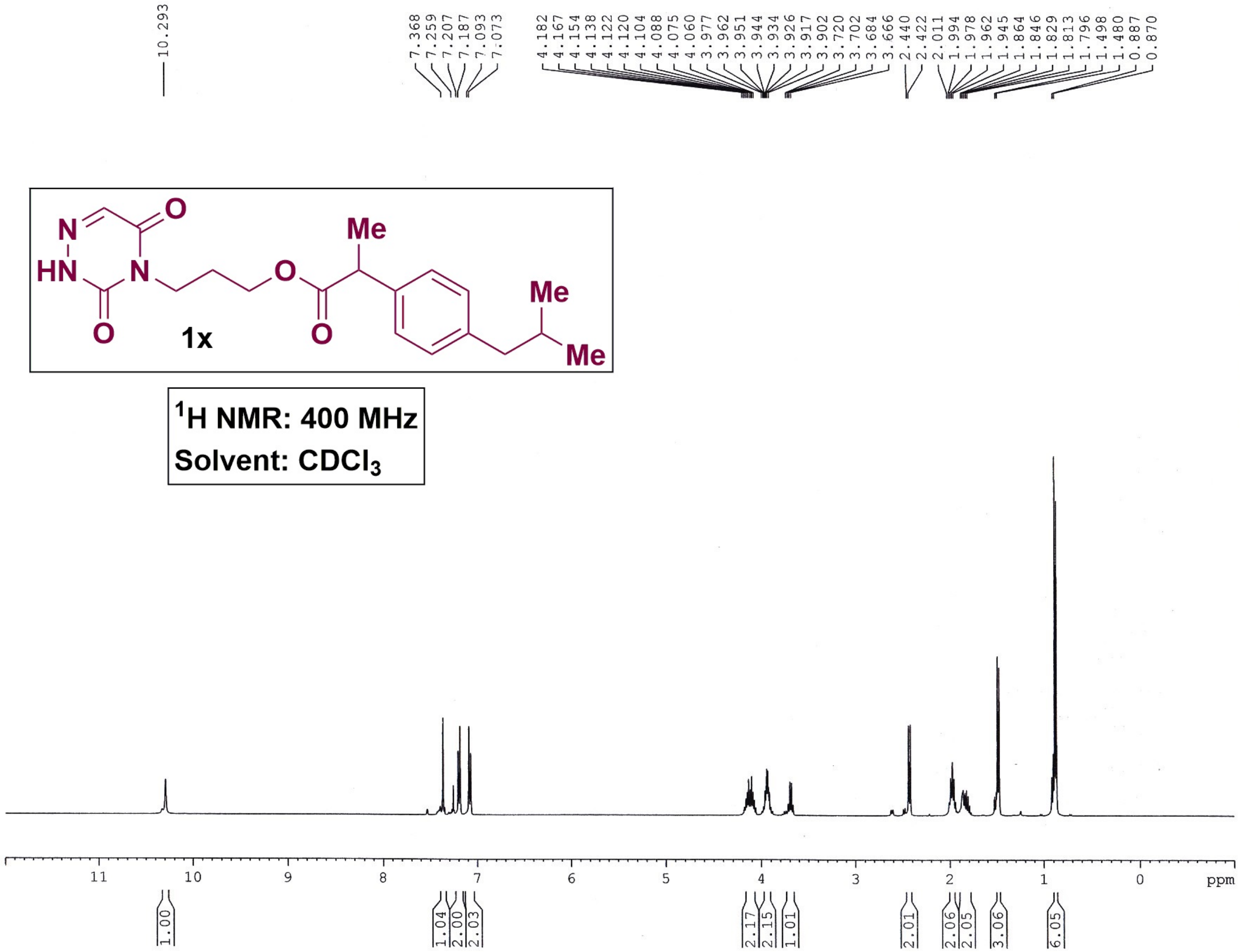
```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                  467
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240530
Time                 10.34
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG               zg30
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                   32.25
DW                  60.800 usec
DE                    6.50 usec
TE                   299.3 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1           400.1524711 MHz
NUC1                    1H
P1                   14.75 usec
PLW1           12.00000000 W

F2 - Processing parameters
SI                   16384
SF             400.1500092 MHz
WDW                     EM
SSB       0
LB                    0.30 Hz
GB        0
PC                    1.00
```



^{13}C NMR: 100 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                    86
PROCNO                    1

F2 - Acquisition Parameters
Date_             20250220
Time                 11.17
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                  32768
SOLVENT             CDCl3
NS                    120
DS                      2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                 186.42
DW                 20.800 usec
DE                   6.50 usec
TE                  296.1 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1         100.6278588 MHz
NUC1                 13C
P1                  8.90 usec
PLW1         54.00000000 W

======== CHANNEL f2 ========
SFO2         400.1516006 MHz
NUC2                  1H
CPDPRG[2         waltz16
PCPD2              90.00 usec
PLW2         12.00000000 W
PLW12         0.32231000 W
PLW13         0.16212000 W

F2 - Processing parameters
SI                 16384
SF           100.6177888 MHz
WDW                   EM
SSB      0
LB                  1.00 Hz
GB       0
PC                  1.40
```

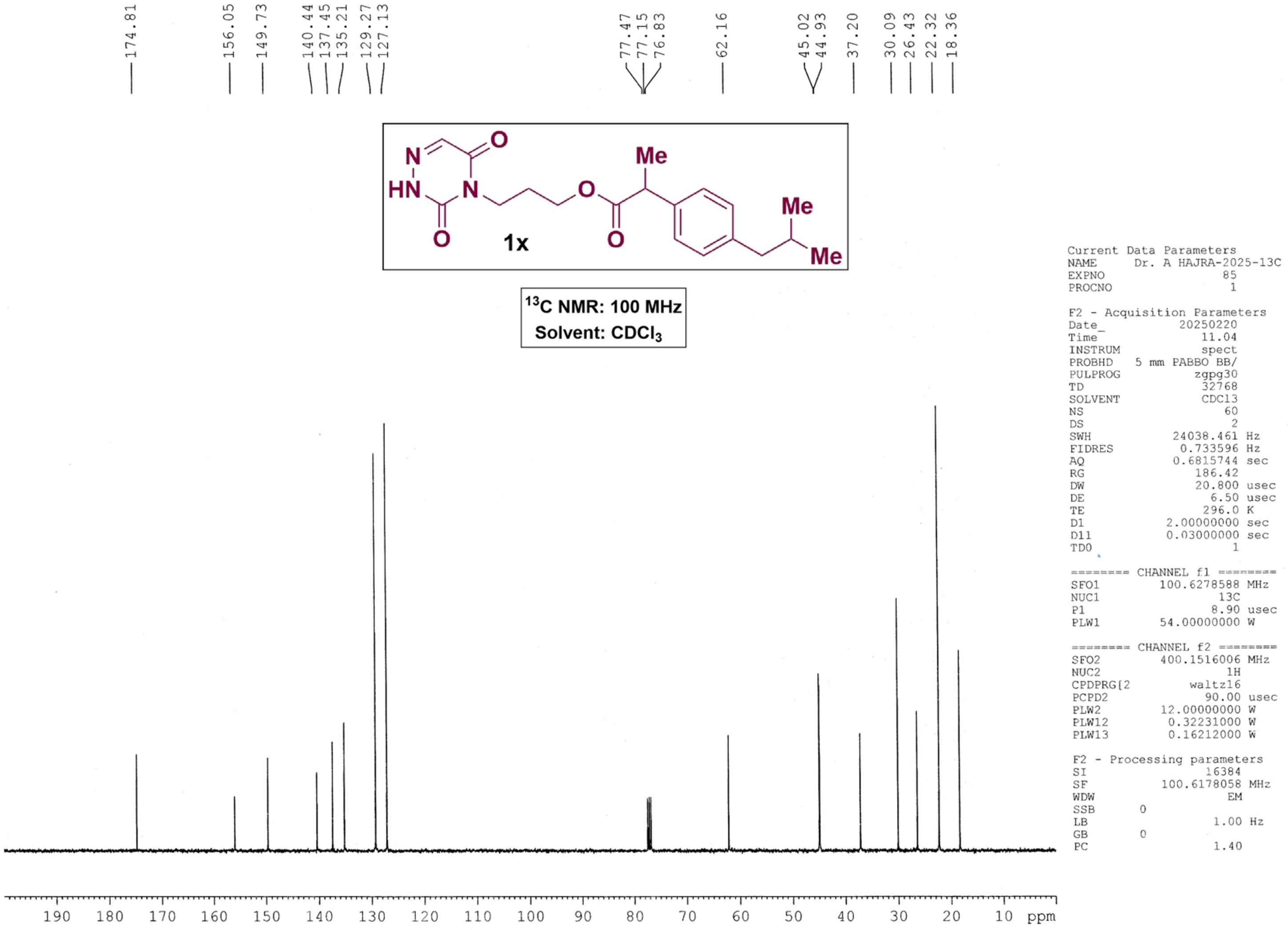


1x

^{1}H NMR: 400 MHz

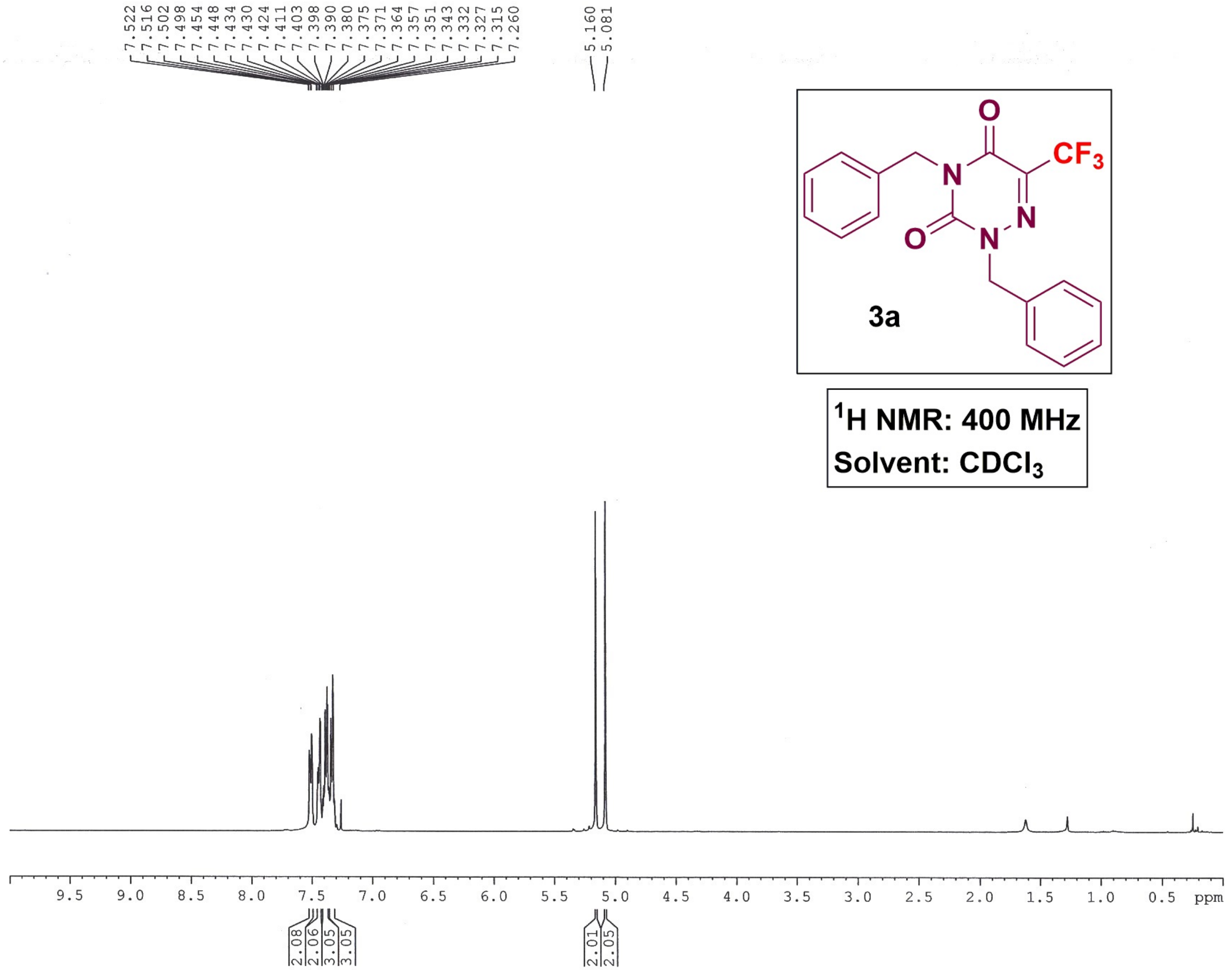
Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   516
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240620
Time                  11.02
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                    62.69
DW                   60.800 usec
DE                     6.50 usec
TE                    297.1 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1          400.1524711 MHz
NUC1                   1H
P1                  14.75 usec
PLW1          12.00000000 W

F2 - Processing parameters
SI                    16384
SF             400.1500097 MHz
WDW                      EM
SSB       0
LB                     0.30 Hz
GB        0
PC                     1.00
```



^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

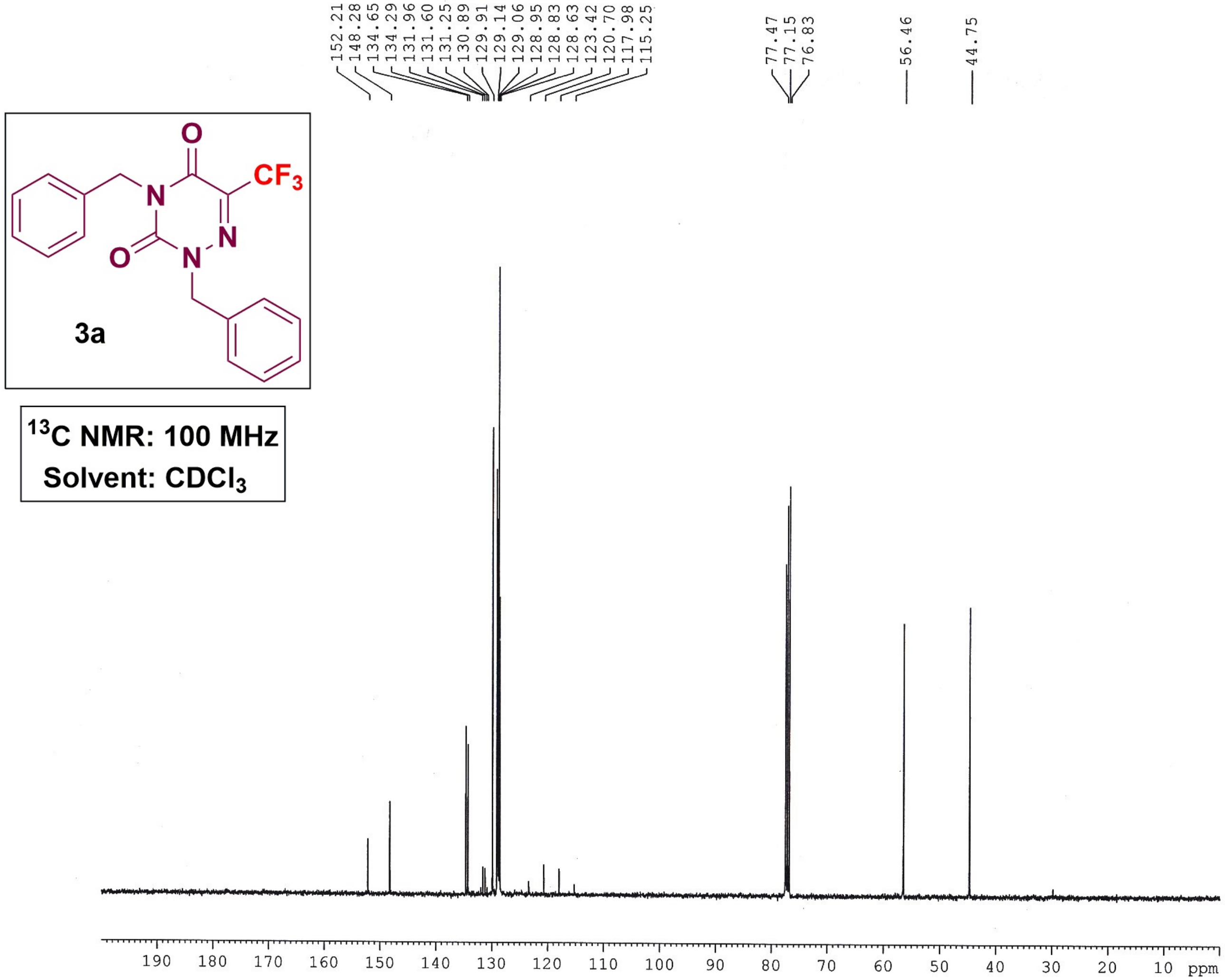
```
Current Data Parameters
NAME      Dr. A HAJRA-2025-13C
EXPNO                    85
PROCNO                    1

F2 - Acquisition Parameters
Date_              20250220
Time                  11.04
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG             zgpg30
TD                   32768
SOLVENT              CDCl3
NS                      60
DS                       2
SWH              24038.461 Hz
FIDRES            0.733596 Hz
AQ               0.6815744 sec
RG                  186.42
DW                  20.800 usec
DE                    6.50 usec
TE                   296.0 K
D1              2.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1          100.6278588 MHz
NUC1                  13C
P1                   8.90 usec
PLW1          54.00000000 W

======== CHANNEL f2 ========
SFO2          400.1516006 MHz
NUC2                   1H
CPDPRG[2           waltz16
PCPD2               90.00 usec
PLW2          12.00000000 W
PLW12          0.32231000 W
PLW13          0.16212000 W

F2 - Processing parameters
SI                  16384
SF            100.6178058 MHz
WDW                    EM
SSB      0
LB                   1.00 Hz
GB       0
PC                   1.40
```



^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   342
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240502
Time                   8.46
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                    77.59
DW                   60.800 usec
DE                     6.50 usec
TE                    290.4 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500092 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```

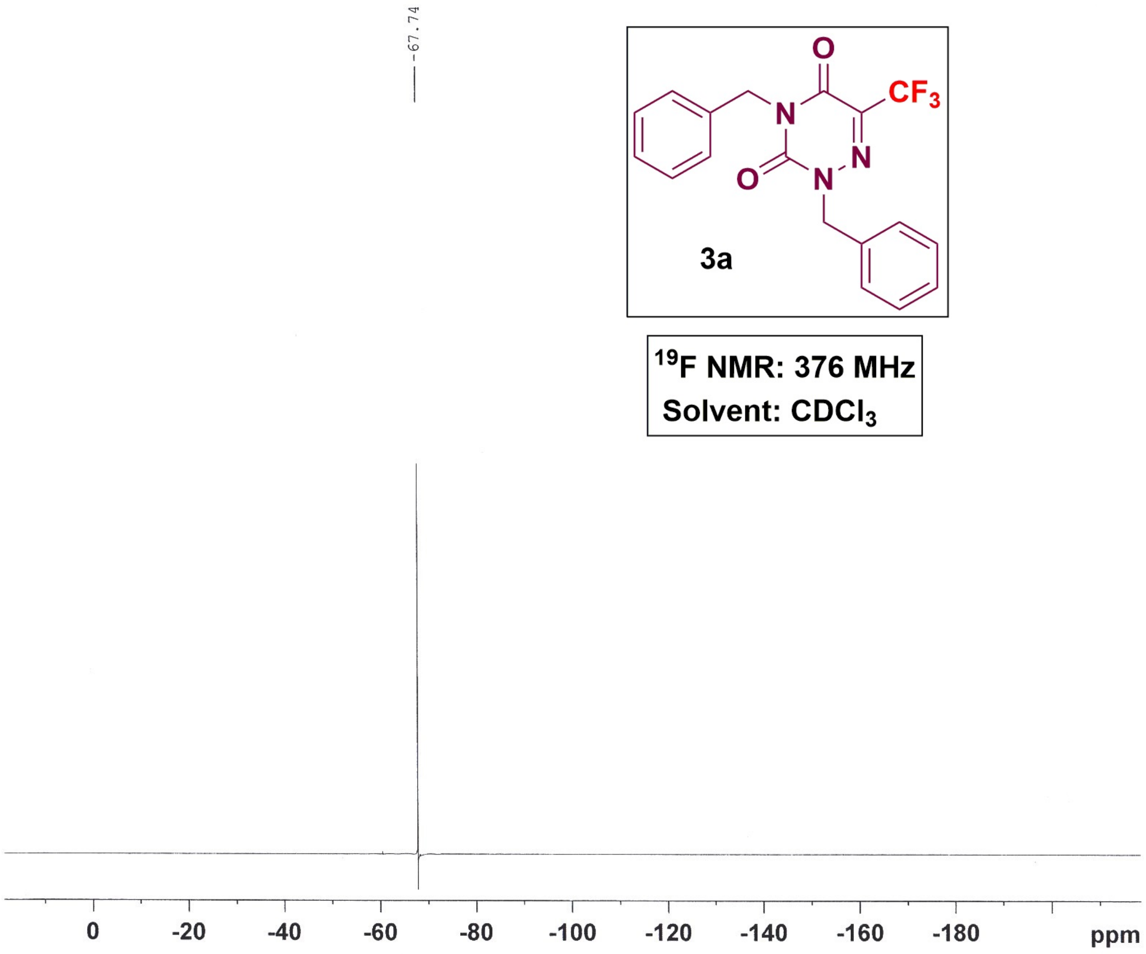


3a

^{13}C NMR: 100 MHz

Solvent: CDCl$_3$

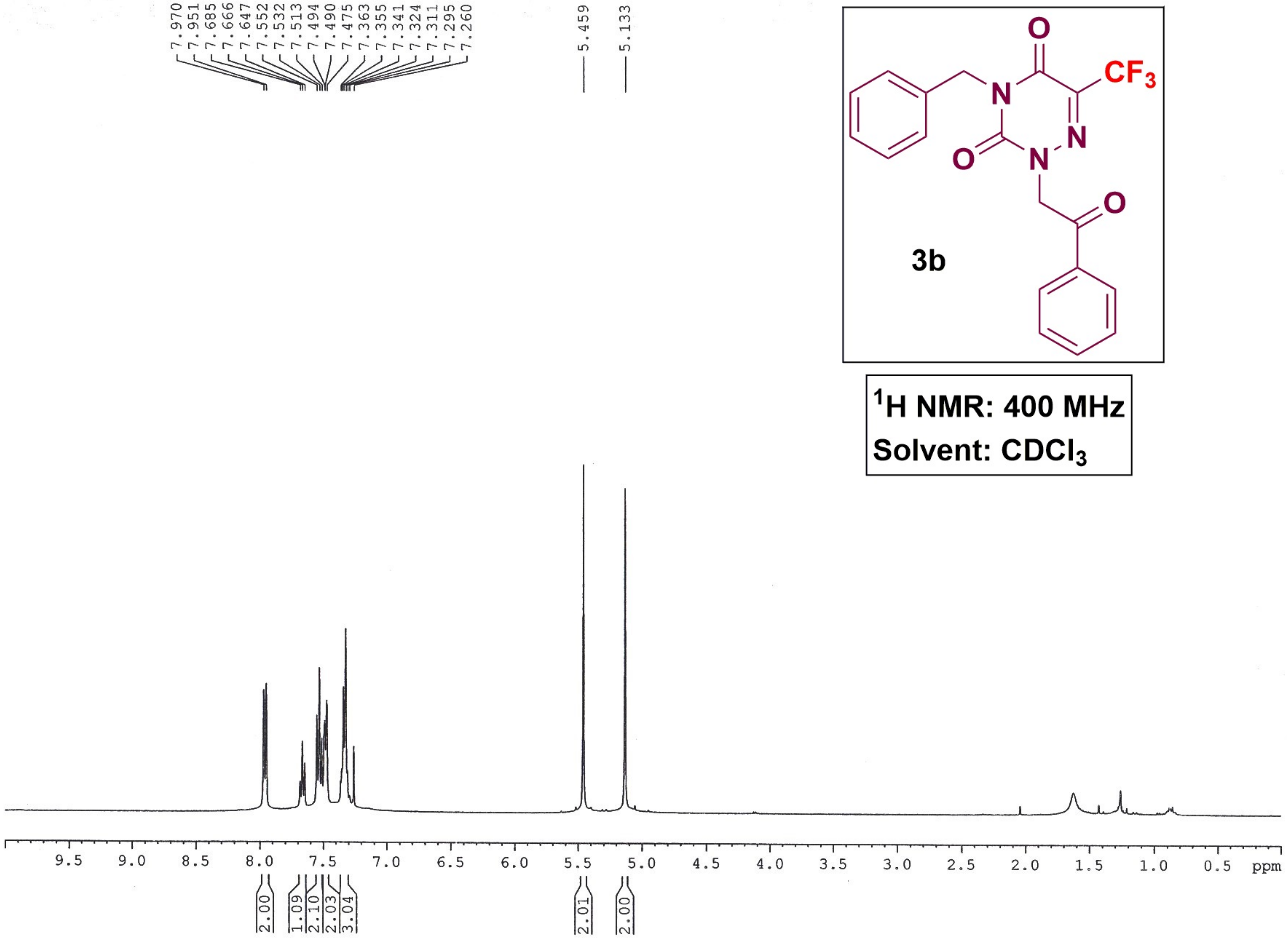
```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO                    128
PROCNO                     1

F2 - Acquisition Parameters
Date_             20240502
Time                  9.29
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                  32768
SOLVENT             CDCl3
NS                    730
DS                      2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                 186.42
DW                 20.800 usec
DE                   6.50 usec
TE                  292.6 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1          100.6278588 MHz
NUC1                  13C
P1                   8.90 usec
PLW1          54.00000000 W

======== CHANNEL f2 ========
SFO2          400.1516006 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2               90.00 usec
PLW2          12.00000000 W
PLW12          0.32231000 W
PLW13          0.16212000 W

F2 - Processing parameters
SI                  16384
SF            100.6177902 MHz
WDW                    EM
SSB      0
LB                   1.00 Hz
GB       0
PC                   1.40
```



^{19}F NMR: 376 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME     Dr. A HAJRA 2024 1H
EXPNO                 343
PROCNO                  1

F2 - Acquisition Parameters
Date_            20240502
Time                 8.53
INSTRUM             spect
PROBHD   5 mm PABBO BB/
PULPROG           zgflqn
TD                 32768
SOLVENT            CDCl3
NS                     8
DS                     2
SWH          89285.711 Hz
FIDRES        2.724784 Hz
AQ           0.1835008 sec
RG               186.42
DW                5.600 usec
DE                 6.50 usec
TE                290.7 K
D1           1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1        376.4795333 MHz
NUC1                19F
P1                12.50 usec
PLW1        20.00000000 W

F2 - Processing parameters
SI                 16384
SF           376.5171850 MHz
WDW                   EM
SSB      0
LB                 0.30 Hz
GB       0
PC                 1.00
```

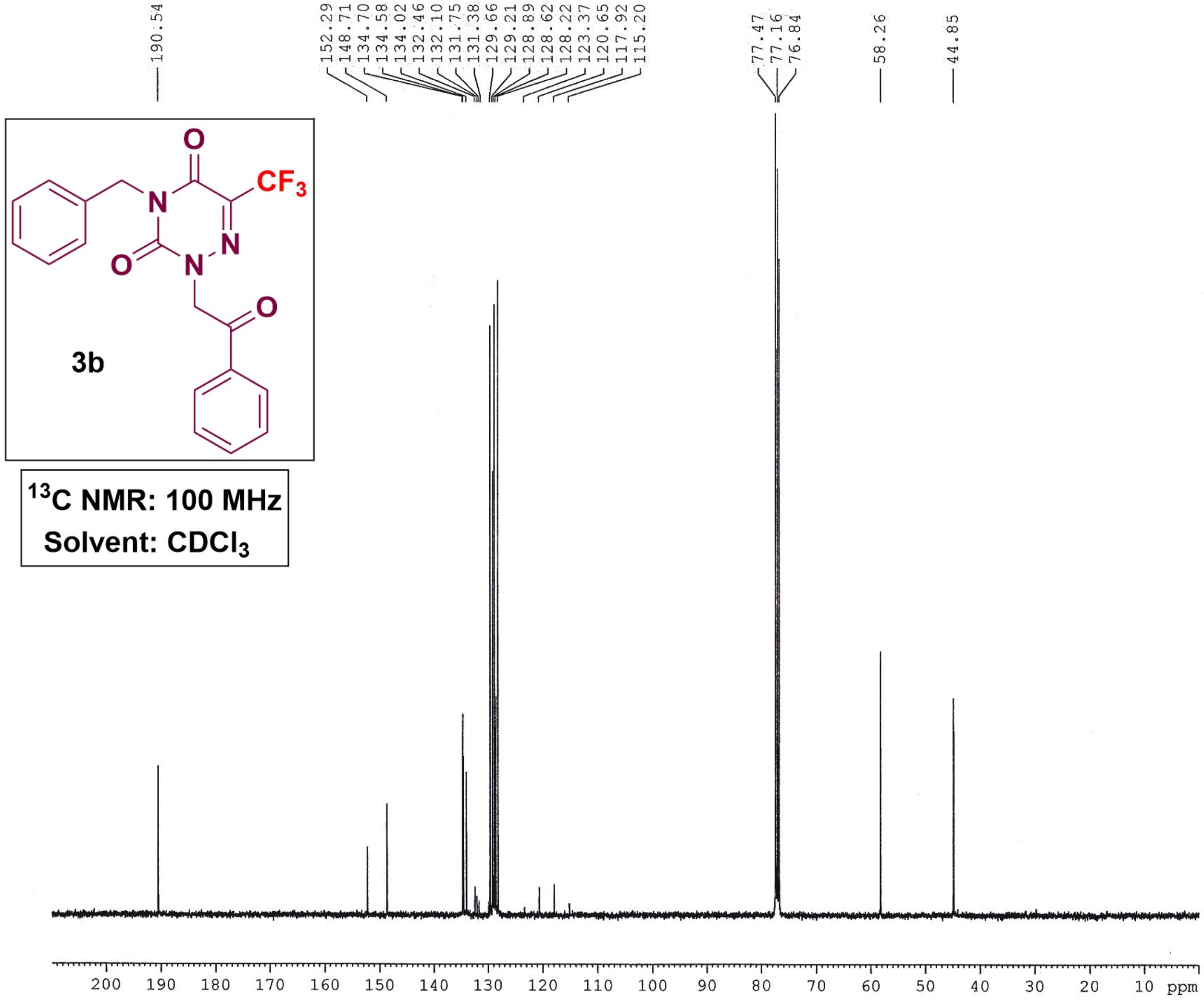


3b

^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                  425
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240521
Time                 10.28
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG               zg30
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                  106.66
DW                  60.800 usec
DE                    6.50 usec
TE                   298.5 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1        400.1524711 MHz
NUC1                  1H
P1                 14.75 usec
PLW1         12.00000000 W

F2 - Processing parameters
SI                   16384
SF          400.1500097 MHz
WDW                     EM
SSB      0
LB                    0.30 Hz
GB       0
PC                    1.00
```

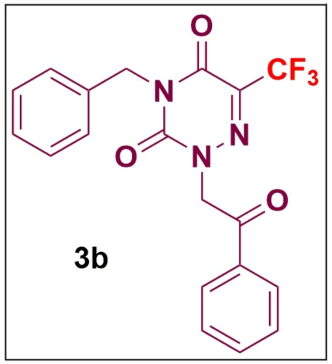


3b

^{13}C NMR: 100 MHz

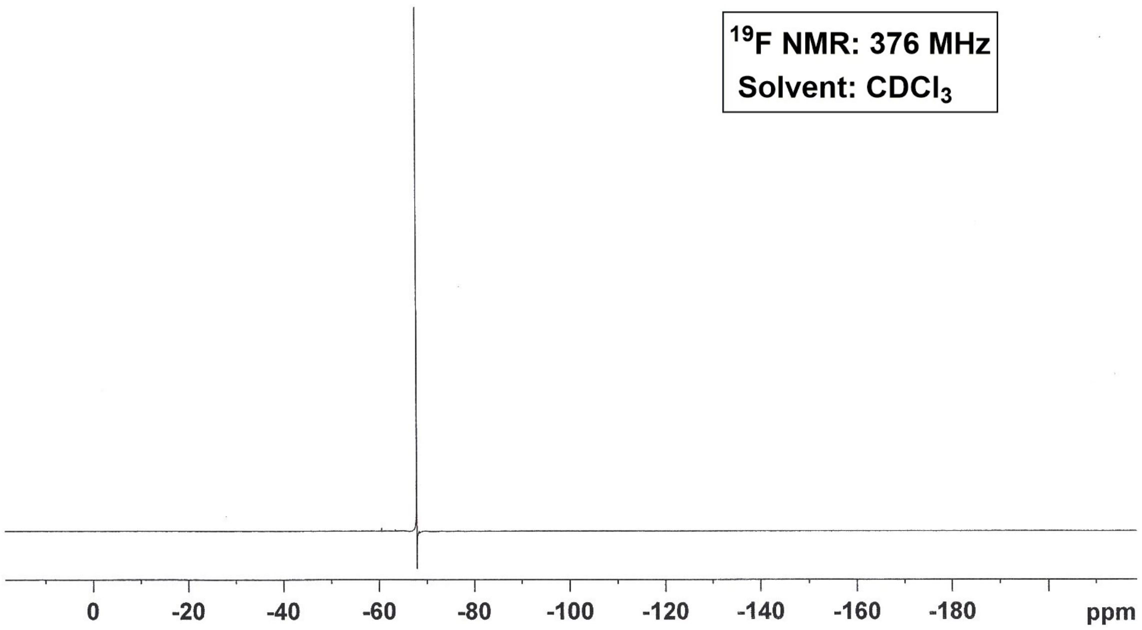
Solvent: $CDCl_3$

```
Current Data Parameters
NAME        Dr. A HAJRA-2024-13C
EXPNO                    166
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240524
Time                   12.17
INSTRUM                spect
PROBHD     5 mm PABBO BB/
PULPROG               zgpg30
TD                     32768
SOLVENT                CDCl3
NS                      2050
DS                         2
SWH                24038.461 Hz
FIDRES              0.733596 Hz
AQ                 0.6815744 sec
RG                    186.42
DW                    20.800 usec
DE                      6.50 usec
TE                     296.9 K
D1                2.00000000 sec
D11               0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1             100.6278588 MHz
NUC1                     13C
P1                      8.90 usec
PLW1             54.00000000 W

======== CHANNEL f2 ========
SFO2             400.1516006 MHz
NUC2                      1H
CPDPRG[2             waltz16
PCPD2                  90.00 usec
PLW2             12.00000000 W
PLW12             0.32231000 W
PLW13             0.16212000 W

F2 - Processing parameters
SI                     16384
SF               100.6177858 MHz
WDW                       EM
SSB       0
LB                      1.00 Hz
GB        0
PC                      1.40
```

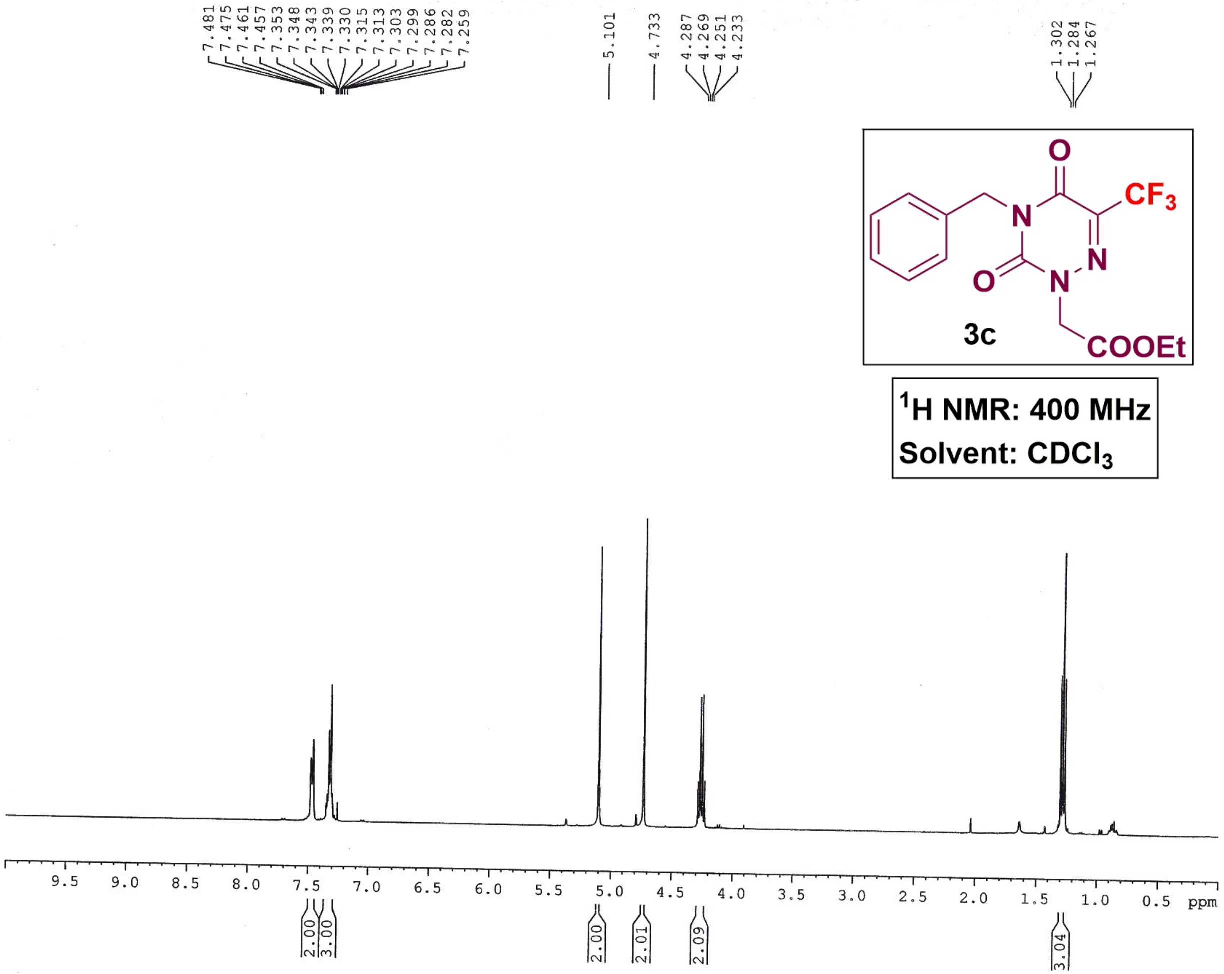


3b

^{19}F NMR: 376 MHz
Solvent: $CDCl_3$



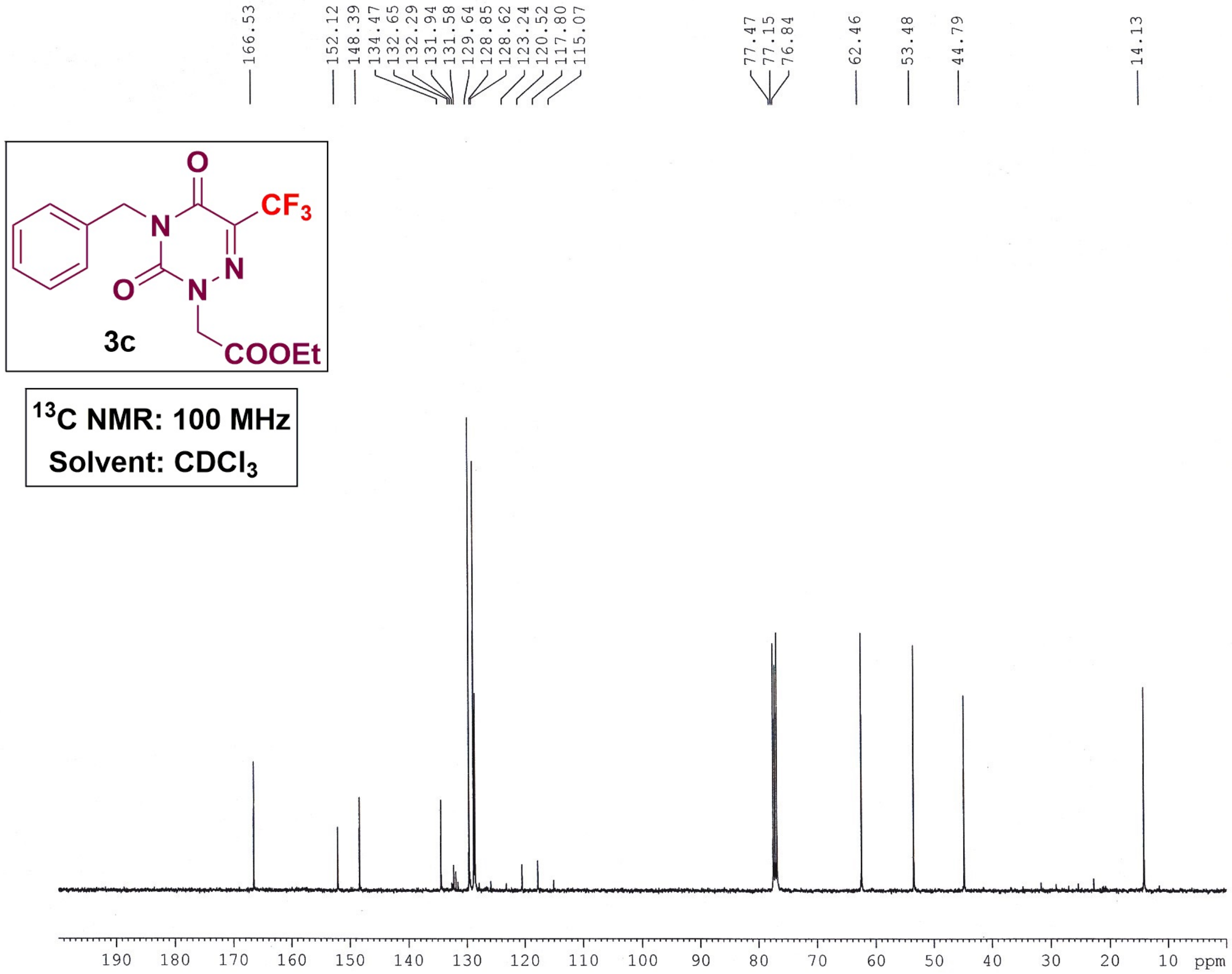
```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                    426
PROCNO                     1

F2 - Acquisition Parameters
Date_             20240521
Time                 10.33
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG             zgflqn
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH            89285.711 Hz
FIDRES          2.724784 Hz
AQ             0.1835008 sec
RG                  186.42
DW                   5.600 usec
DE                    6.50 usec
TE                   298.3 K
D1            1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1         376.4795333 MHz
NUC1                 19F
P1                  12.50 usec
PLW1         20.00000000 W

F2 - Processing parameters
SI                   16384
SF           376.5171850 MHz
WDW                     EM
SSB       0
LB                    0.30 Hz
GB        0
PC                    1.00
```



^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

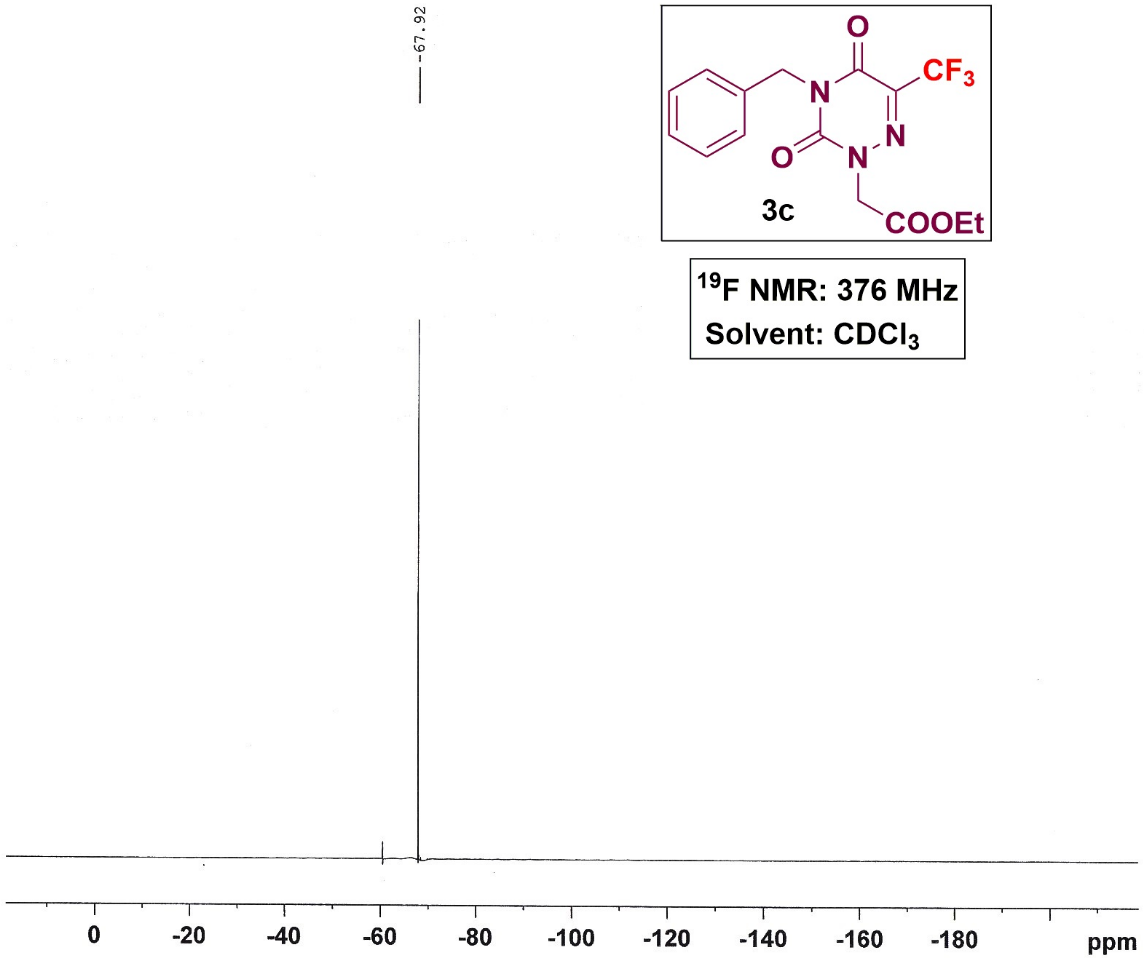
```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                  365
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240507
Time                 12.20
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG               zg30
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                   57.28
DW                  60.800 usec
DE                    6.50 usec
TE                   295.5 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1           400.1524711 MHz
NUC1                    1H
P1                   14.75 usec
PLW1           12.00000000 W

F2 - Processing parameters
SI                   16384
SF             400.1500096 MHz
WDW                     EM
SSB      0
LB                    0.30 Hz
GB       0
PC                    1.00
```



3c

^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

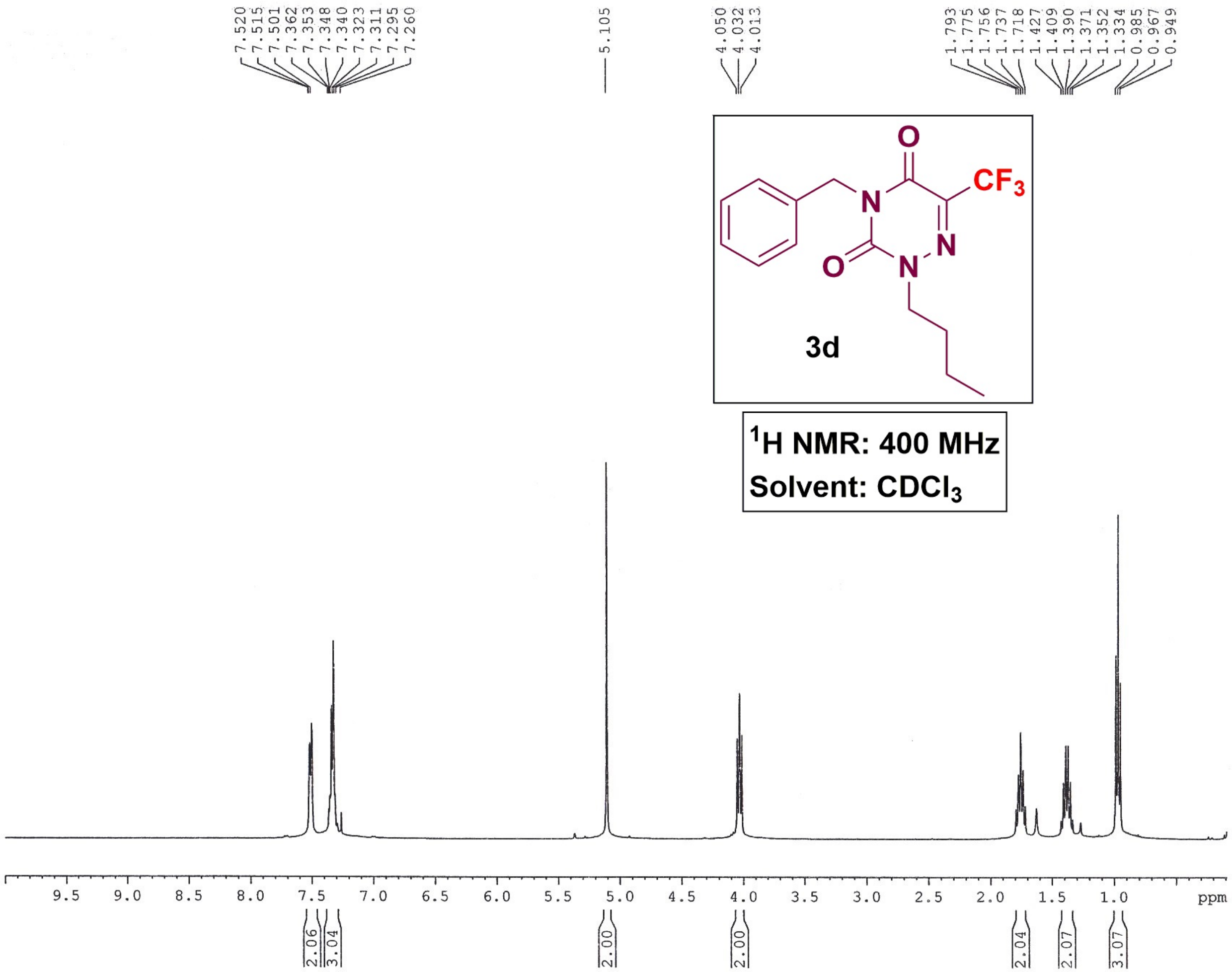
```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO                    140
PROCNO                     1

F2 - Acquisition Parameters
Date_             20240507
Time                 17.28
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                   32768
SOLVENT              CDCl3
NS                     870
DS                       2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                  186.42
DW                  20.800 usec
DE                    6.50 usec
TE                   297.6 K
D1              2.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1          100.6278588 MHz
NUC1                  13C
P1                   8.90 usec
PLW1          54.00000000 W

======== CHANNEL f2 ========
SFO2          400.1516006 MHz
NUC2                   1H
CPDPRG[2           waltz16
PCPD2               90.00 usec
PLW2          12.00000000 W
PLW12          0.32231000 W
PLW13          0.16212000 W

F2 - Processing parameters
SI                  16384
SF            100.6177881 MHz
WDW                    EM
SSB      0
LB                   1.00 Hz
GB       0
PC                   1.40
```



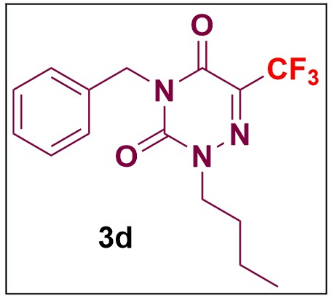
3c

^{19}F NMR: 376 MHz
Solvent: CDCl$_3$

```
Current Data Parameters
NAME     Dr. A HAJRA 2024 1H
EXPNO                   366
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240507
Time                  12.27
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG              zgflqn
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH              89285.711 Hz
FIDRES            2.724784 Hz
AQ               0.1835008 sec
RG                  186.42
DW                   5.600 usec
DE                    6.50 usec
TE                   295.4 K
D1              1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1           376.4795333 MHz
NUC1                    19F
P1                    12.50 usec
PLW1            20.00000000 W

F2 - Processing parameters
SI                    16384
SF             376.5171850 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```



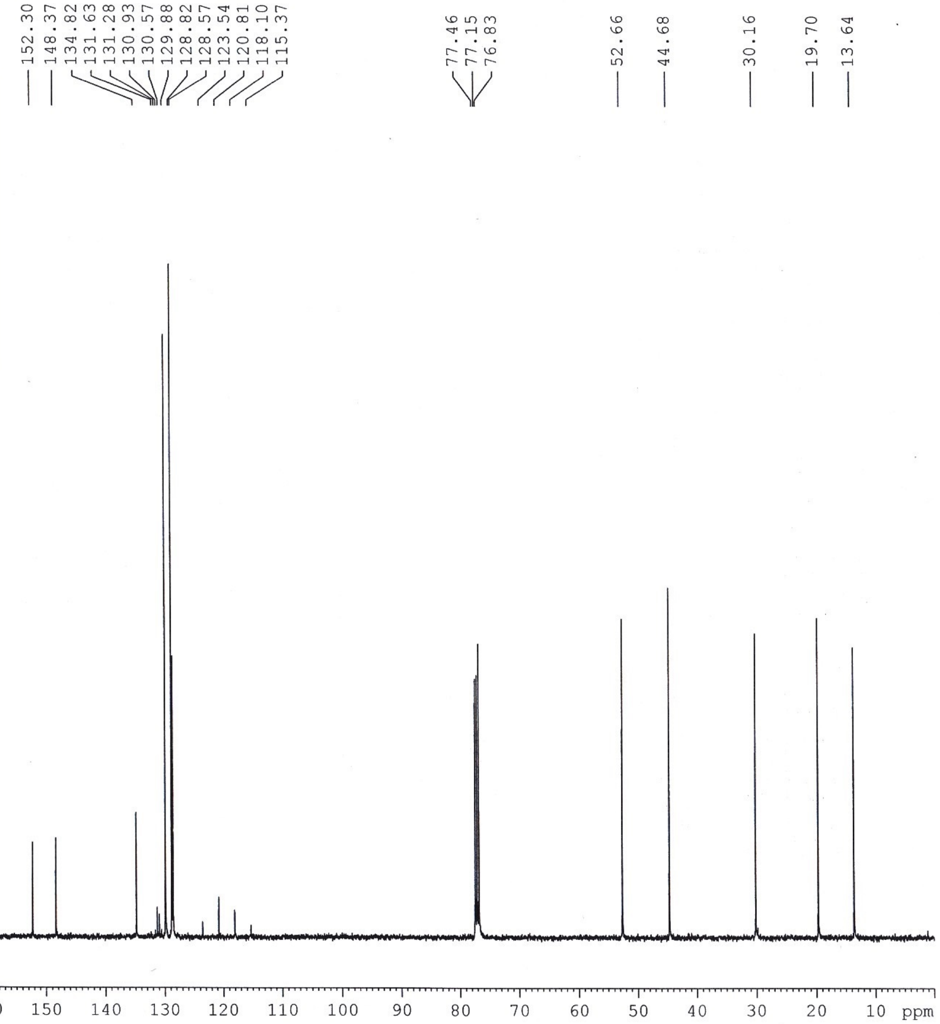
```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                   404
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240517
Time                  11.07
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                    57.28
DW                   60.800 usec
DE                     6.50 usec
TE                    297.8 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500092 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```



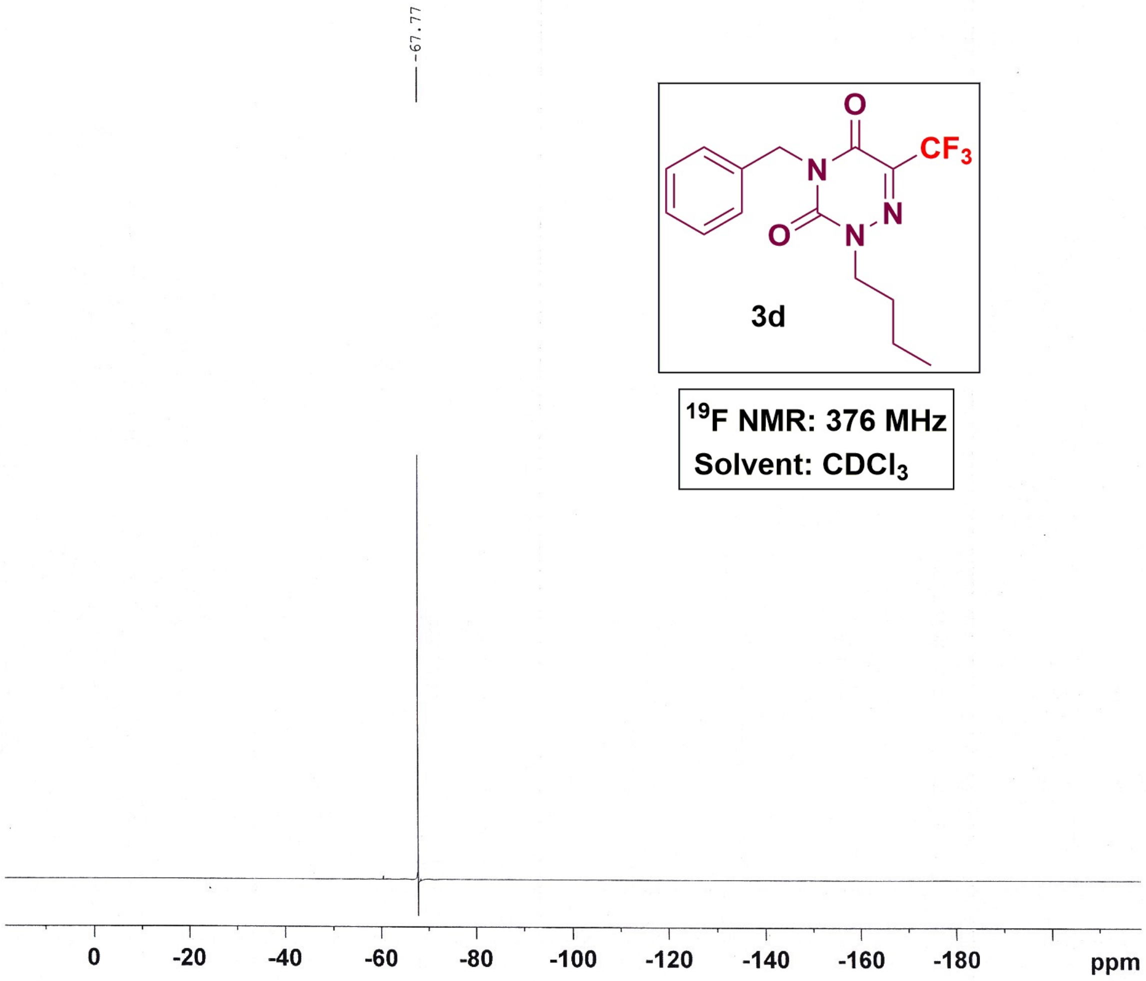
3d

^{13}C NMR: 100 MHz

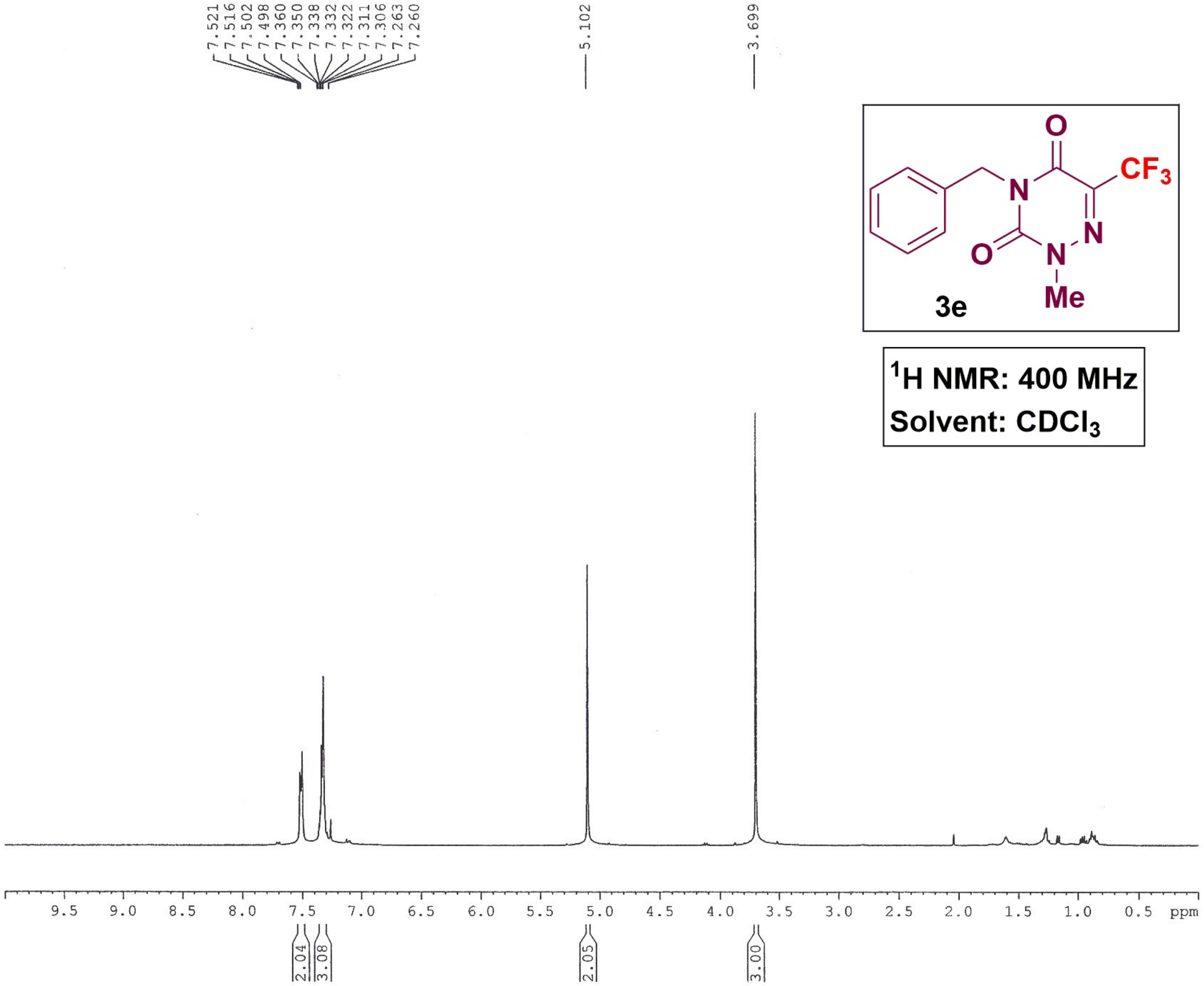
Solvent: $CDCl_3$



```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO                  157
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240517
Time                 11.48
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                   32768
SOLVENT              CDCl3
NS                     710
DS                       2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                  186.42
DW                  20.800 usec
DE                    6.50 usec
TE                   298.5 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1         100.6278588 MHz
NUC1                   13C
P1                    8.90 usec
PLW1          54.00000000 W

======== CHANNEL f2 ========
SFO2         400.1516006 MHz
NUC2                    1H
CPDPRG[2           waltz16
PCPD2                90.00 usec
PLW2          12.00000000 W
PLW12          0.32231000 W
PLW13          0.16212000 W

F2 - Processing parameters
SI                   16384
SF           100.6177871 MHz
WDW                     EM
SSB      0
LB                    1.00 Hz
GB       0
PC                    1.40
```



```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   405
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240517
Time                  11.12
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG              zgflqn
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH               89285.711 Hz
FIDRES             2.724784 Hz
AQ                0.1835008 sec
RG                   186.42
DW                    5.600 usec
DE                     6.50 usec
TE                    297.7 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            376.4795333 MHz
NUC1                    19F
P1                    12.50 usec
PLW1            20.00000000 W

F2 - Processing parameters
SI                    16384
SF              376.5171850 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```

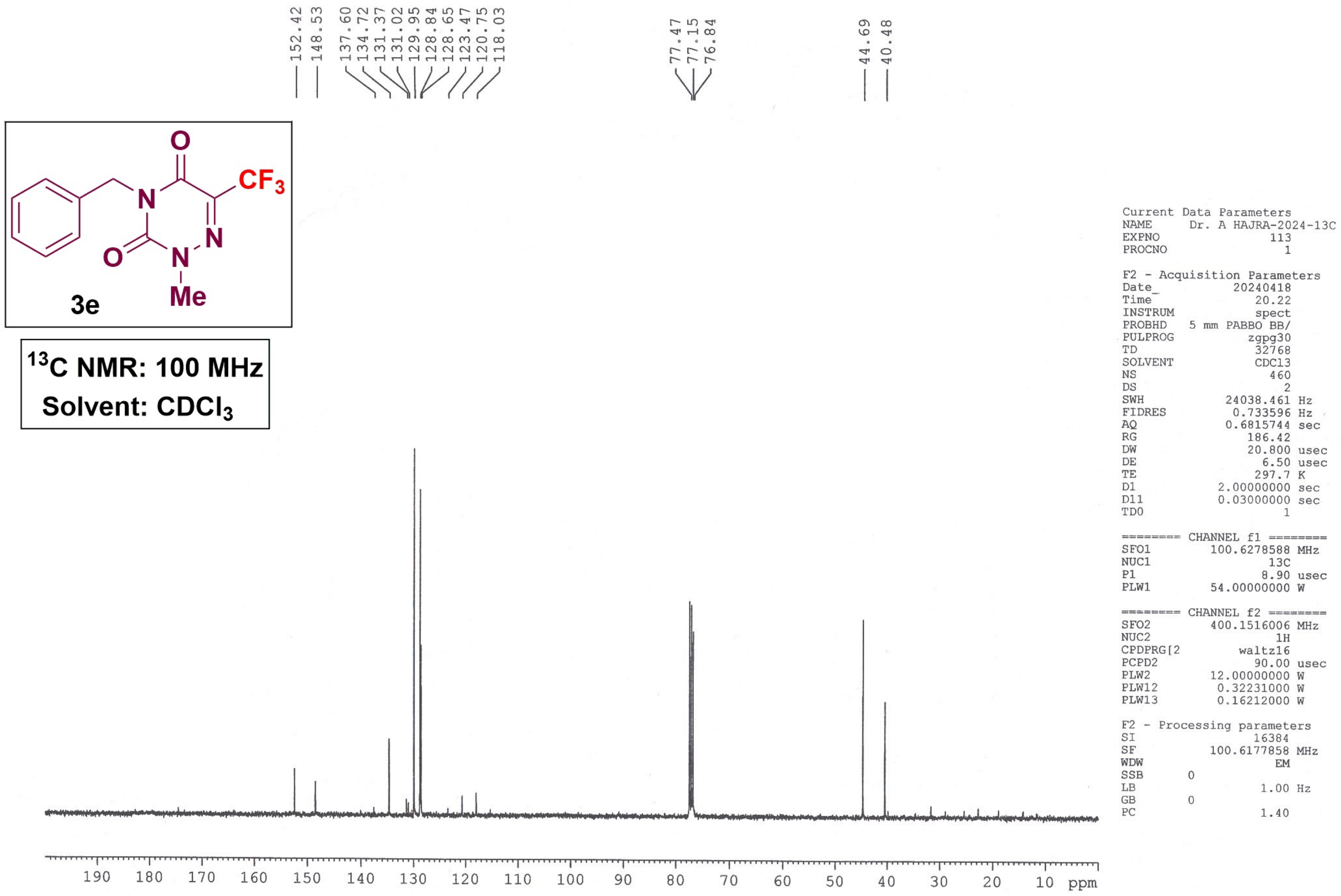


3e

^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                  314
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240418
Time                 19.40
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG               zg30
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                   77.59
DW                  60.800 usec
DE                    6.50 usec
TE                   296.8 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1           400.1524711 MHz
NUC1                    1H
P1                   14.75 usec
PLW1           12.00000000 W

F2 - Processing parameters
SI                   16384
SF             400.1500087 MHz
WDW                     EM
SSB       0
LB                    0.30 Hz
GB        0
PC                    1.00
```



3e

^{13}C NMR: 100 MHz

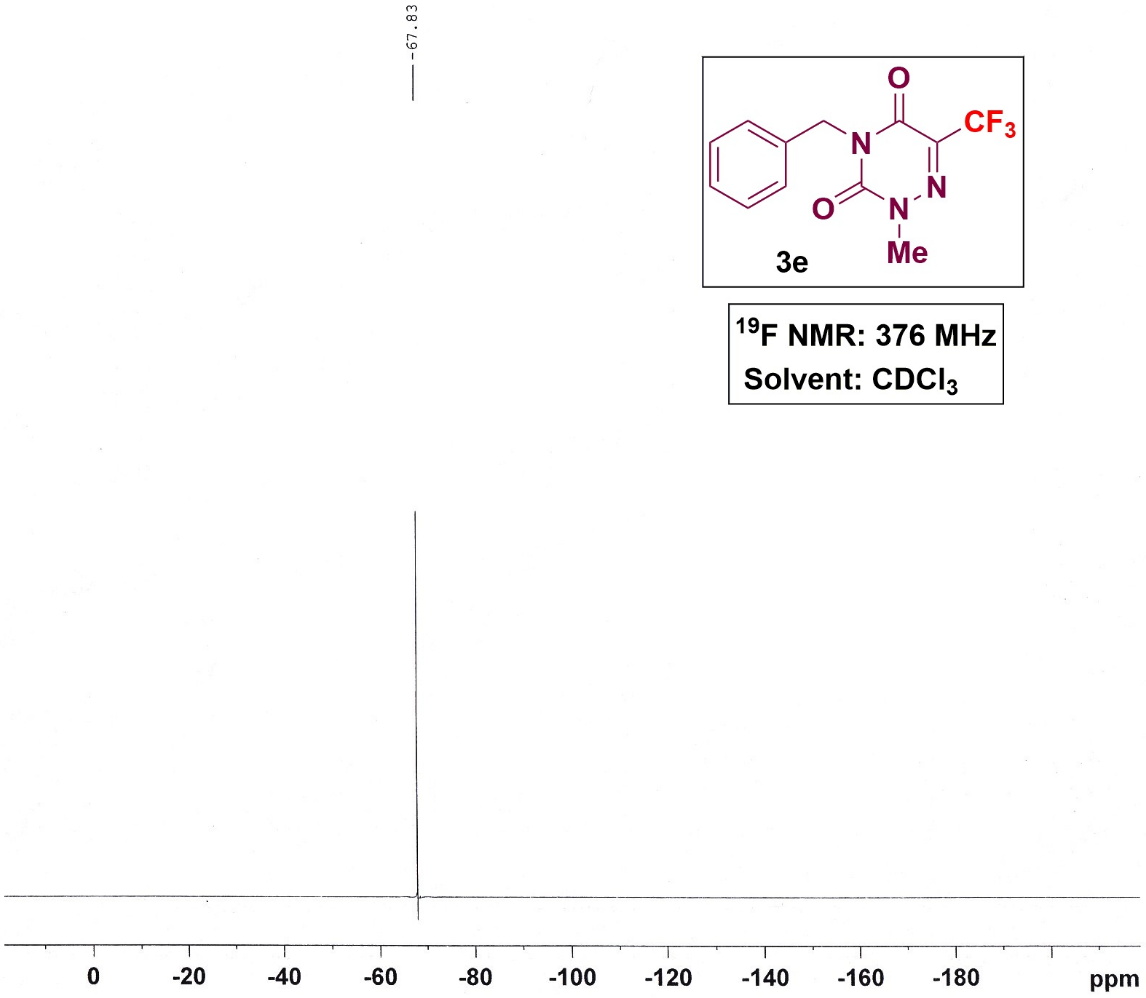
Solvent: CDCl$_3$

```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO              113
PROCNO               1

F2 - Acquisition Parameters
Date_          20240418
Time              20.22
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG         zgpg30
TD               32768
SOLVENT          CDCl3
NS                 460
DS                   2
SWH          24038.461 Hz
FIDRES        0.733596 Hz
AQ           0.6815744 sec
RG              186.42
DW              20.800 usec
DE                6.50 usec
TE               297.7 K
D1         2.00000000 sec
D11        0.03000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1       100.6278588 MHz
NUC1               13C
P1                8.90 usec
PLW1       54.00000000 W

======== CHANNEL f2 ========
SFO2       400.1516006 MHz
NUC2                1H
CPDPRG[2        waltz16
PCPD2            90.00 usec
PLW2       12.00000000 W
PLW12       0.32231000 W
PLW13       0.16212000 W

F2 - Processing parameters
SI               16384
SF         100.6177858 MHz
WDW                 EM
SSB      0
LB                1.00 Hz
GB       0
PC                1.40
```

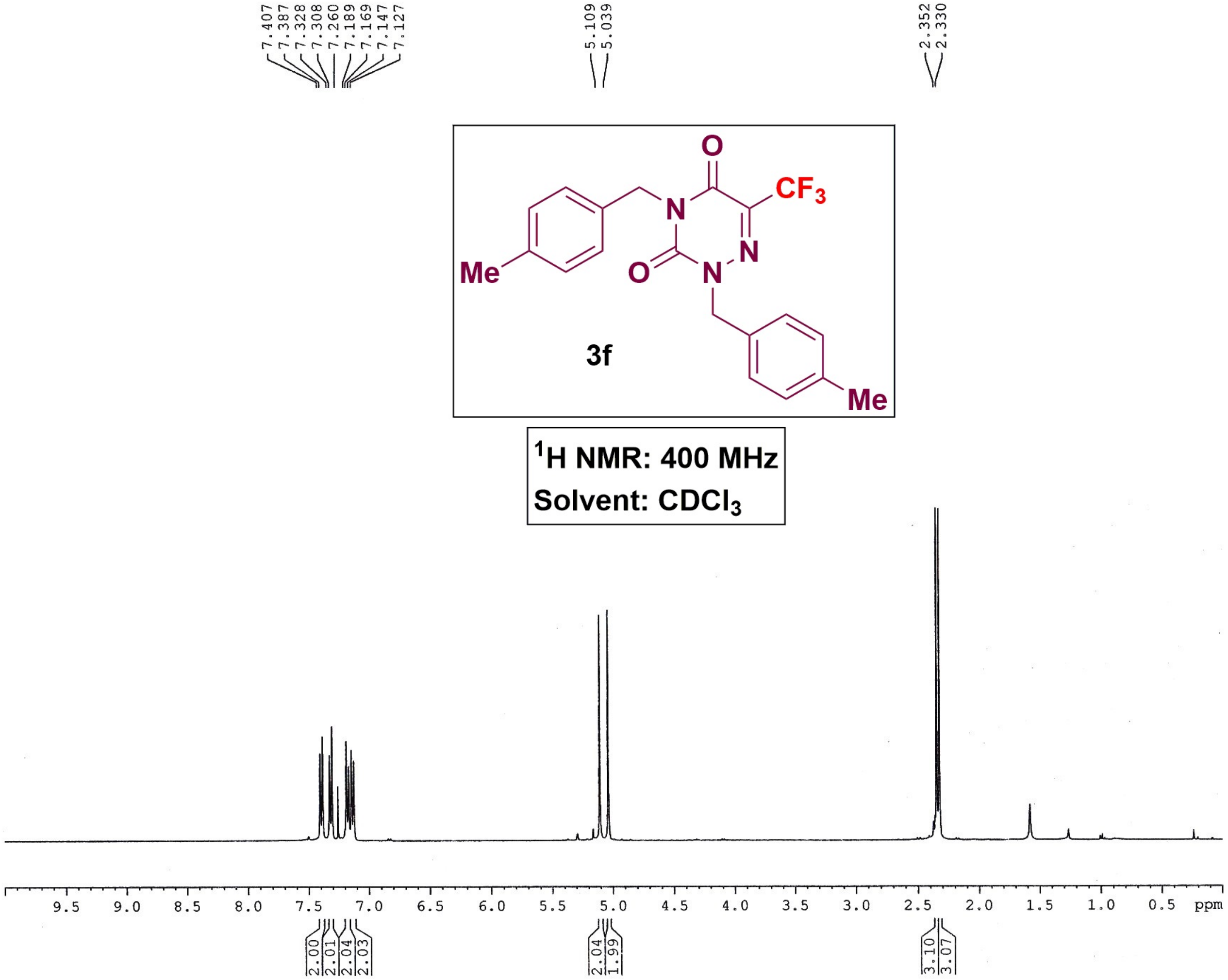
3e

^{19}F NMR: 376 MHz

Solvent: $CDCl_3$

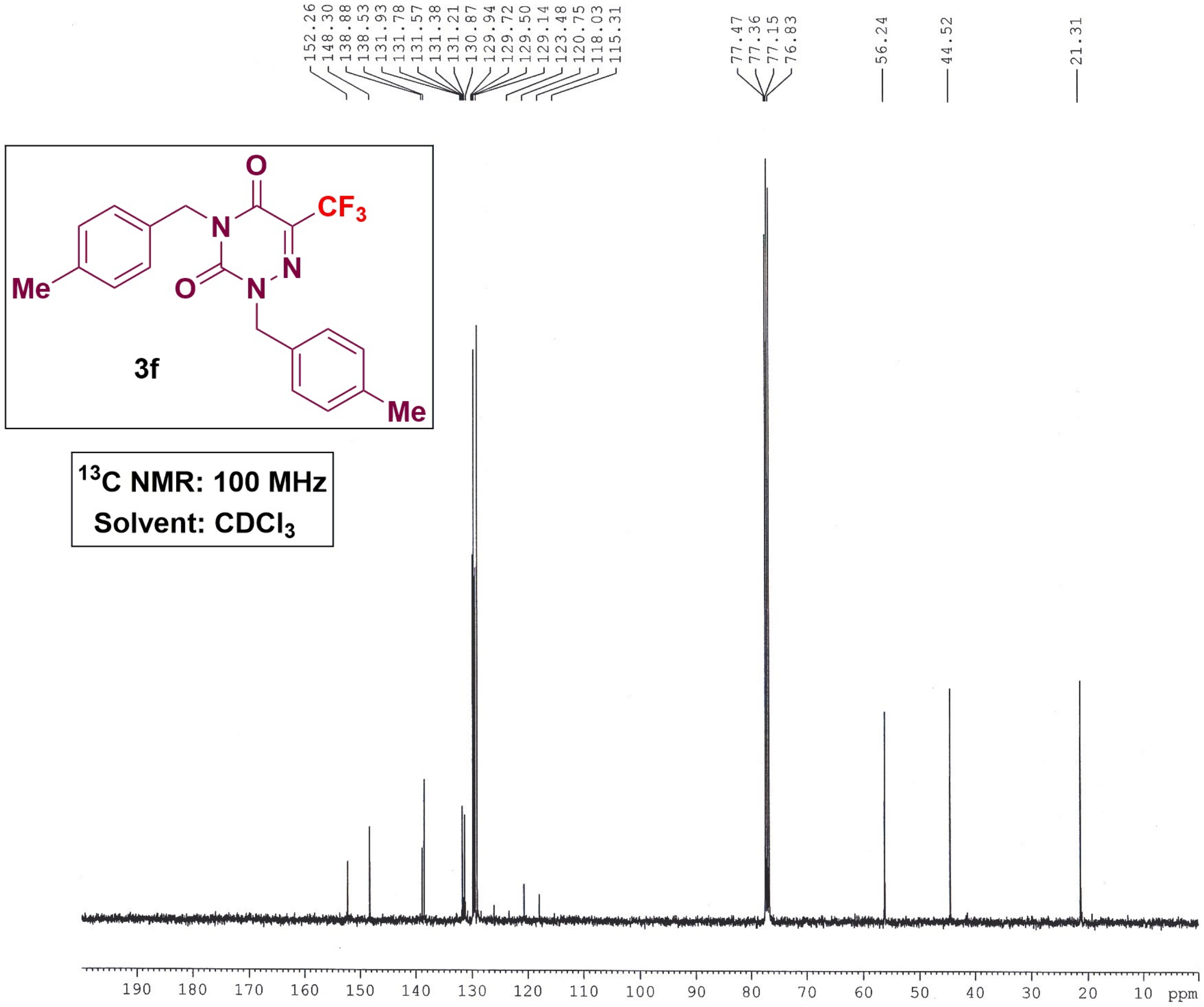


```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   315
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240418
Time                  19.45
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG             zgflqn
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH              89285.711 Hz
FIDRES            2.724784 Hz
AQ               0.1835008 sec
RG                   186.42
DW                    5.600 usec
DE                     6.50 usec
TE                    296.8 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1          376.4795333 MHz
NUC1                   19F
P1                    12.50 usec
PLW1          20.00000000 W

F2 - Processing parameters
SI                    16384
SF            376.5171850 MHz
WDW                      EM
SSB       0
LB                     0.30 Hz
GB        0
PC                     1.00
```



^{1}H NMR: 400 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                    301
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240415
Time                   16.41
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         2
SWH                 8223.685 Hz
FIDRES              0.250967 Hz
AQ                 1.9922944 sec
RG                     135.7
DW                    60.800 usec
DE                      6.50 usec
TE                     295.9 K
D1                1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1             400.1524711 MHz
NUC1                      1H
P1                     14.75 usec
PLW1             12.00000000 W

F2 - Processing parameters
SI                     16384
SF               400.1500098 MHz
WDW                       EM
SSB       0
LB                      0.30 Hz
GB        0
PC                      1.00
```

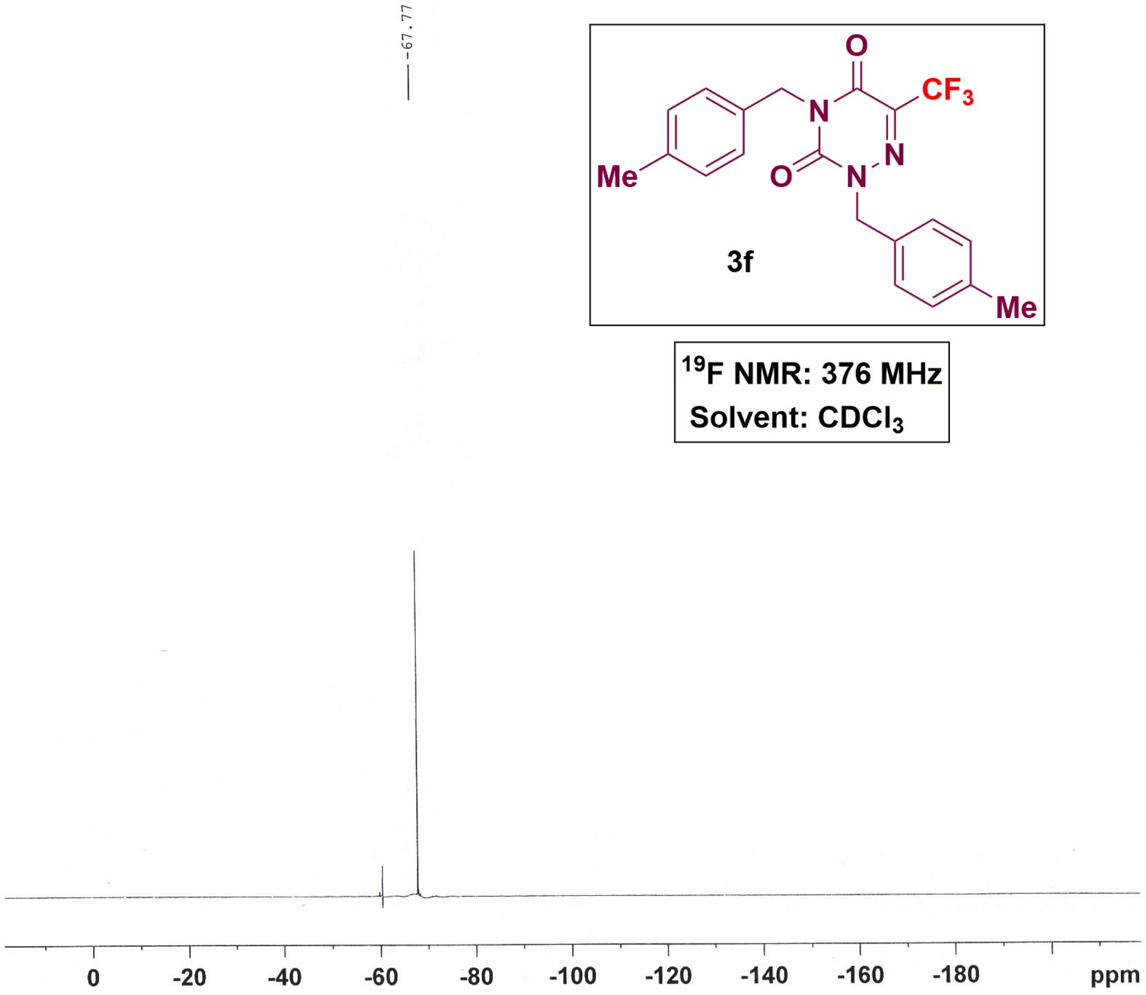


3f

^{13}C NMR: 100 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME        Dr. A HAJRA-2024-13C
EXPNO                    106
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240415
Time                   17.36
INSTRUM                spect
PROBHD   5 mm PABBO BB/
PULPROG               zgpg30
TD                     32768
SOLVENT                CDCl3
NS                      1024
DS                         2
SWH                24038.461 Hz
FIDRES              0.733596 Hz
AQ                 0.6815744 sec
RG                    186.42
DW                    20.800 usec
DE                      6.50 usec
TE                     296.5 K
D1                2.00000000 sec
D11               0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1             100.6278588 MHz
NUC1                     13C
P1                      8.90 usec
PLW1             54.00000000 W

======== CHANNEL f2 ========
SFO2             400.1516006 MHz
NUC2                      1H
CPDPRG[2             waltz16
PCPD2                  90.00 usec
PLW2             12.00000000 W
PLW12             0.32231000 W
PLW13             0.16212000 W

F2 - Processing parameters
SI                     16384
SF               100.6177858 MHz
WDW                       EM
SSB      0
LB                      1.00 Hz
GB       0
PC                      1.40
```

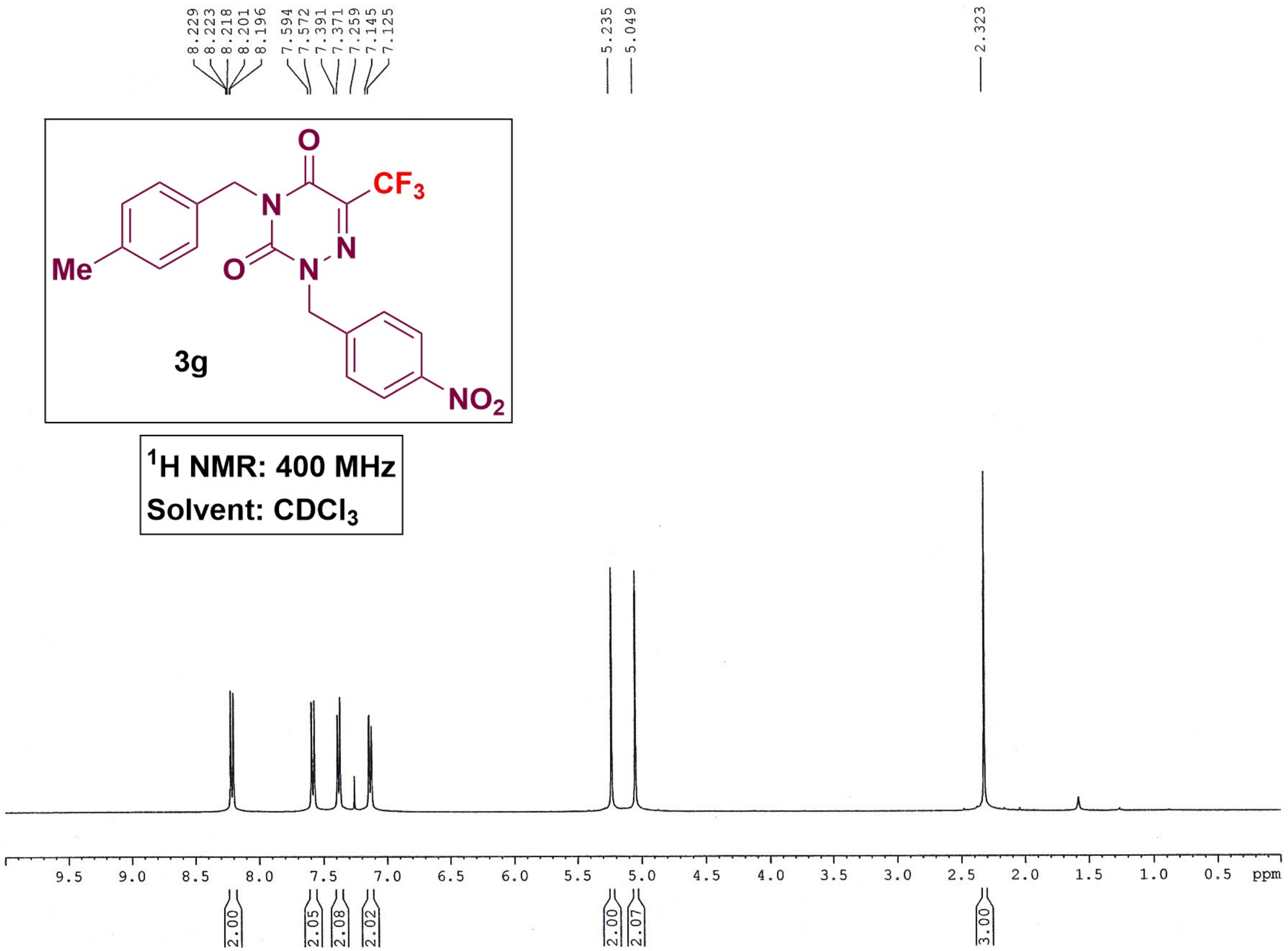


3f

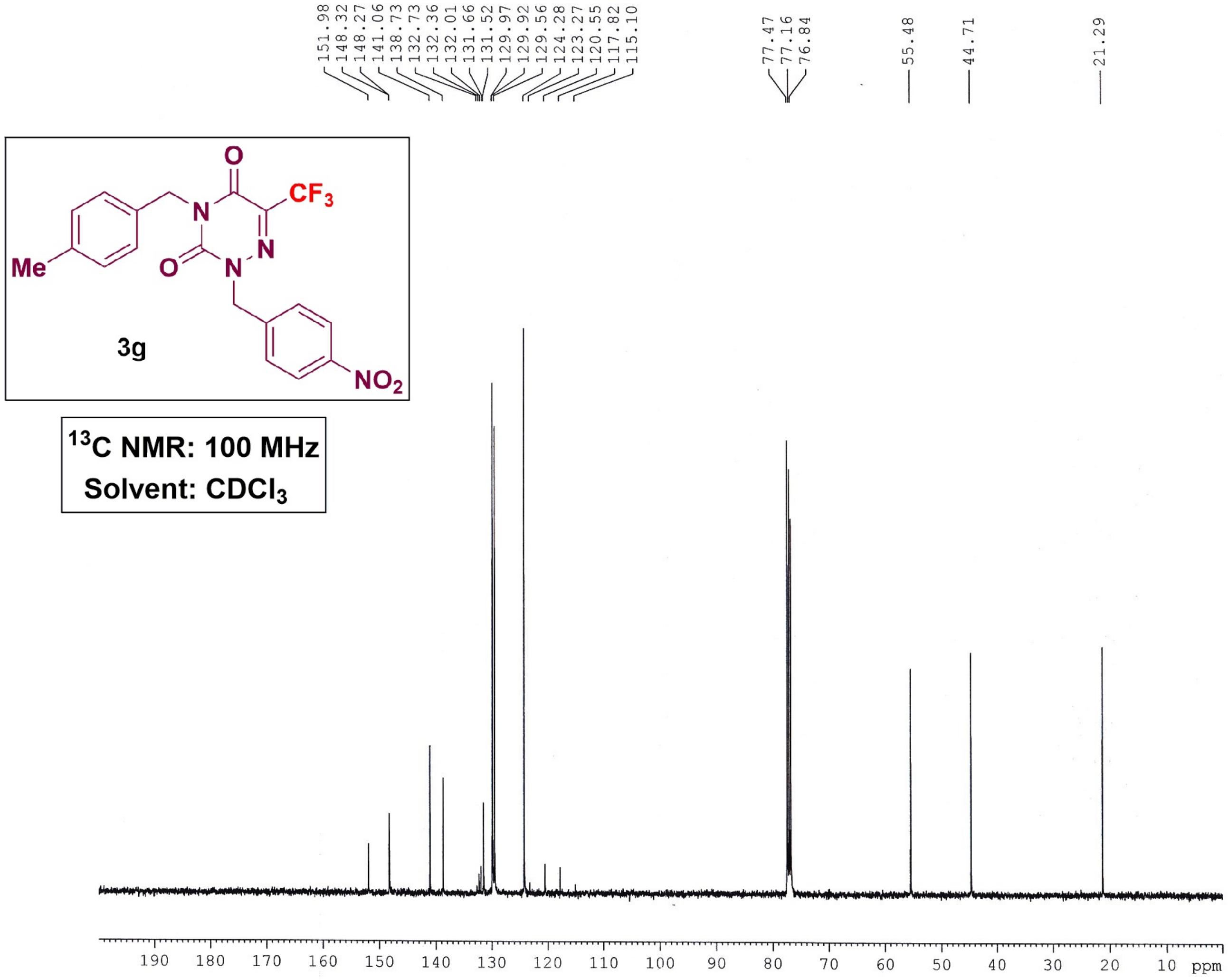
^{19}F NMR: 376 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                   302
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240415
Time                  16.47
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG              zgflqn
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH              89285.711 Hz
FIDRES            2.724784 Hz
AQ               0.1835008 sec
RG                   186.42
DW                    5.600 usec
DE                     6.50 usec
TE                    295.8 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1           376.4795333 MHz
NUC1                    19F
P1                    12.50 usec
PLW1            20.00000000 W

F2 - Processing parameters
SI                    16384
SF              376.5171850 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```



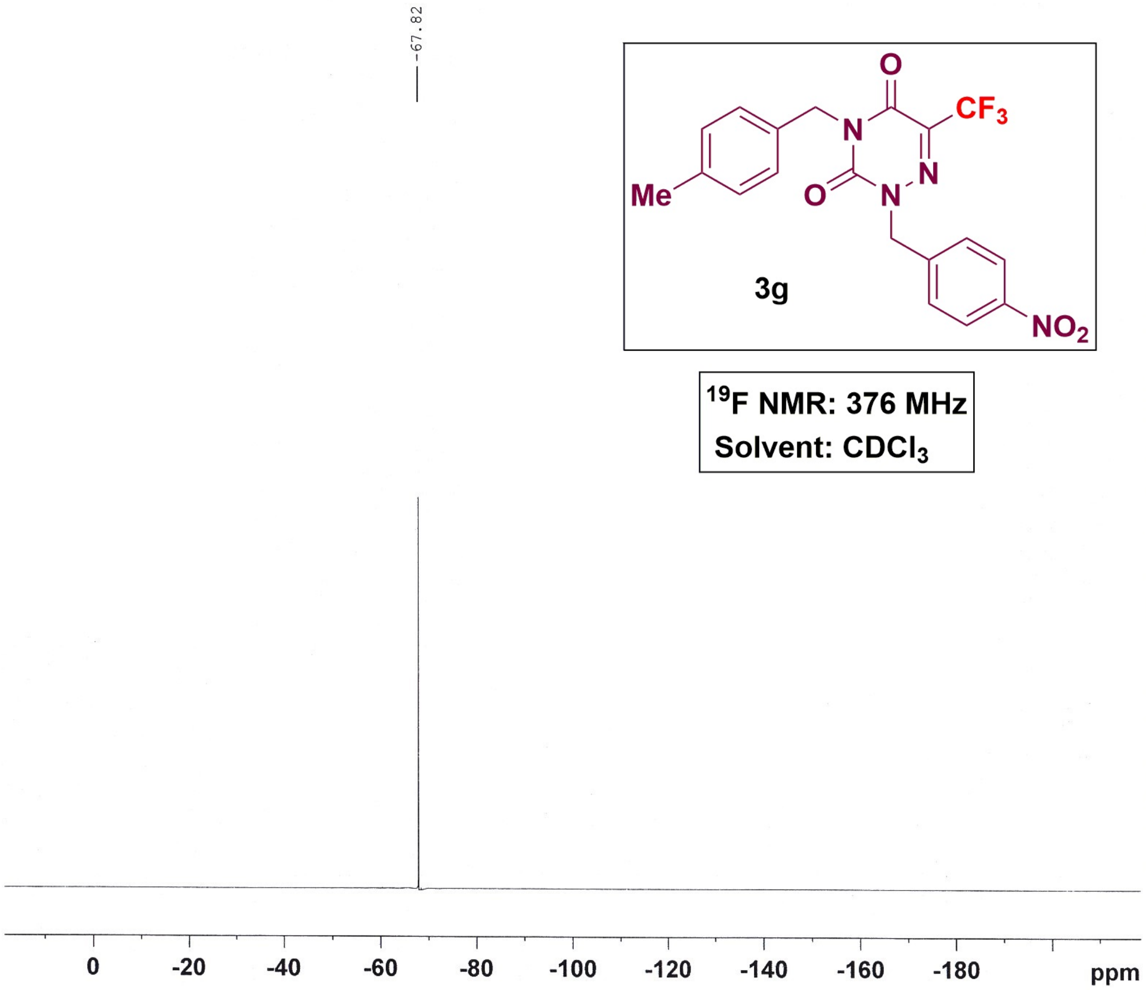
```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1
EXPNO                    321
PROCNO                     1

F2 - Acquisition Parameters
Date_             20240421
Time                 11.02
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG               zg30
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                   77.59
DW                  60.800 use
DE                    6.50 use
TE                   298.1 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1          400.1524711 MHz
NUC1                   1H
P1                  14.75 use
PLW1          12.00000000 W

F2 - Processing parameters
SI                   16384
SF            400.1500097 MHz
WDW                     EM
SSB       0
LB                    0.30 Hz
GB        0
PC                    1.00
```



3g

^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO                      117
PROCNO                       1

F2 - Acquisition Parameters
Date_                 20240421
Time                     11.55
INSTRUM                  spect
PROBHD    5 mm PABBO BB/
PULPROG                zgpg30
TD                       32768
SOLVENT                  CDCl3
NS                        1024
DS                           2
SWH                  24038.461 Hz
FIDRES                0.733596 Hz
AQ                   0.6815744 sec
RG                      186.42
DW                      20.800 usec
DE                        6.50 usec
TE                       298.5 K
D1                  2.00000000 sec
D11                 0.03000000 sec
TD0                          1

======== CHANNEL f1 ========
SFO1              100.6278588 MHz
NUC1                      13C
P1                        8.90 usec
PLW1               54.00000000 W

======== CHANNEL f2 ========
SFO2              400.1516006 MHz
NUC2                        1H
CPDPRG[2               waltz16
PCPD2                    90.00 usec
PLW2               12.00000000 W
PLW12               0.32231000 W
PLW13               0.16212000 W

F2 - Processing parameters
SI                       16384
SF                 100.6177858 MHz
WDW                         EM
SSB       0
LB                        1.00 Hz
GB        0
PC                        1.40
```

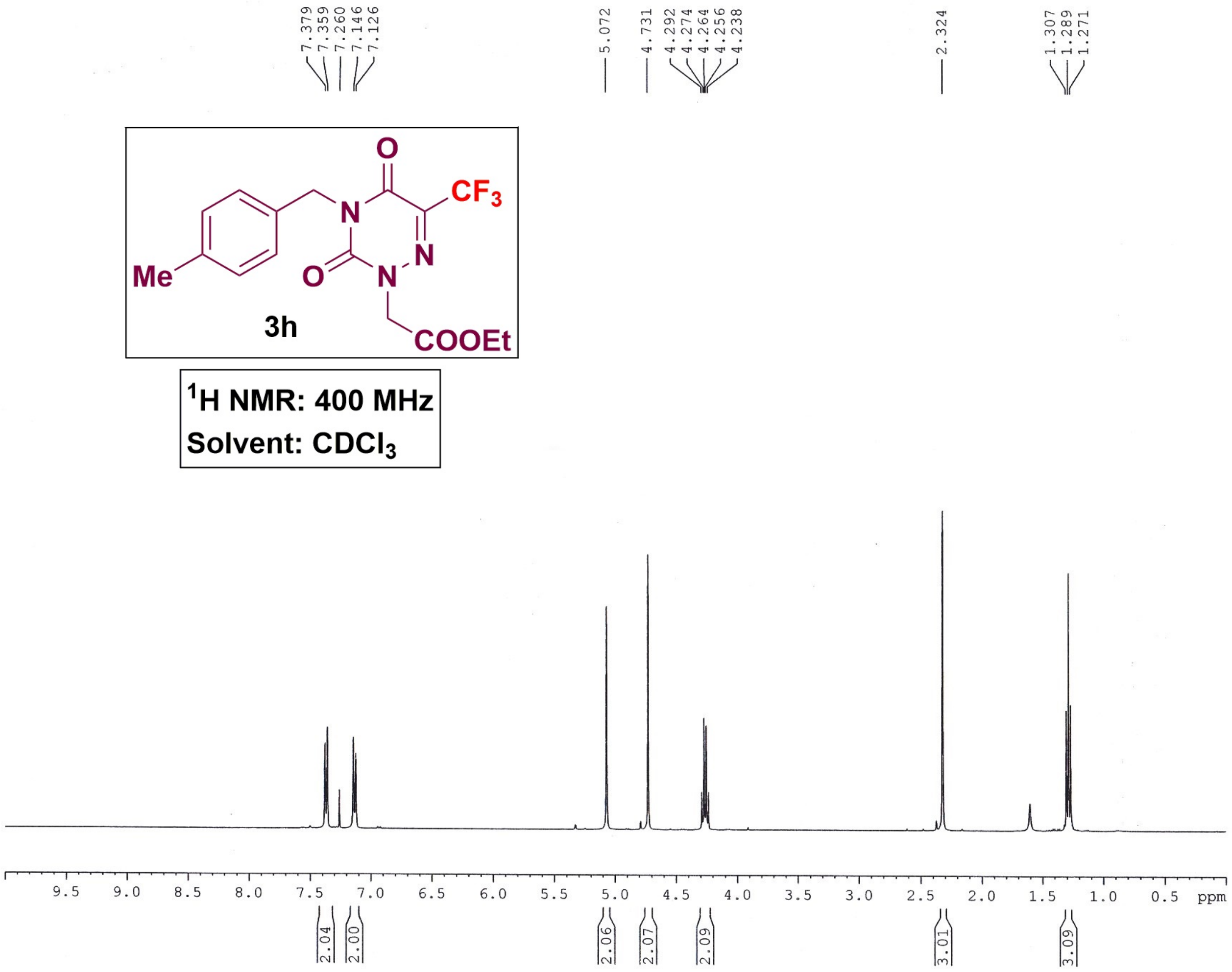


3g

^{19}F NMR: 376 MHz

Solvent: CDCl$_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                  322
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240421
Time                 11.06
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG             zgflqn
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH             89285.711 Hz
FIDRES           2.724784 Hz
AQ              0.1835008 sec
RG                  186.42
DW                   5.600 usec
DE                    6.50 usec
TE                   298.0 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1         376.4795333 MHz
NUC1                   19F
P1                   12.50 usec
PLW1         20.00000000 W

F2 - Processing parameters
SI                   16384
SF           376.5171850 MHz
WDW                     EM
SSB      0
LB                    0.30 Hz
GB       0
PC                    1.00
```

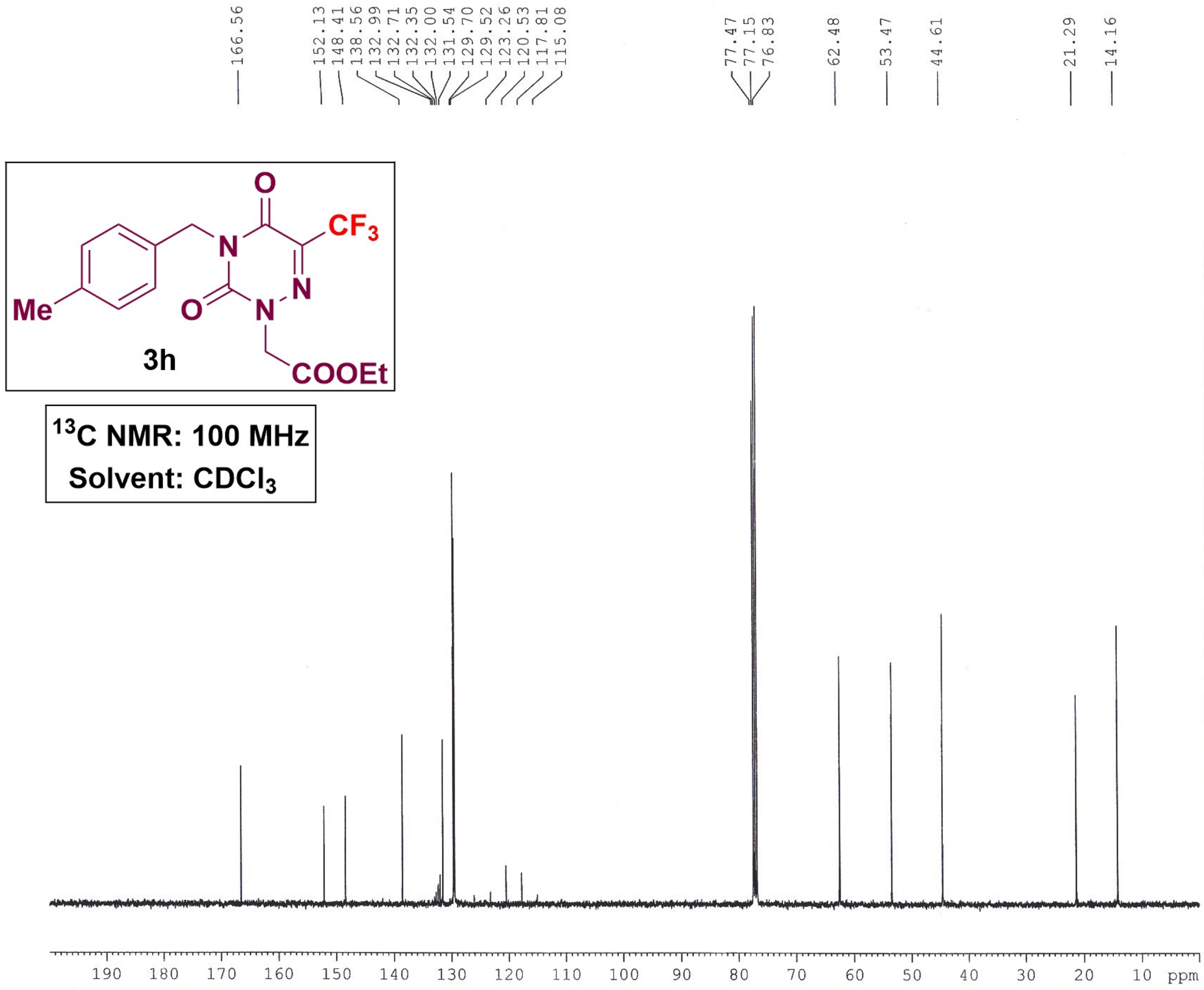


3h

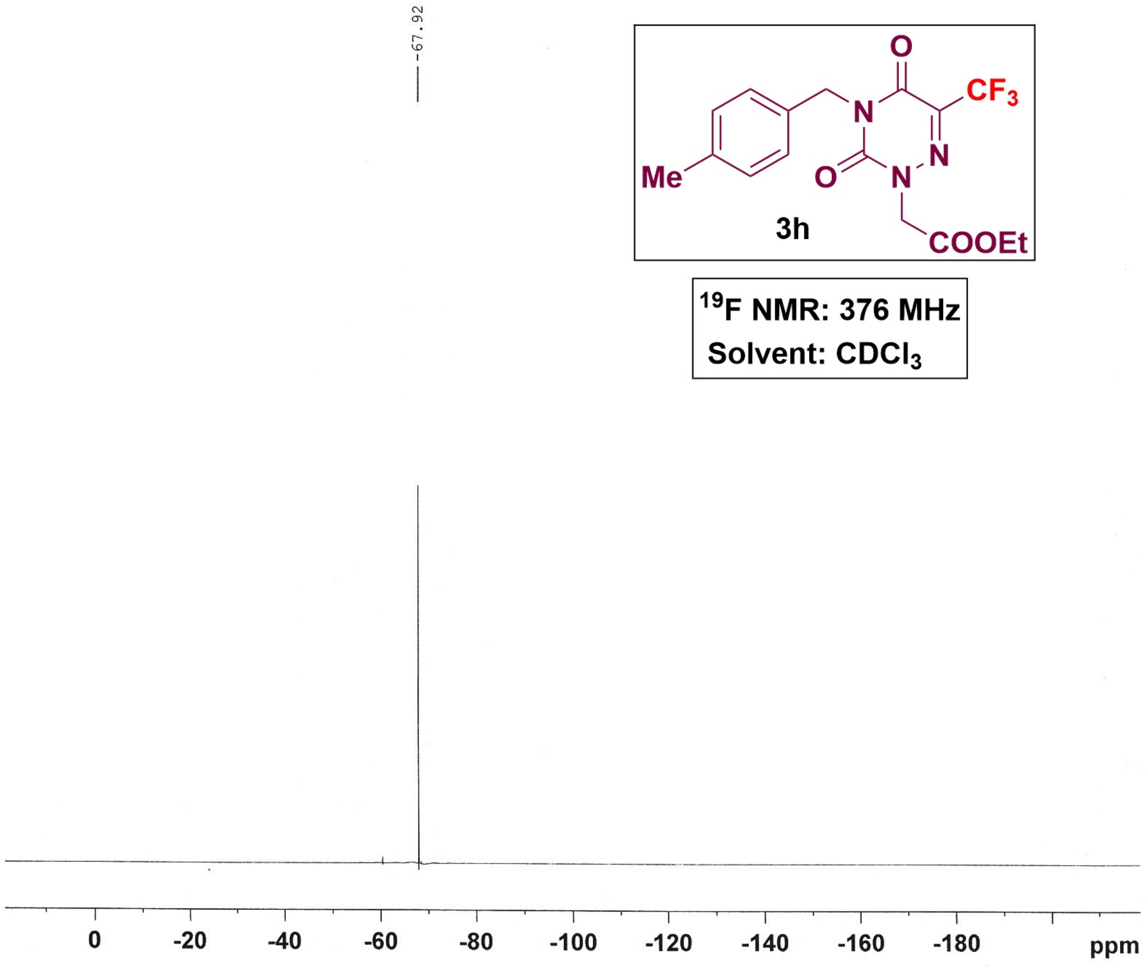
^{1}H NMR: 400 MHz

Solvent: CDCl$_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   543
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240626
Time                  19.16
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                   106.66
DW                   60.800 usec
DE                     6.50 usec
TE                    297.2 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500097 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```



```
Current Data Parameters
NAME     Dr. A HAJRA-2024-13C
EXPNO                    206
PROCNO                     1

F2 - Acquisition Parameters
Date_              20240626
Time                  20.14
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG             zgpg30
TD                   32768
SOLVENT              CDCl3
NS                    1090
DS                       2
SWH              24038.461 Hz
FIDRES            0.733596 Hz
AQ               0.6815744 sec
RG                  186.42
DW                  20.800 usec
DE                    6.50 usec
TE                   297.7 K
D1              2.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1           100.6278588 MHz
NUC1                   13C
P1                    8.90 usec
PLW1           54.00000000 W

======== CHANNEL f2 ========
SFO2           400.1516006 MHz
NUC2                    1H
CPDPRG[2           waltz16
PCPD2                90.00 usec
PLW2           12.00000000 W
PLW12           0.32231000 W
PLW13           0.16212000 W

F2 - Processing parameters
SI                   16384
SF             100.6177858 MHz
WDW                     EM
SSB      0
LB                    1.00 Hz
GB       0
PC                    1.40
```

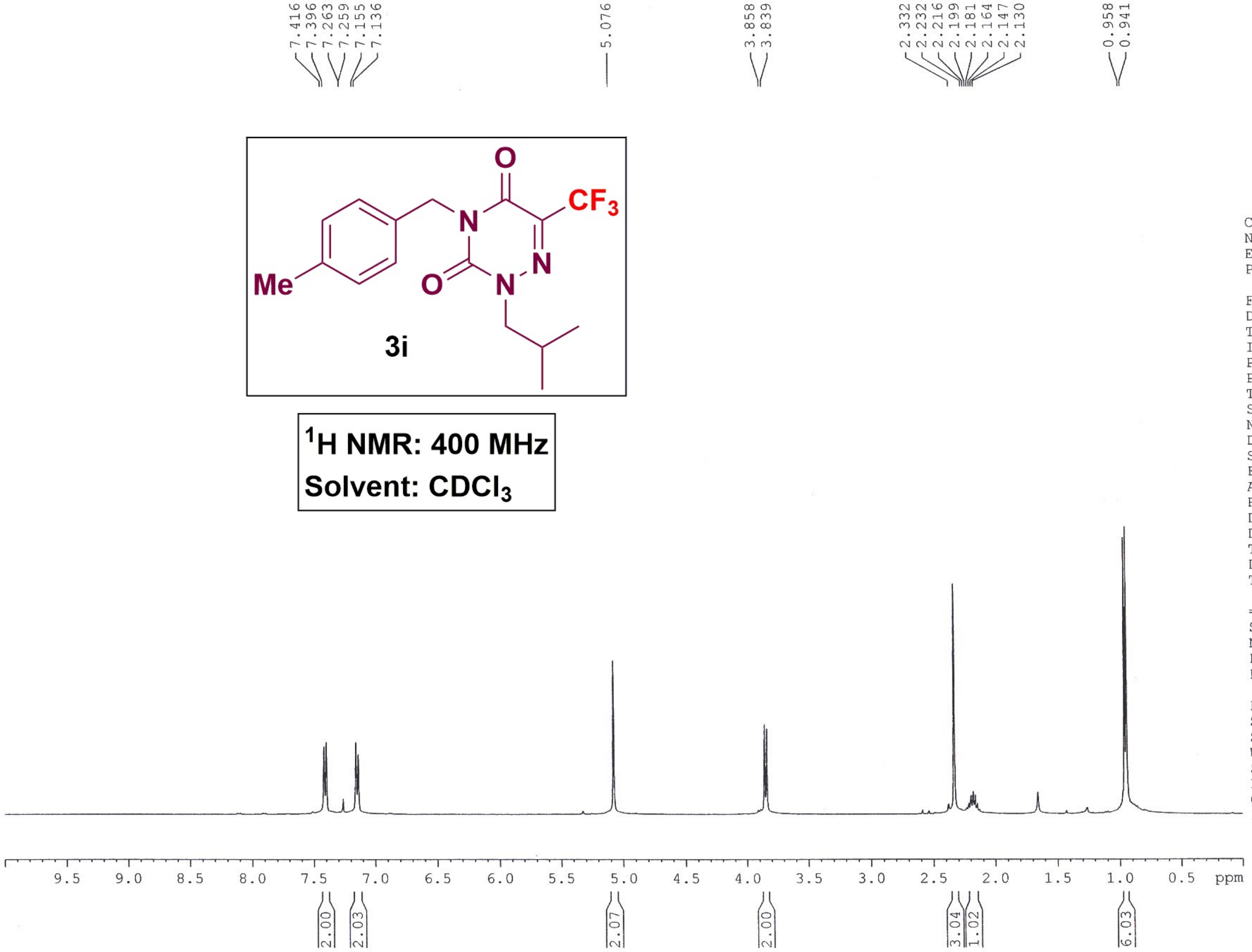


3h

^{19}F NMR: 376 MHz

Solvent: $CDCl_3$

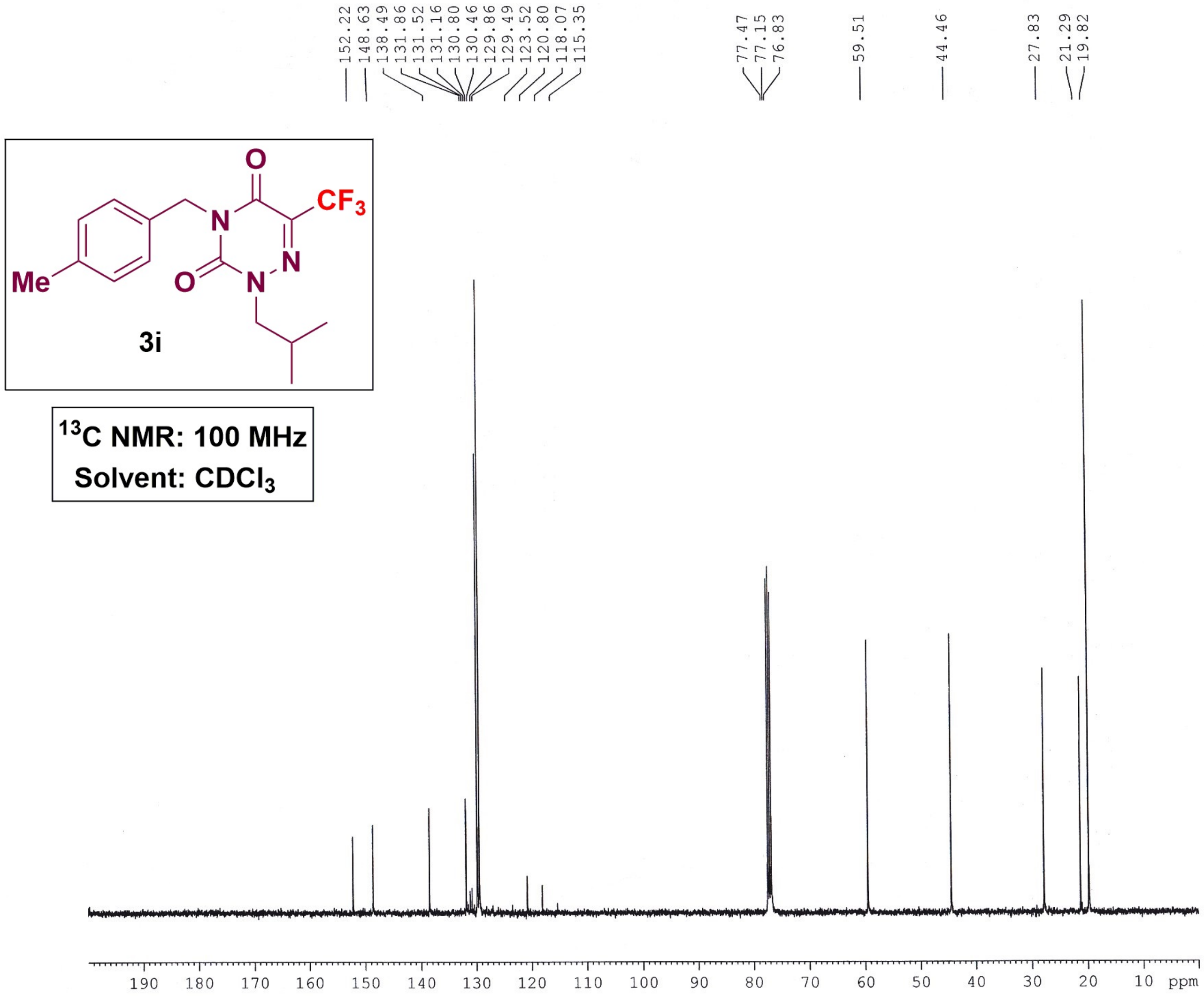
```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                  544
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240626
Time                 19.22
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG             zgflqn
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH             89285.711 Hz
FIDRES           2.724784 Hz
AQ              0.1835008 sec
RG                  186.42
DW                   5.600 usec
DE                    6.50 usec
TE                   297.1 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1          376.4795333 MHz
NUC1                   19F
P1                   12.50 usec
PLW1           20.00000000 W

F2 - Processing parameters
SI                   16384
SF             376.5171850 MHz
WDW                     EM
SSB      0
LB                    0.30 Hz
GB       0
PC                    1.00
```



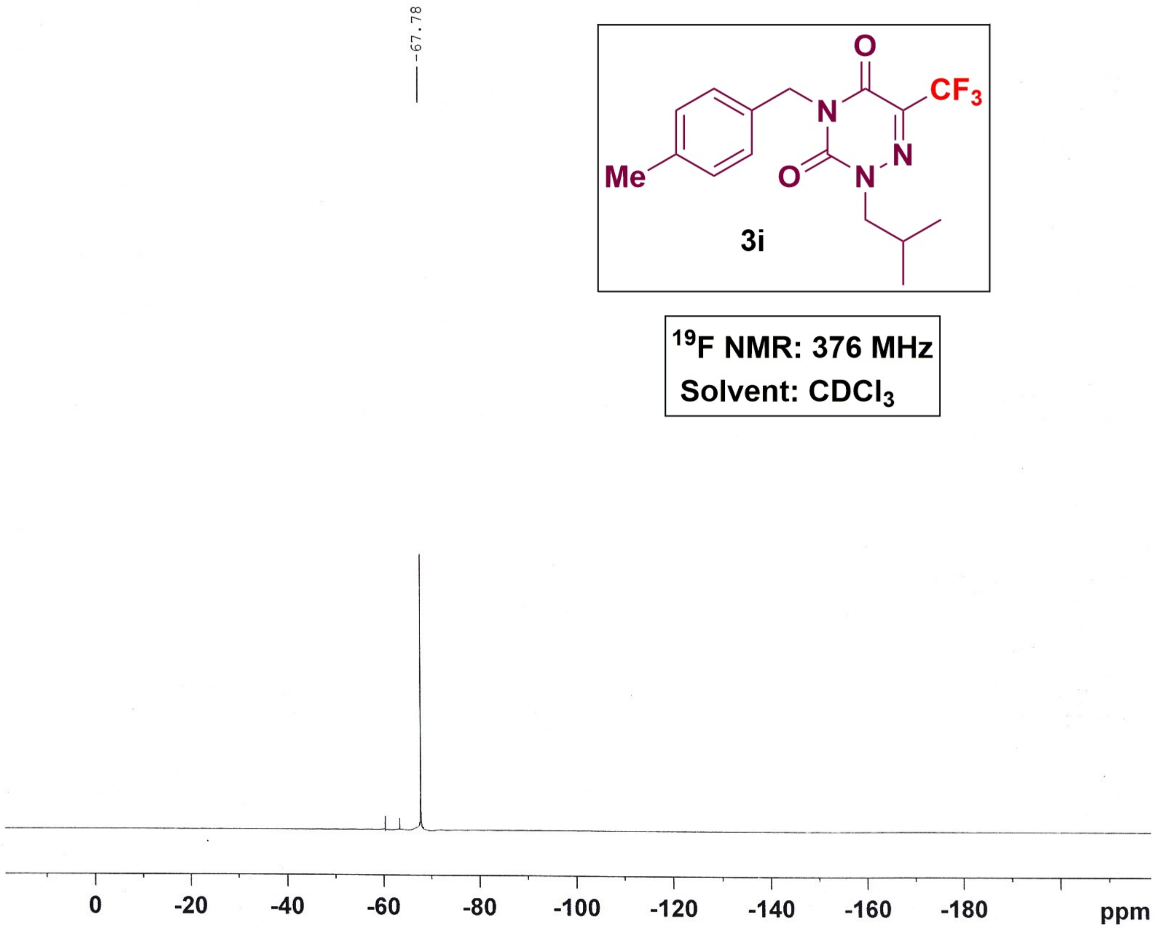
```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                  593
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240723
Time                  9.54
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG               zg30
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                   47.25
DW                  60.800 usec
DE                    6.50 usec
TE                   289.1 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1          400.1524711 MHz
NUC1                    1H
P1                   14.75 usec
PLW1           12.00000000 W

F2 - Processing parameters
SI                   16384
SF             400.1500087 MHz
WDW                     EM
SSB        0
LB                    0.30 Hz
GB         0
PC                    1.00
```

3i

^{13}C NMR: 100 MHz
Solvent: $CDCl_3$



```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO                  223
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240723
Time                 10.30
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG            zgpg30
TD                  32768
SOLVENT             CDC13
NS                    620
DS                      2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                 186.42
DW                 20.800 usec
DE                   6.50 usec
TE                  291.8 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1          100.6278588 MHz
NUC1                  13C
P1                   8.90 usec
PLW1          54.00000000 W

======== CHANNEL f2 ========
SFO2          400.1516006 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2               90.00 usec
PLW2          12.00000000 W
PLW12          0.32231000 W
PLW13          0.16212000 W

F2 - Processing parameters
SI                  16384
SF            100.6177887 MHz
WDW                    EM
SSB      0
LB                   1.00 Hz
GB       0
PC                   1.40
```



3i

^{19}F NMR: 376 MHz

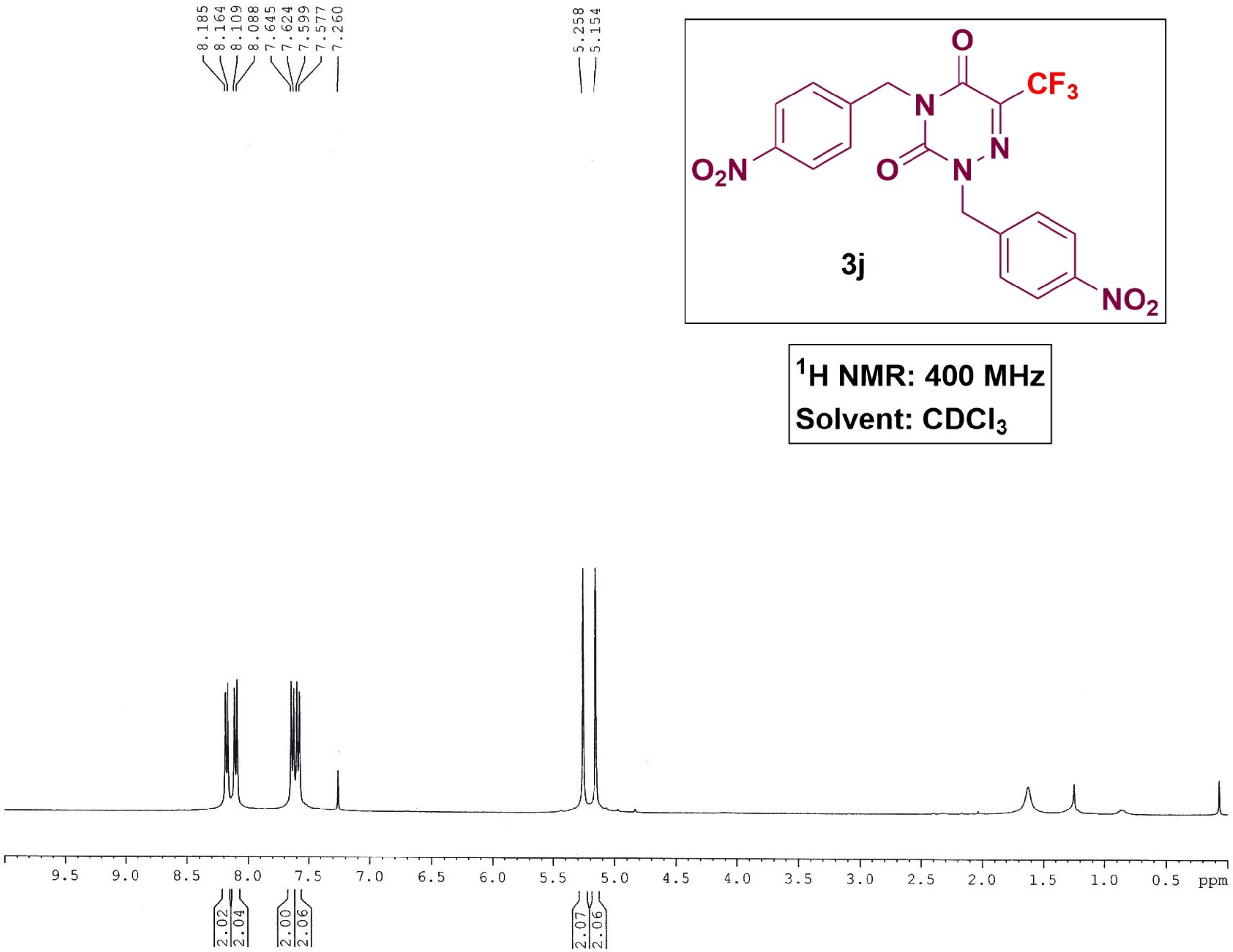
Solvent: $CDCl_3$

```
Current Data Parameters
NAME     Dr. A HAJRA 2024 1H
EXPNO                  594
PROCNO                   1

F2 - Acquisition Parameters
Date_           20240723
Time                9.59
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG           zgflqn
TD                 32768
SOLVENT            CDCl3
NS                     8
DS                     2
SWH           89285.711 Hz
FIDRES         2.724784 Hz
AQ            0.1835008 sec
RG               186.42
DW                5.600 usec
DE                 6.50 usec
TE                289.5 K
D1           1.00000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1        376.4795333 MHz
NUC1                19F
P1                12.50 usec
PLW1        20.00000000 W

F2 - Processing parameters
SI                16384
SF          376.5171850 MHz
WDW                  EM
SSB      0
LB                 0.30 Hz
GB       0
PC                 1.00
```

3j

^{1}H NMR: 400 MHz

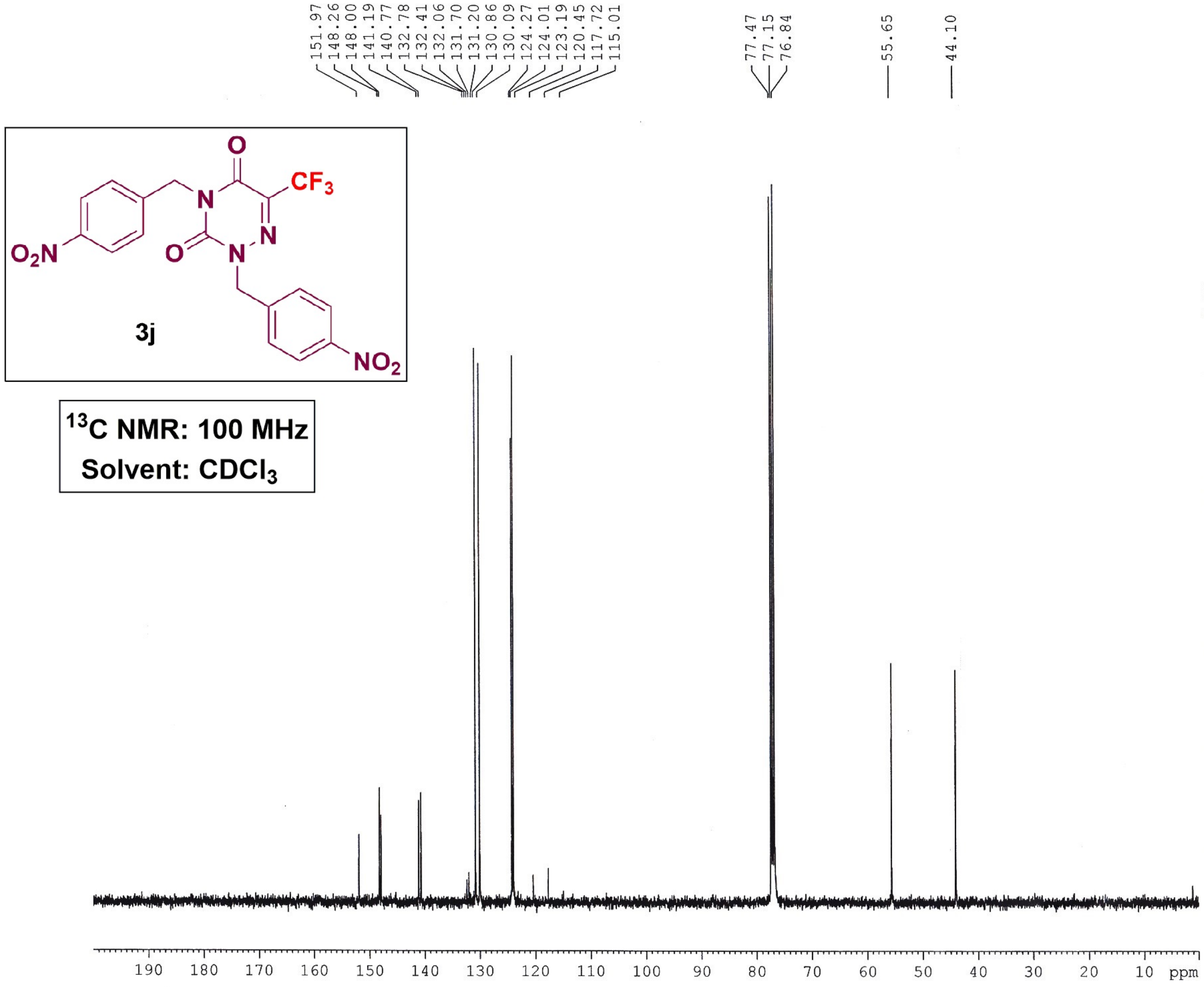
Solvent: $CDCl_3$



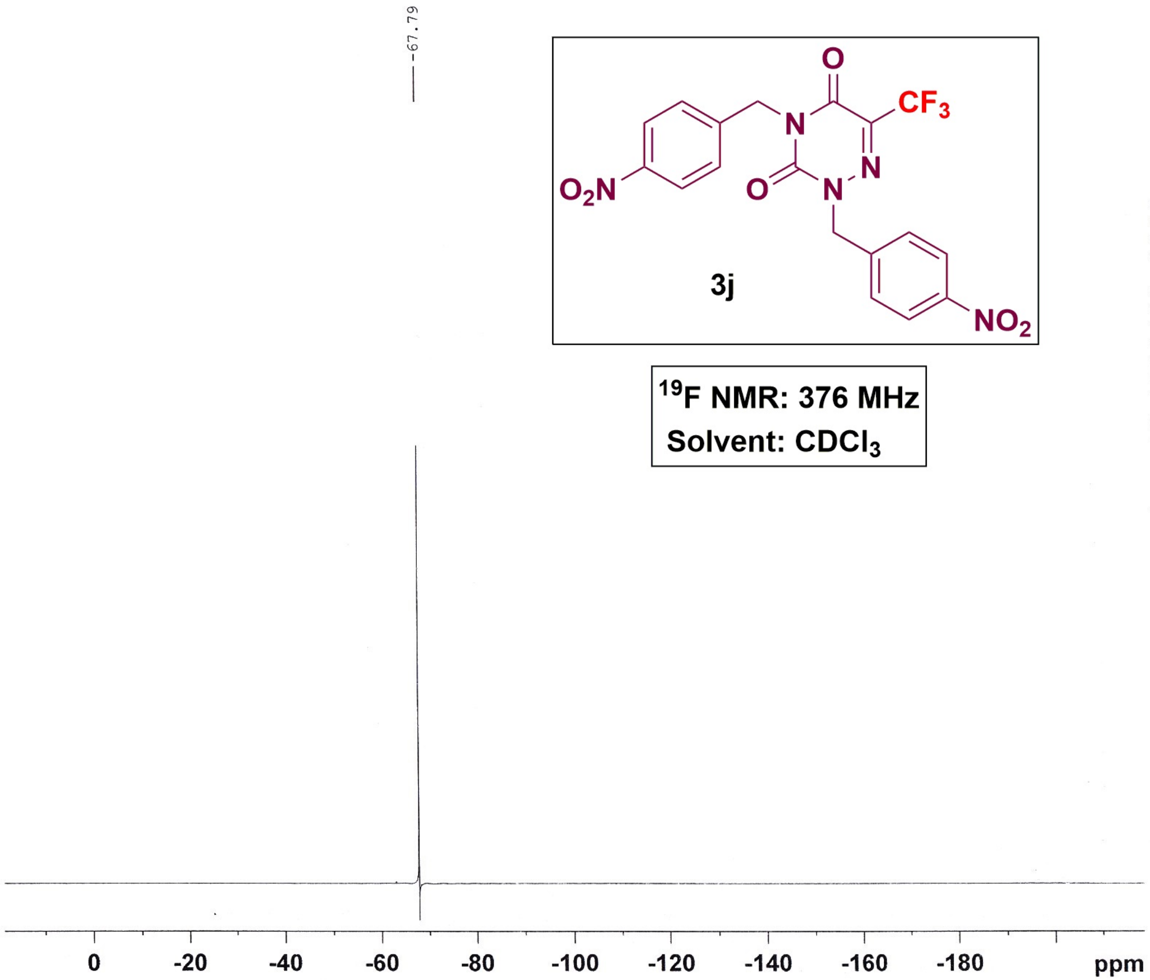
```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   628
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240816
Time                  18.00
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                   148.91
DW                   60.800 usec
DE                     6.50 usec
TE                    297.1 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1           400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500099 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```

3j

^{13}C NMR: 100 MHz
Solvent: $CDCl_3$



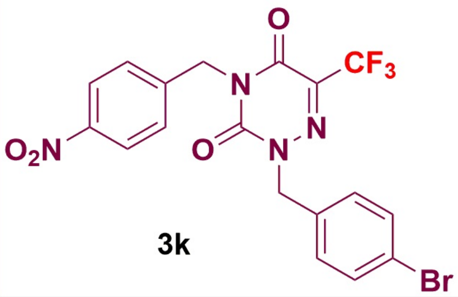
```
Current Data Parameters
NAME       Dr. A HAJRA-2024-13C
EXPNO                     238
PROCNO                      1

F2 - Acquisition Parameters
Date_              20240816
Time                  19.01
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG             zgpg30
TD                   32768
SOLVENT              CDCl3
NS                    1290
DS                       2
SWH              24038.461 Hz
FIDRES            0.733596 Hz
AQ               0.6815744 sec
RG                  186.42
DW                  20.800 usec
DE                    6.50 usec
TE                   298.0 K
D1              2.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1           100.6278588 MHz
NUC1                   13C
P1                    8.90 usec
PLW1           54.00000000 W

======== CHANNEL f2 ========
SFO2           400.1516006 MHz
NUC2                    1H
CPDPRG[2           waltz16
PCPD2                90.00 usec
PLW2           12.00000000 W
PLW12           0.32231000 W
PLW13           0.16212000 W

F2 - Processing parameters
SI                   16384
SF             100.6177852 MHz
WDW                     EM
SSB        0
LB                    1.00 Hz
GB         0
PC                    1.40
```



3j

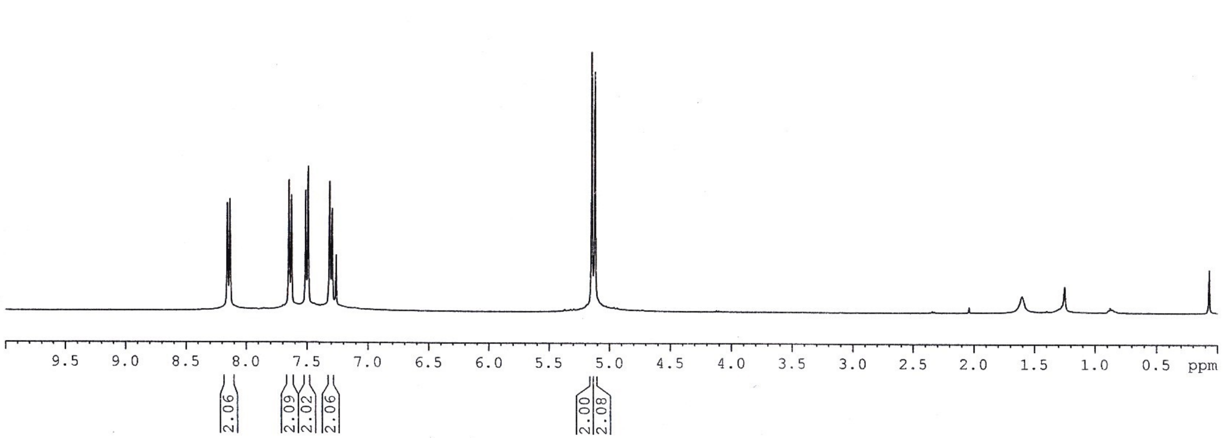
^{19}F NMR: 376 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   608
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240811
Time                  19.49
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG             zgflqn
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH             89285.711 Hz
FIDRES           2.724784 Hz
AQ              0.1835008 sec
RG                   186.42
DW                    5.600 usec
DE                     6.50 usec
TE                    295.5 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1          376.4795333 MHz
NUC1                  19F
P1                   12.50 usec
PLW1          20.00000000 W

F2 - Processing parameters
SI                    16384
SF            376.5171850 MHz
WDW                      EM
SSB       0
LB                     0.30 Hz
GB        0
PC                     1.00
```



3k

^{1}H NMR: 400 MHz
Solvent: CDCl$_3$

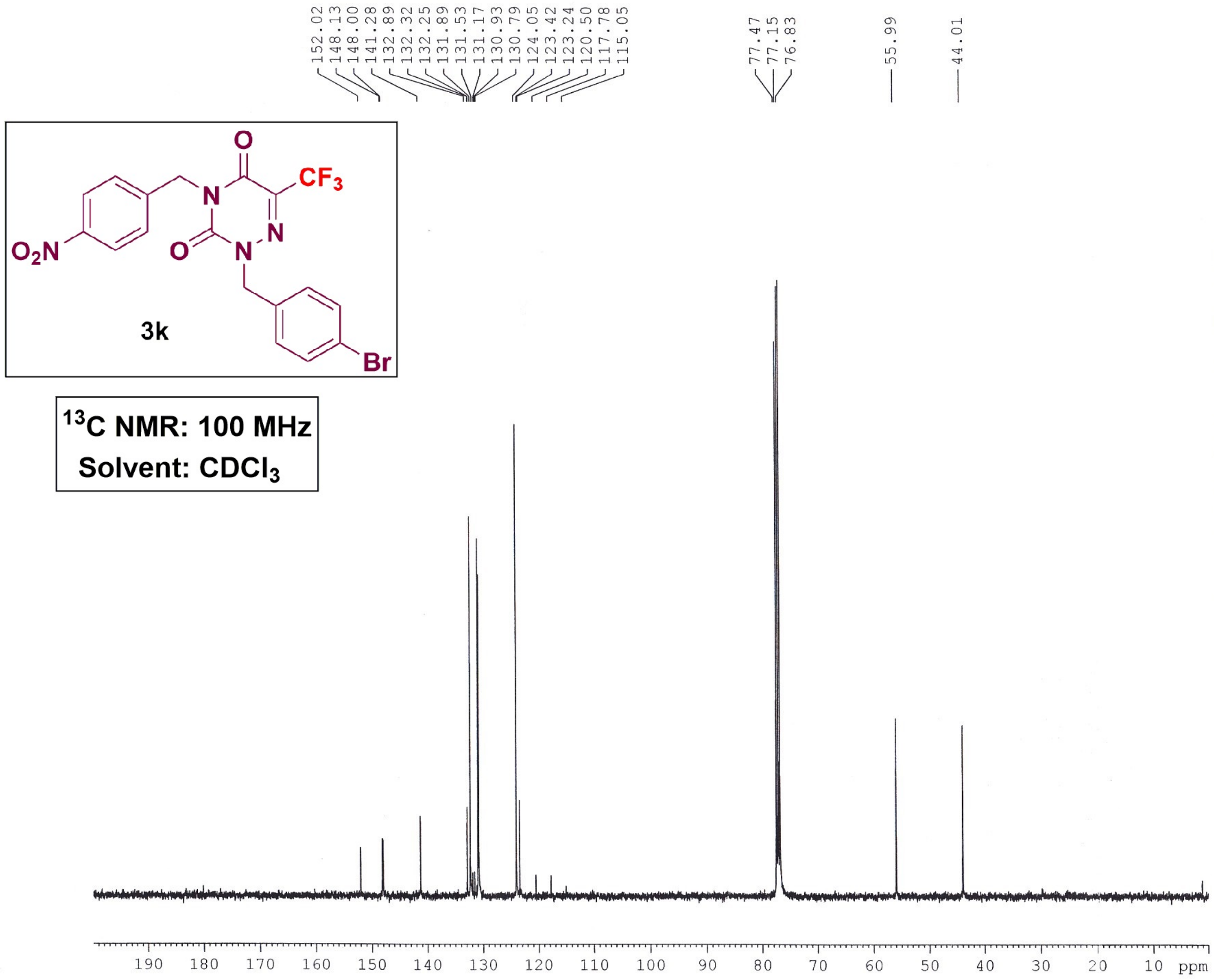


```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                     324
PROCNO                      1

F2 - Acquisition Parameters
Date_                20240426
Time                     9.40
INSTRUM                 spect
PROBHD    5 mm PABBO BB/
PULPROG                  zg30
TD                      32768
SOLVENT                 CDCl3
NS                          8
DS                          2
SWH                  8223.685 Hz
FIDRES               0.250967 Hz
AQ                  1.9922944 sec
RG                      135.7
DW                     60.800 usec
DE                       6.50 usec
TE                      291.0 K
D1                 1.00000000 sec
TD0                         1

======== CHANNEL f1 ========
SFO1              400.1524711 MHz
NUC1                       1H
P1                      14.75 usec
PLW1              12.00000000 W

F2 - Processing parameters
SI                      16384
SF                400.1500092 MHz
WDW                        EM
SSB         0
LB                       0.30 Hz
GB          0
PC                       1.00
```

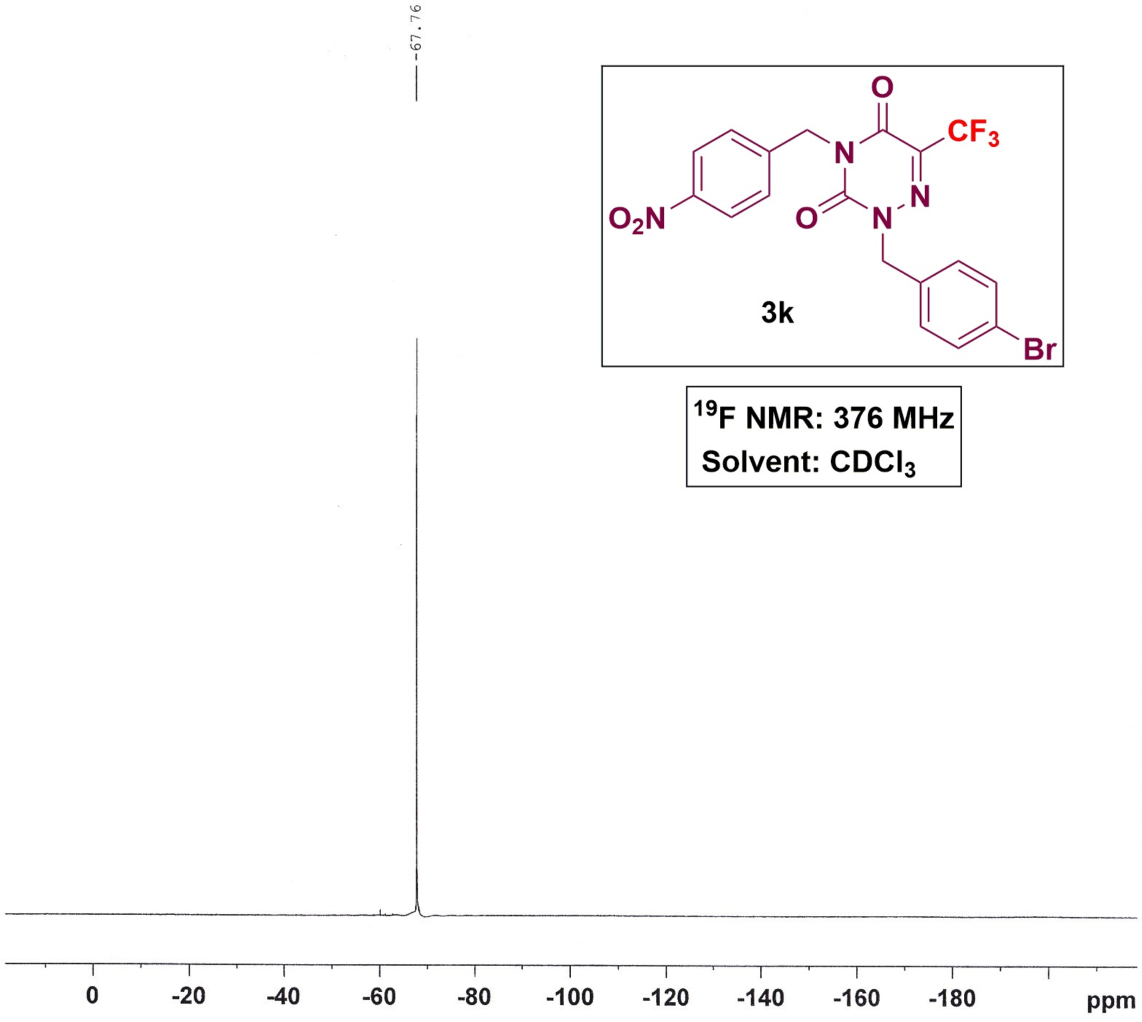
3k

^{13}C NMR: 100 MHz

Solvent: $CDCl_3$



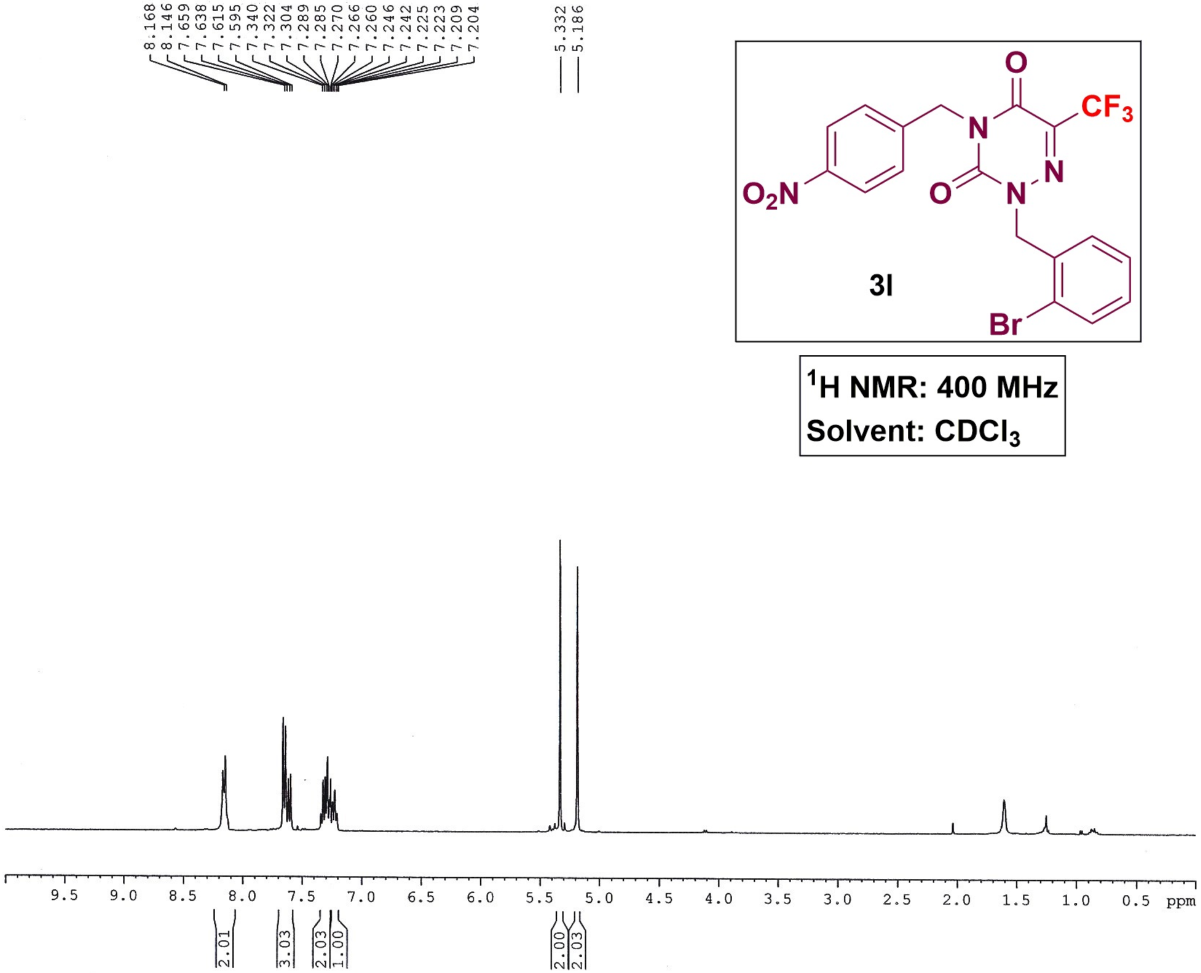
```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO                  119
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240426
Time                 10.55
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                  32768
SOLVENT             CDCl3
NS                   1500
DS                      2
SWH           24038.461 Hz
FIDRES         0.733596 Hz
AQ            0.6815744 sec
RG               186.42
DW               20.800 usec
DE                 6.50 usec
TE                295.7 K
D1           2.00000000 sec
D11          0.03000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1        100.6278588 MHz
NUC1                  13C
P1                  8.90 usec
PLW1         54.00000000 W

======== CHANNEL f2 ========
SFO2        400.1516006 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2              90.00 usec
PLW2         12.00000000 W
PLW12         0.32231000 W
PLW13         0.16212000 W

F2 - Processing parameters
SI                  16384
SF          100.6177873 MHz
WDW                    EM
SSB      0
LB                   1.00 Hz
GB       0
PC                   1.40
```



^{19}F NMR: 376 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   325
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240426
Time                   9.43
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG              zgflqn
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH              89285.711 Hz
FIDRES            2.724784 Hz
AQ               0.1835008 sec
RG                   186.42
DW                    5.600 usec
DE                     6.50 usec
TE                    291.4 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1         376.4795333 MHz
NUC1                    19F
P1                    12.50 usec
PLW1         20.00000000 W

F2 - Processing parameters
SI                    16384
SF           376.5171850 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```

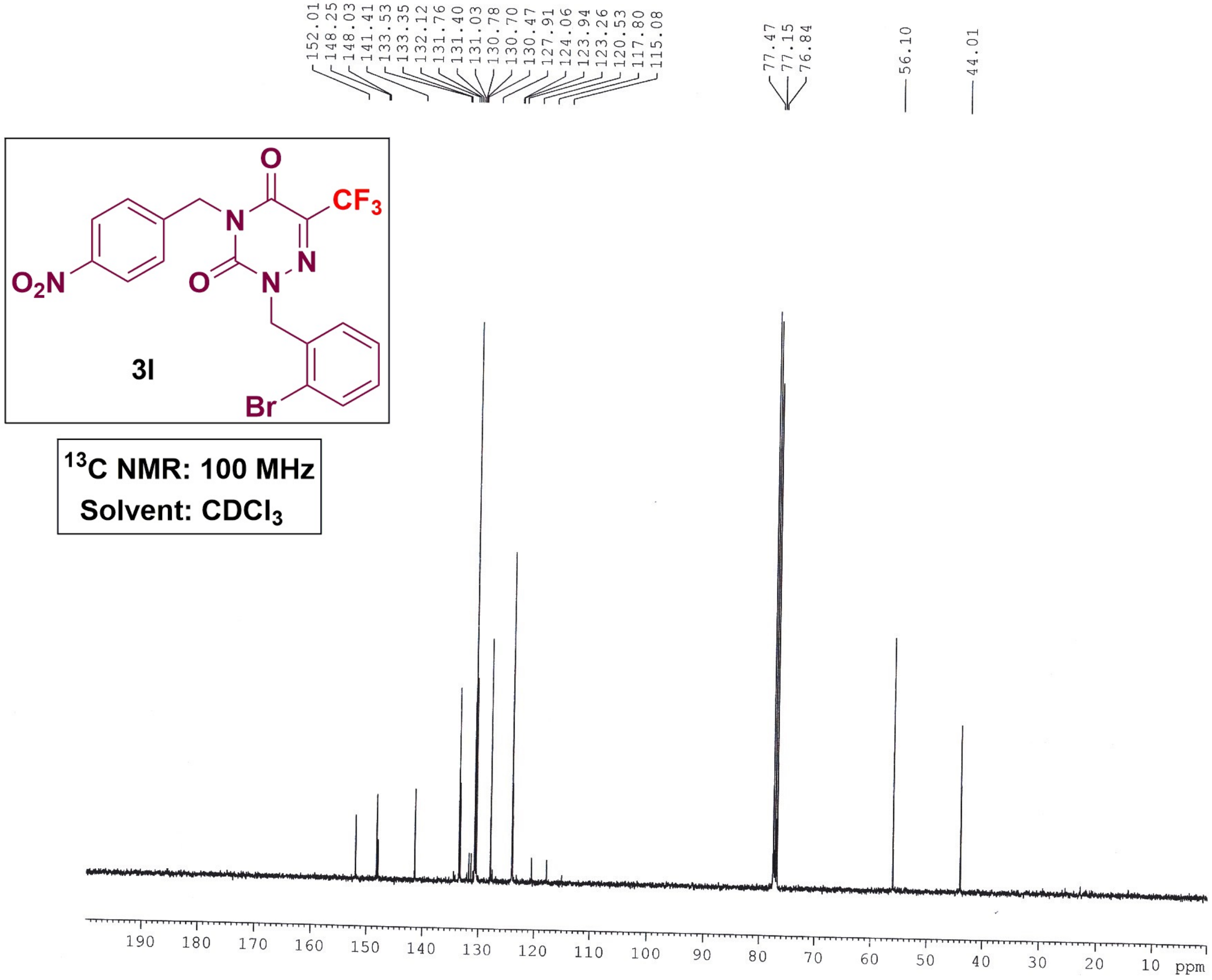


3l

^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO               362
PROCNO                1

F2 - Acquisition Parameters
Date_          20240506
Time              11.50
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG            zg30
TD                32768
SOLVENT           CDCl3
NS                    8
DS                    2
SWH            8223.685 Hz
FIDRES         0.250967 Hz
AQ            1.9922944 sec
RG               120.16
DW               60.800 usec
DE                 6.50 usec
TE                296.8 K
D1           1.00000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1        400.1524711 MHz
NUC1                 1H
P1                14.75 usec
PLW1        12.00000000 W

F2 - Processing parameters
SI                16384
SF          400.1500098 MHz
WDW                  EM
SSB      0
LB                 0.30 Hz
GB       0
PC                 1.00
```

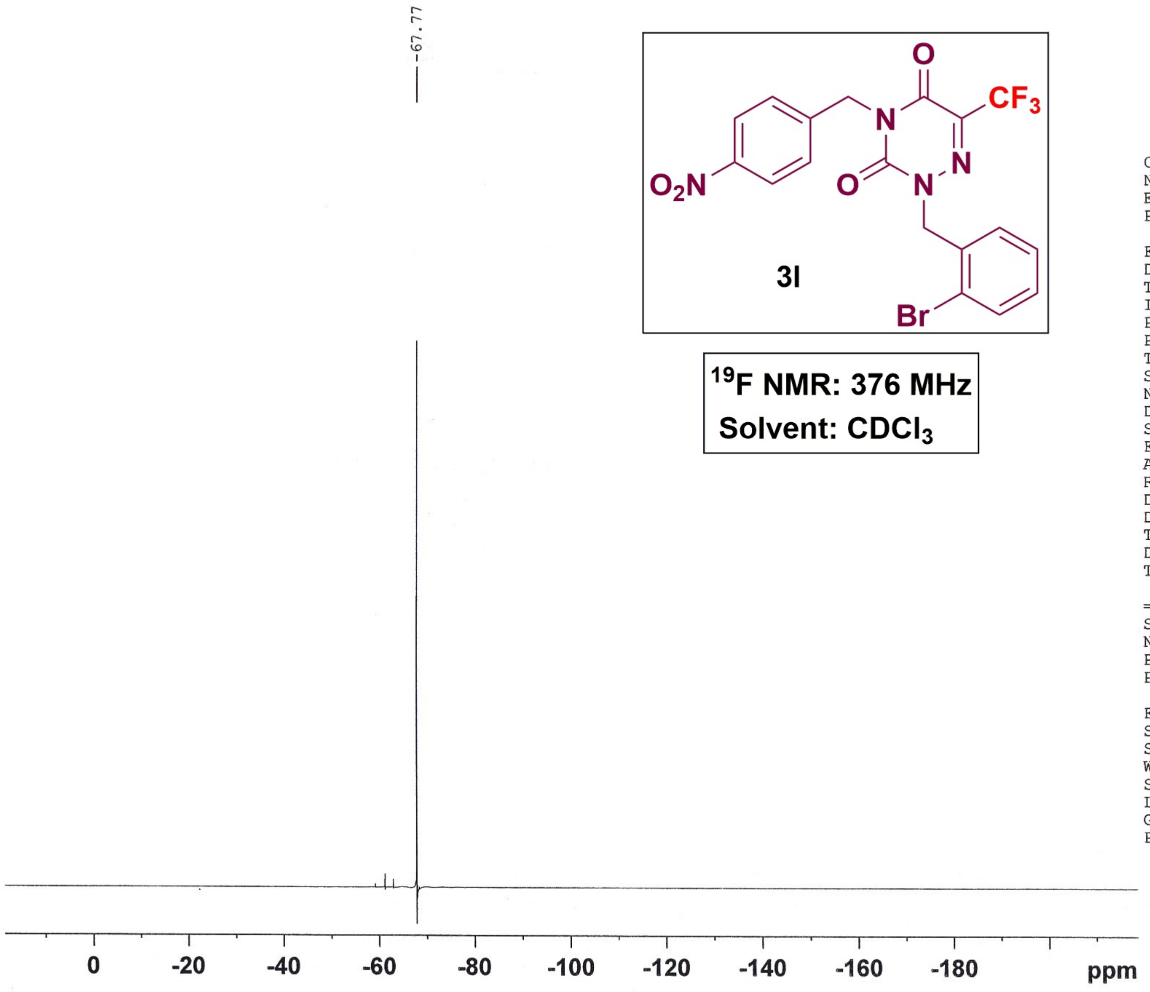


3l

^{13}C NMR: 100 MHz

Solvent: CDCl$_3$

```
Current Data Parameters
NAME        Dr. A HAJRA-2024-13C
EXPNO                    137
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240506
Time                   13.11
INSTRUM                spect
PROBHD   5 mm PABBO BB/
PULPROG              zgpg30
TD                     32768
SOLVENT                CDCl3
NS                      1650
DS                         2
SWH                24038.461 Hz
FIDRES              0.733596 Hz
AQ                 0.6815744 sec
RG                    186.42
DW                    20.800 usec
DE                      6.50 usec
TE                     297.4 K
D1                2.00000000 sec
D11               0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1            100.6278588 MHz
NUC1                    13C
P1                       8.90 usec
PLW1            54.00000000 W

======== CHANNEL f2 ========
SFO2            400.1516006 MHz
NUC2                     1H
CPDPRG[2             waltz16
PCPD2                  90.00 usec
PLW2             12.00000000 W
PLW12             0.32231000 W
PLW13             0.16212000 W

F2 - Processing parameters
SI                     16384
SF               100.6177859 MHz
WDW                       EM
SSB          0
LB                      1.00 Hz
GB           0
PC                      1.40
```

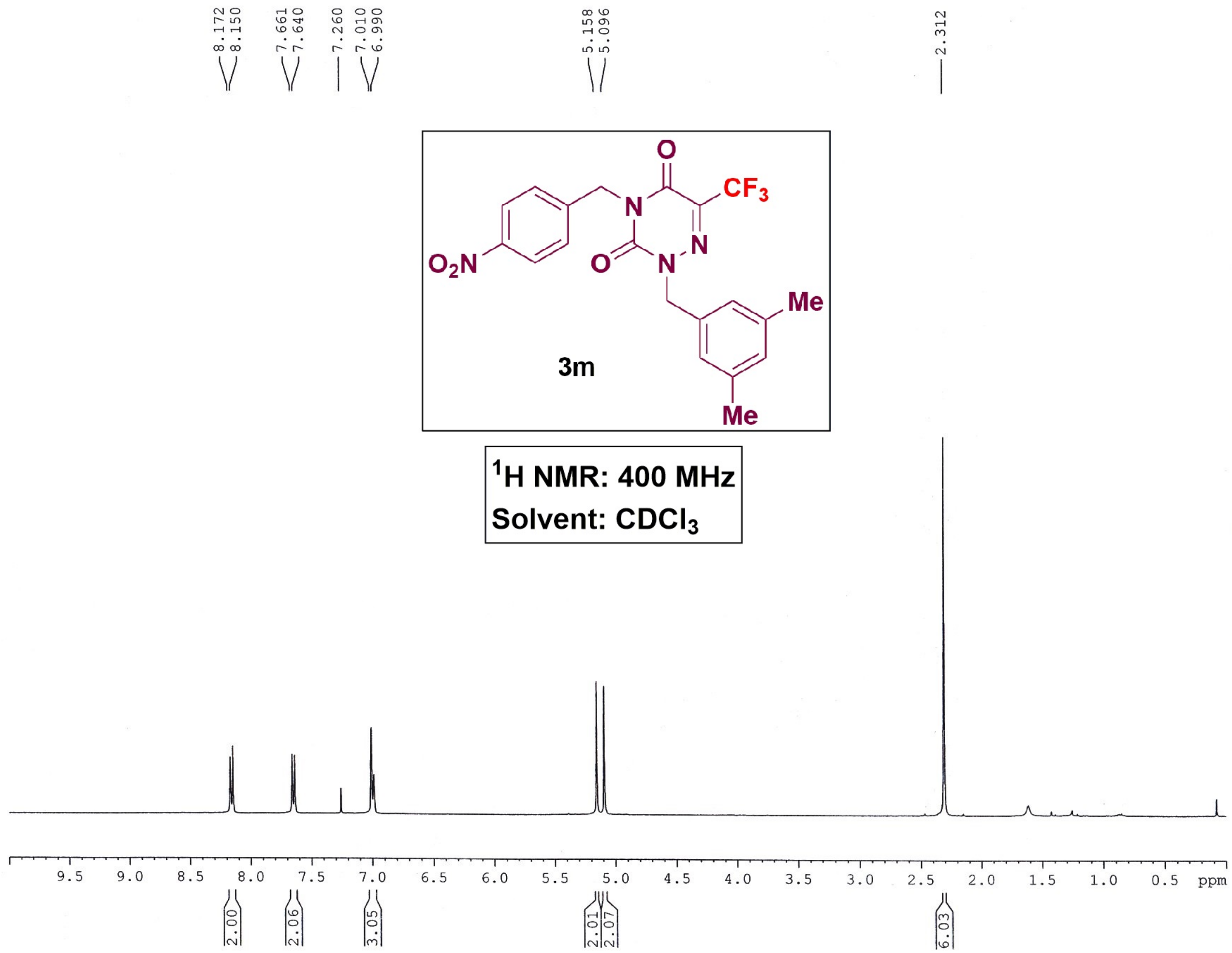


3l

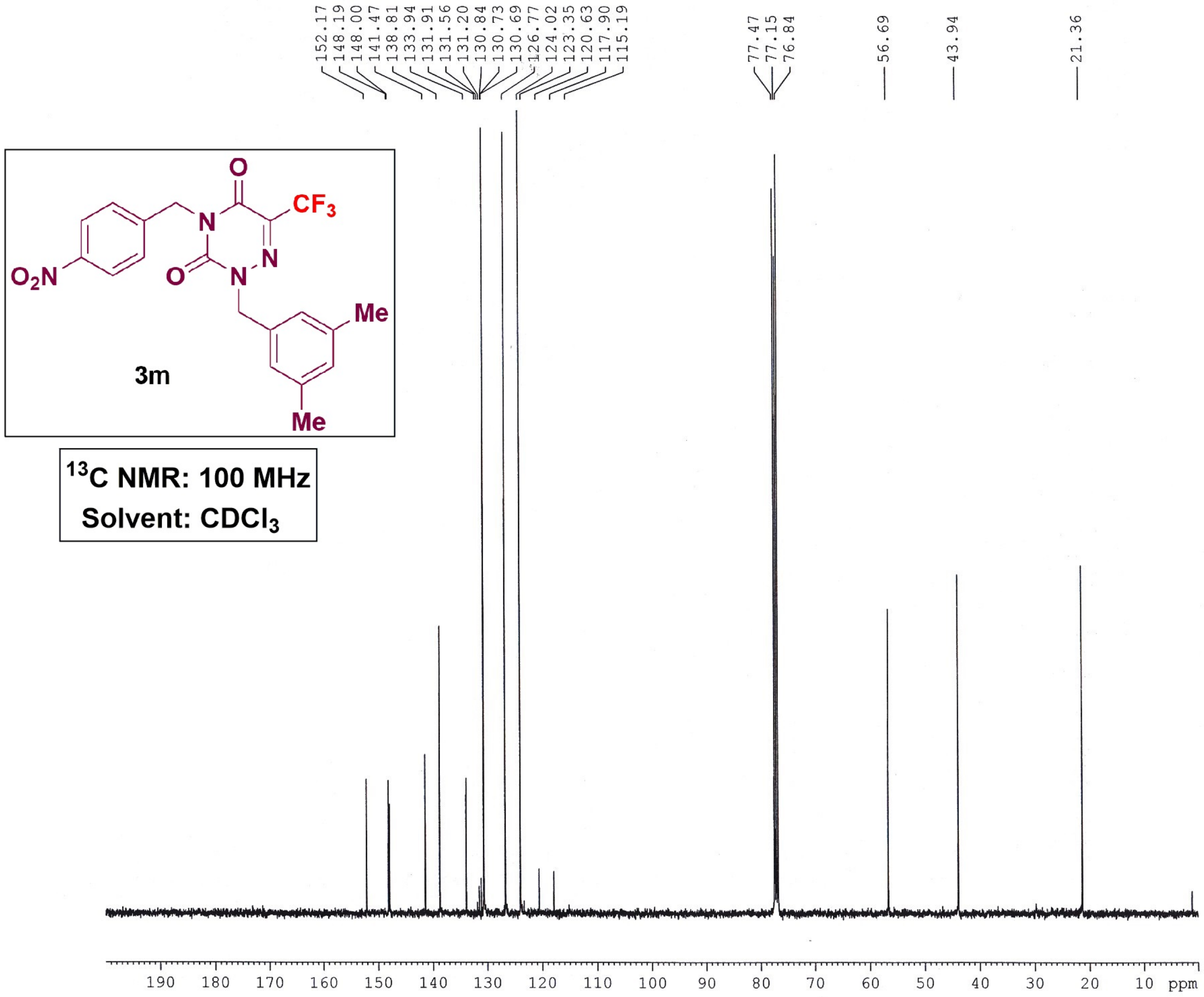
^{19}F NMR: 376 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                    364
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240506
Time                   11.53
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG              zgflqn
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         2
SWH               89285.711 Hz
FIDRES             2.724784 Hz
AQ                0.1835008 sec
RG                    186.42
DW                     5.600 usec
DE                      6.50 usec
TE                     296.7 K
D1               1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1           376.4795333 MHz
NUC1                     19F
P1                     12.50 usec
PLW1           20.00000000 W

F2 - Processing parameters
SI                     16384
SF             376.5171850 MHz
WDW                       EM
SSB       0
LB                      0.30 Hz
GB        0
PC                      1.00
```



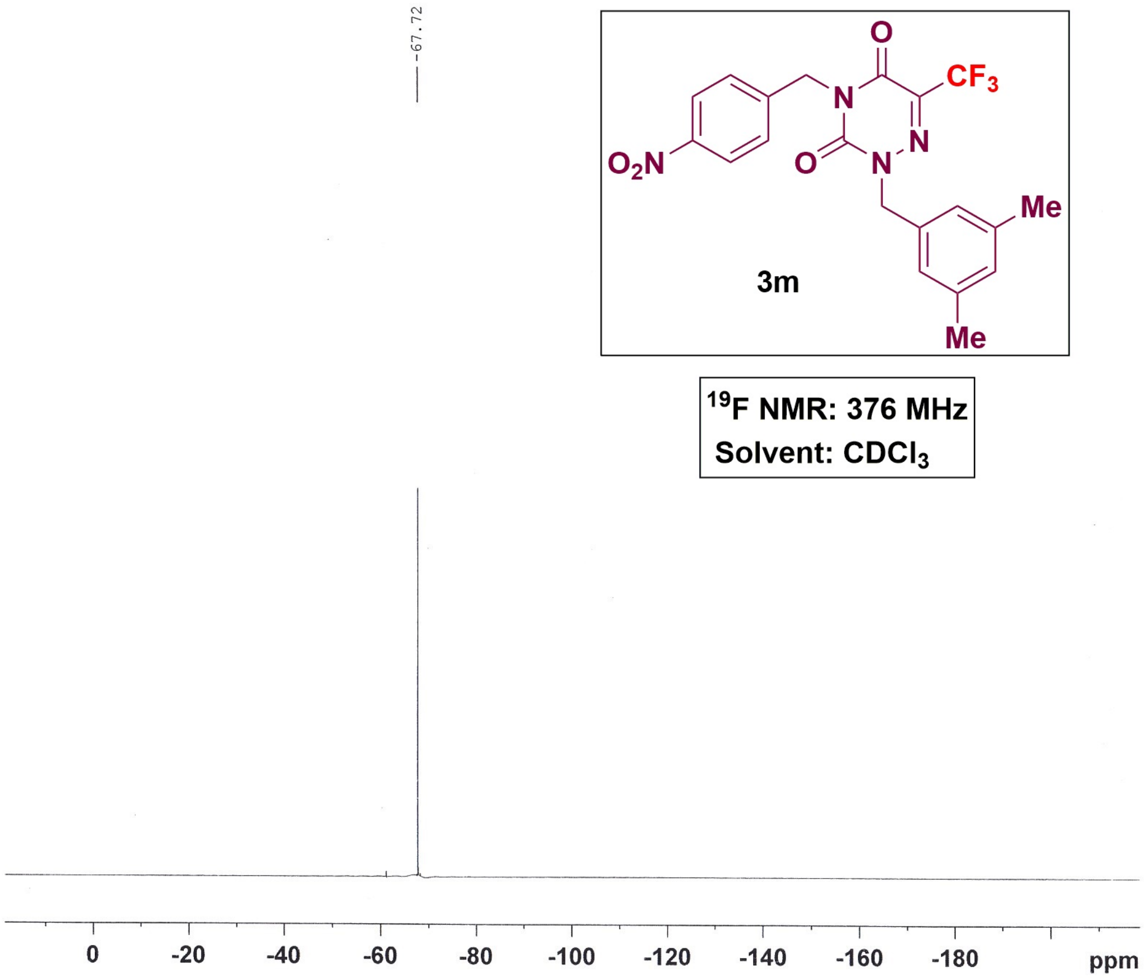
```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   569
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240707
Time                  20.05
INSTRUM               spect
PROBHD     5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                   106.66
DW                   60.800 usec
DE                     6.50 usec
TE                    295.2 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500097 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```



3m

^{13}C NMR: 100 MHz
Solvent: CDCl$_3$

```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO                  215
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240707
Time                 21.19
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG            zgpg30
TD                  32768
SOLVENT             CDCl3
NS                   1420
DS                      2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                 186.42
DW                 20.800 usec
DE                   6.50 usec
TE                  296.0 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1         100.6278588 MHz
NUC1                 13C
P1                  8.90 usec
PLW1         54.00000000 W

======== CHANNEL f2 ========
SFO2         400.1516006 MHz
NUC2                  1H
CPDPRG[2          waltz16
PCPD2              90.00 usec
PLW2         12.00000000 W
PLW12         0.32231000 W
PLW13         0.16212000 W

F2 - Processing parameters
SI                 16384
SF           100.6177867 MHz
WDW                   EM
SSB        0
LB                  1.00 Hz
GB         0
PC                  1.40
```

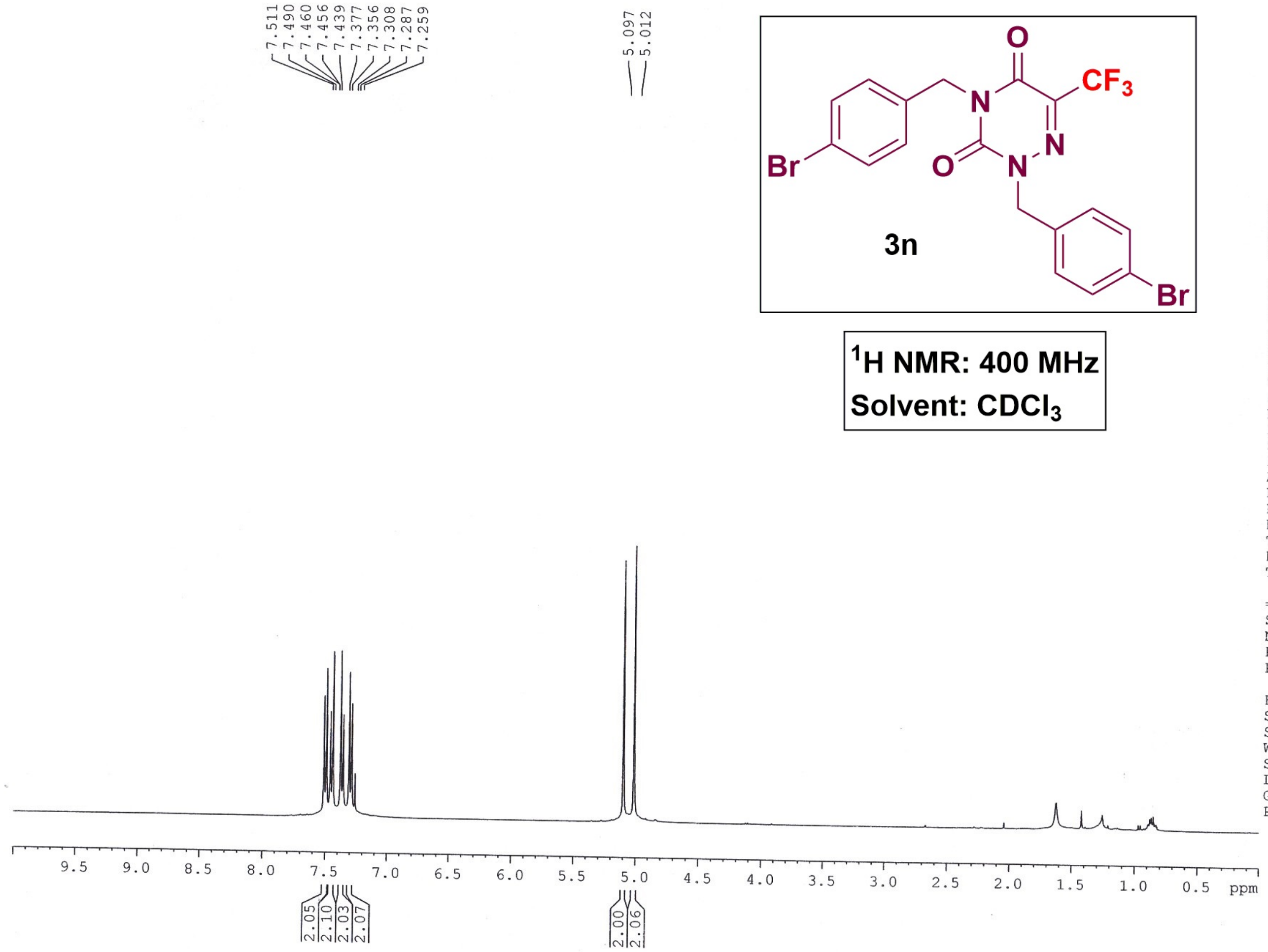


3m

^{19}F NMR: 376 MHz

Solvent: $CDCl_3$

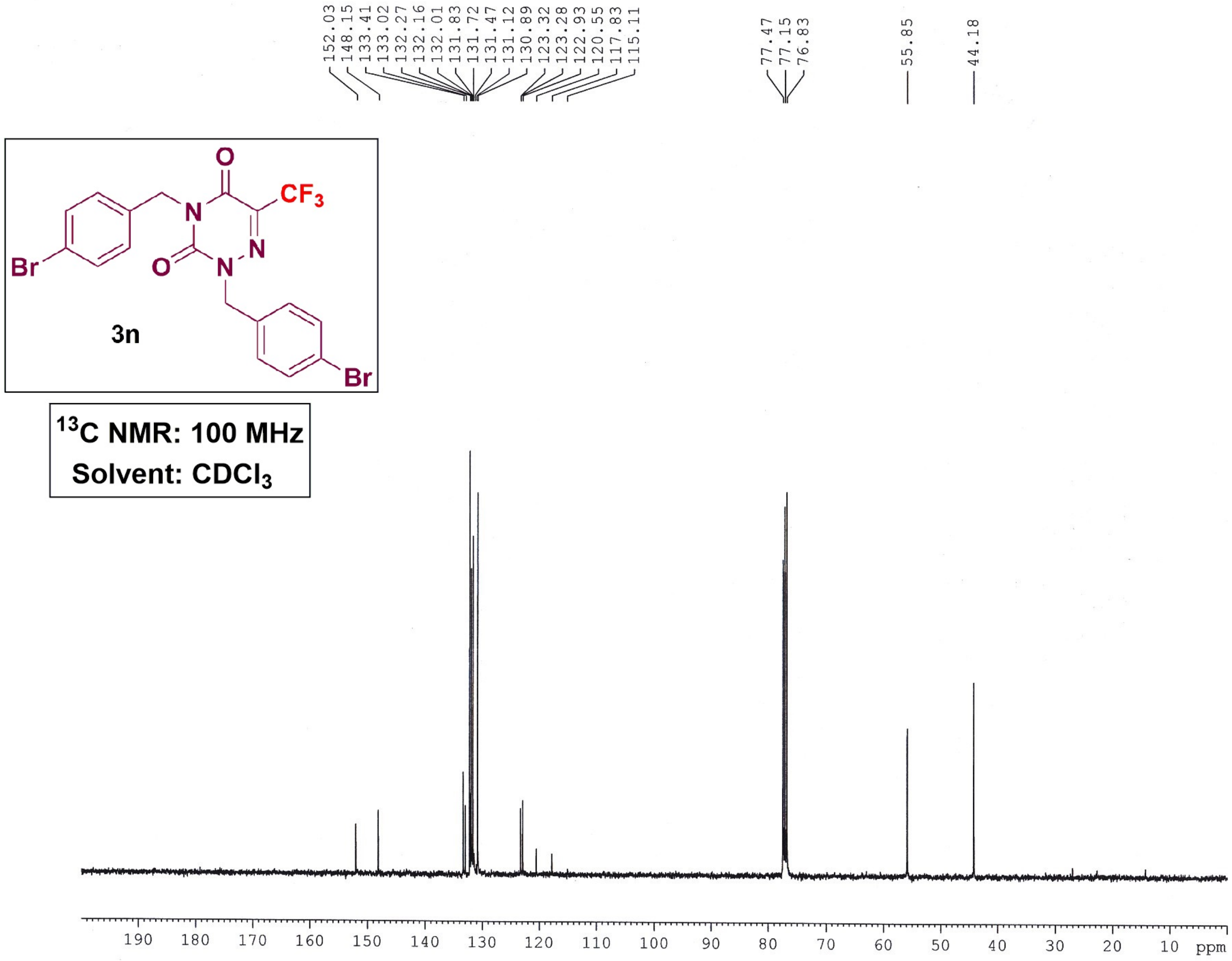
```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   570
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240707
Time                  20.10
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG              zgflqn
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH              89285.711 Hz
FIDRES            2.724784 Hz
AQ               0.1835008 sec
RG                   186.42
DW                    5.600 usec
DE                     6.50 usec
TE                    295.1 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1           376.4795333 MHz
NUC1                    19F
P1                    12.50 usec
PLW1            20.00000000 W

F2 - Processing parameters
SI                    16384
SF              376.5171850 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```



3n

^{1}H NMR: 400 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                    518
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240624
Time                    9.18
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         2
SWH                 8223.685 Hz
FIDRES              0.250967 Hz
AQ                 1.9922944 sec
RG                    106.66
DW                    60.800 usec
DE                      6.50 usec
TE                     289.9 K
D1                1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1             400.1524711 MHz
NUC1                      1H
P1                     14.75 usec
PLW1             12.00000000 W

F2 - Processing parameters
SI                     16384
SF               400.1500095 MHz
WDW                       EM
SSB          0
LB                      0.30 Hz
GB           0
PC                      1.00
```

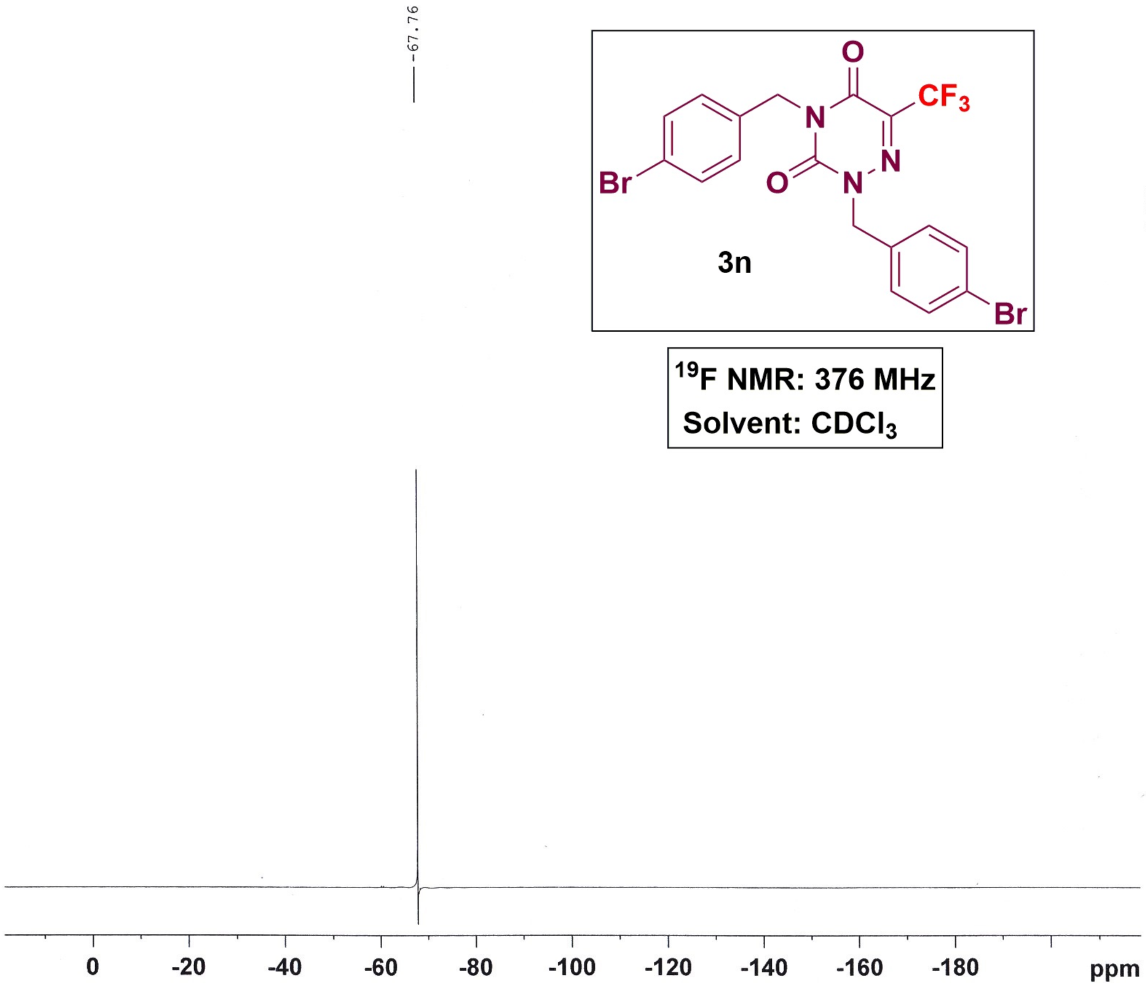


3n

^{13}C NMR: 100 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME       Dr. A HAJRA-2024-13C
EXPNO                   193
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240624
Time                  10.02
INSTRUM               spect
PROBHD     5 mm PABBO BB/
PULPROG             zgpg30
TD                    32768
SOLVENT               CDCl3
NS                      810
DS                        2
SWH               24038.461 Hz
FIDRES             0.733596 Hz
AQ                0.6815744 sec
RG                   186.42
DW                   20.800 usec
DE                     6.50 usec
TE                    292.2 K
D1               2.00000000 sec
D11              0.03000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1           100.6278588 MHz
NUC1                   13C
P1                    8.90 usec
PLW1           54.00000000 W

======== CHANNEL f2 ========
SFO2           400.1516006 MHz
NUC2                    1H
CPDPRG[2           waltz16
PCPD2                90.00 usec
PLW2           12.00000000 W
PLW12           0.32231000 W
PLW13           0.16212000 W

F2 - Processing parameters
SI                   16384
SF             100.6177888 MHz
WDW                     EM
SSB       0
LB                    1.00 Hz
GB        0
PC                    1.40
```

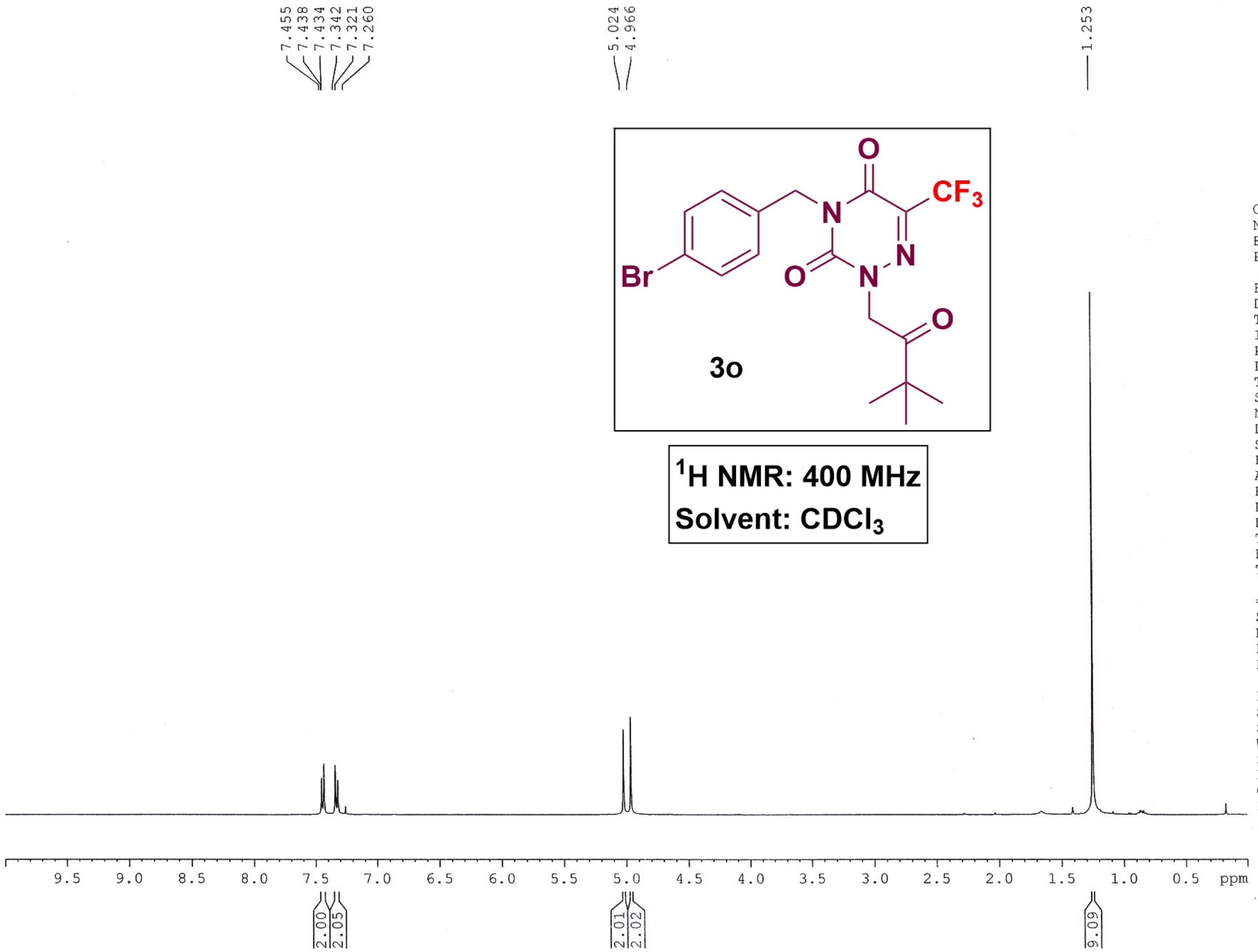


3n

^{19}F NMR: 376 MHz

Solvent: CDCl$_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                 519
PROCNO                  1

F2 - Acquisition Parameters
Date_            20240624
Time                 9.22
INSTRUM             spect
PROBHD   5 mm PABBO BB/
PULPROG            zgflqn
TD                  32768
SOLVENT             CDCl3
NS                      8
DS                      2
SWH            89285.711 Hz
FIDRES          2.724784 Hz
AQ             0.1835008 sec
RG                 186.42
DW                  5.600 usec
DE                   6.50 usec
TE                  290.1 K
D1            1.00000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1         376.4795333 MHz
NUC1                  19F
P1                  12.50 usec
PLW1         20.00000000 W

F2 - Processing parameters
SI                  16384
SF           376.5171850 MHz
WDW                    EM
SSB      0
LB                   0.30 Hz
GB       0
PC                   1.00
```



3o

^{1}H NMR: 400 MHz

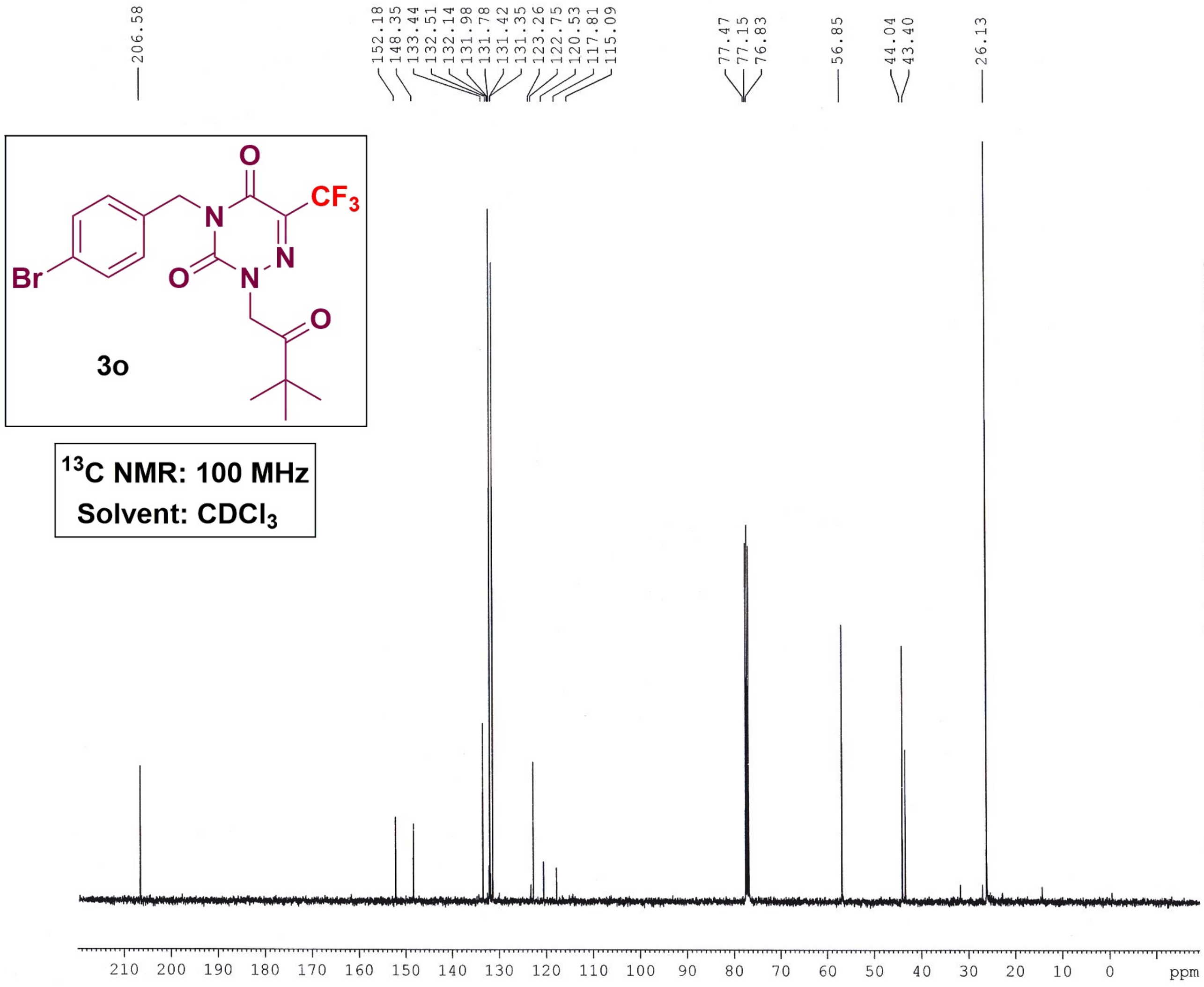
Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   572
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240713
Time                   8.59
INSTRUM               spect
PROBHD    5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                    37.83
DW                   60.800 usec
DE                     6.50 usec
TE                    289.9 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500092 MHz
WDW                      EM
SSB       0
LB                     0.30 Hz
GB        0
PC                     1.00
```

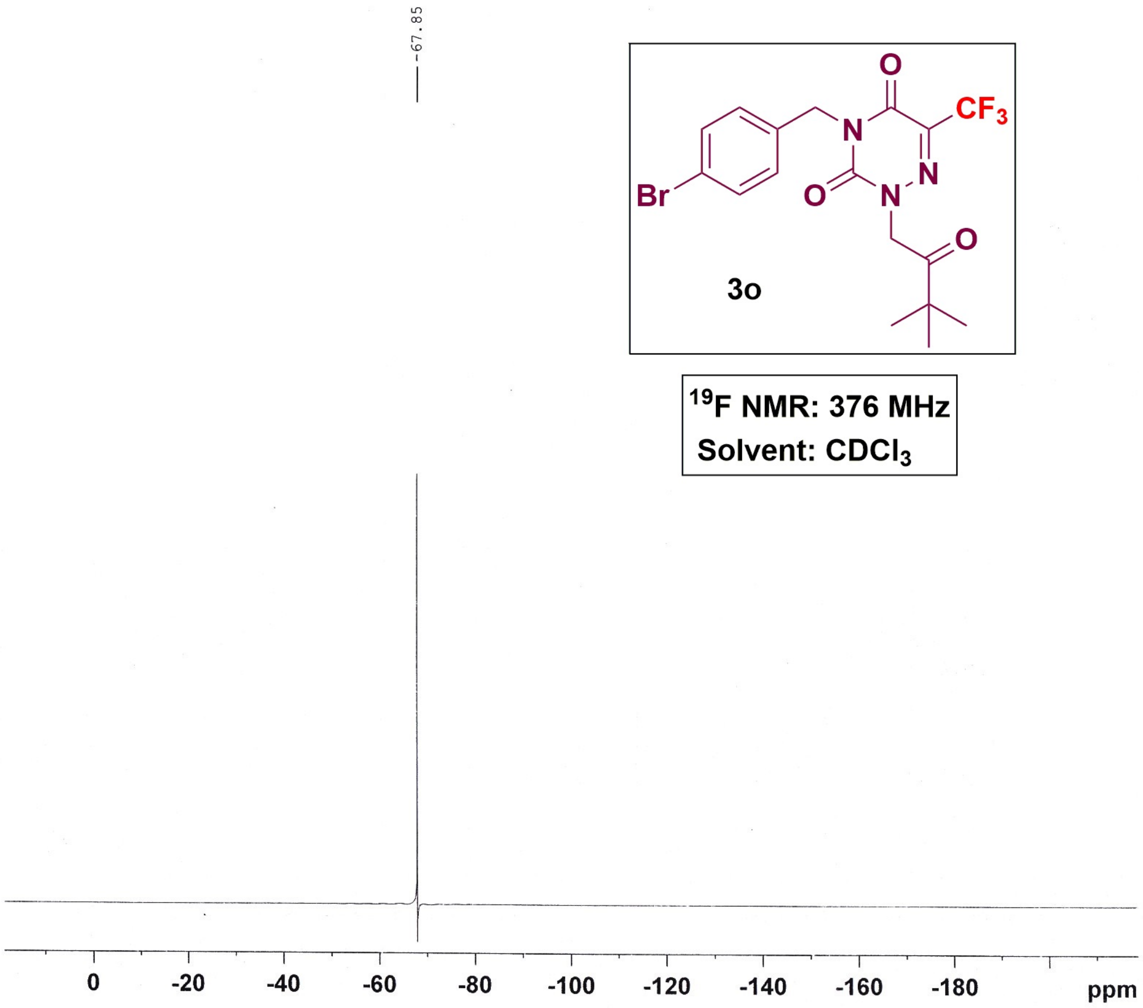
3o

^{13}C NMR: 100 MHz

Solvent: CDCl$_3$



```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO                  217
PROCNO                   1

F2 - Acquisition Parameters
Date_           20240713
Time                9.19
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG          zgpg30
TD                 32768
SOLVENT            CDCl3
NS                   265
DS                     2
SWH            24038.461 Hz
FIDRES          0.733596 Hz
AQ             0.6815744 sec
RG                186.42
DW                20.800 usec
DE                  6.50 usec
TE                 290.9 K
D1            2.00000000 sec
D11           0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         100.6278588 MHz
NUC1                 13C
P1                  8.90 usec
PLW1         54.00000000 W

======== CHANNEL f2 ========
SFO2         400.1516006 MHz
NUC2                  1H
CPDPRG[2         waltz16
PCPD2              90.00 usec
PLW2         12.00000000 W
PLW12         0.32231000 W
PLW13         0.16212000 W

F2 - Processing parameters
SI                 16384
SF           100.6177902 MHz
WDW                   EM
SSB      0
LB                  1.00 Hz
GB       0
PC                  1.40
```

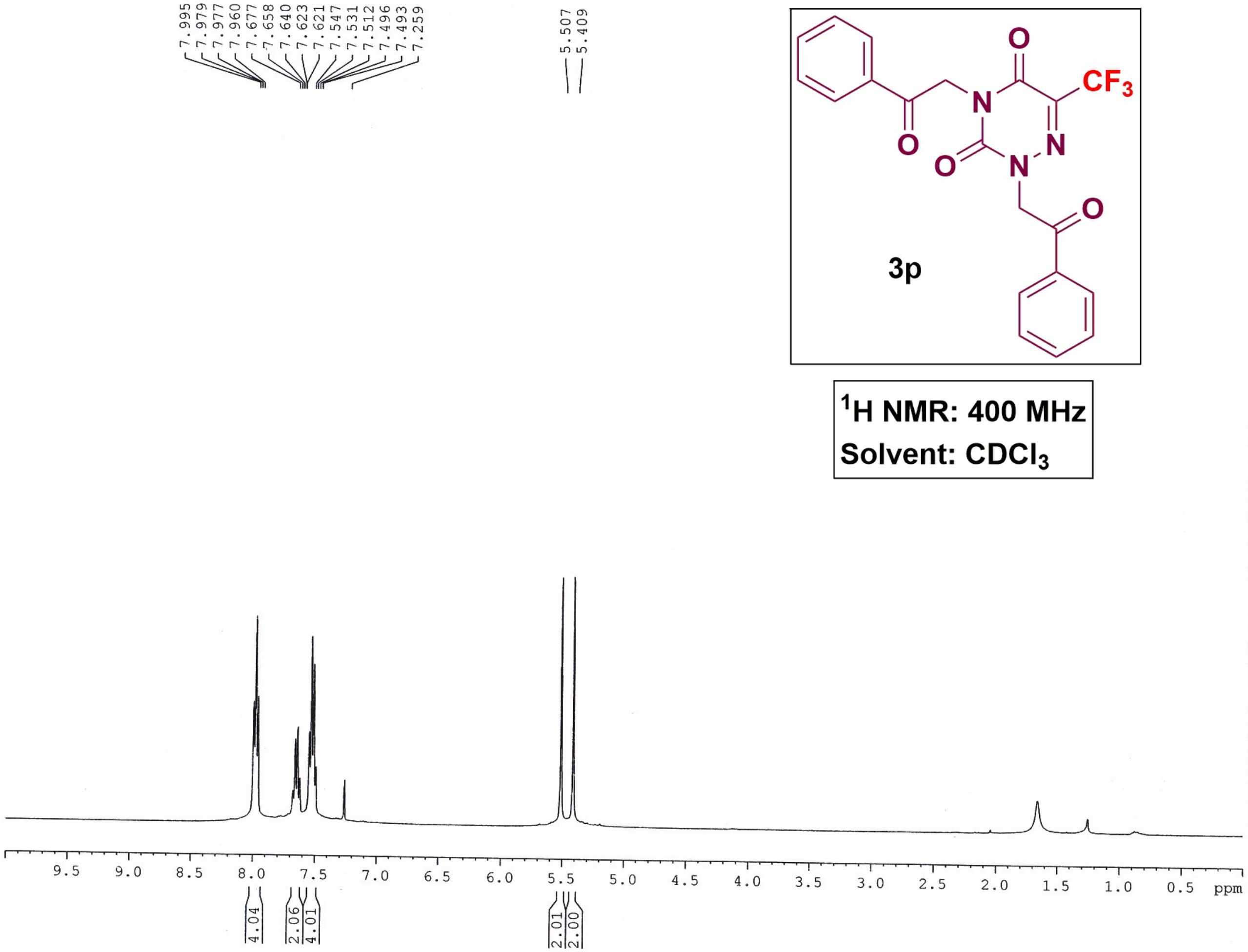


3o

^{19}F NMR: 376 MHz

Solvent: CDCl$_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                  573
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240713
Time                  9.04
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG            zgflqn
TD                  32768
SOLVENT             CDCl3
NS                      8
DS                      2
SWH            89285.711 Hz
FIDRES          2.724784 Hz
AQ             0.1835008 sec
RG                186.42
DW                 5.600 usec
DE                  6.50 usec
TE                 290.0 K
D1            1.00000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1         376.4795333 MHz
NUC1                 19F
P1                 12.50 usec
PLW1         20.00000000 W

F2 - Processing parameters
SI                 16384
SF           376.5171850 MHz
WDW                   EM
SSB       0
LB                  0.30 Hz
GB        0
PC                  1.00
```

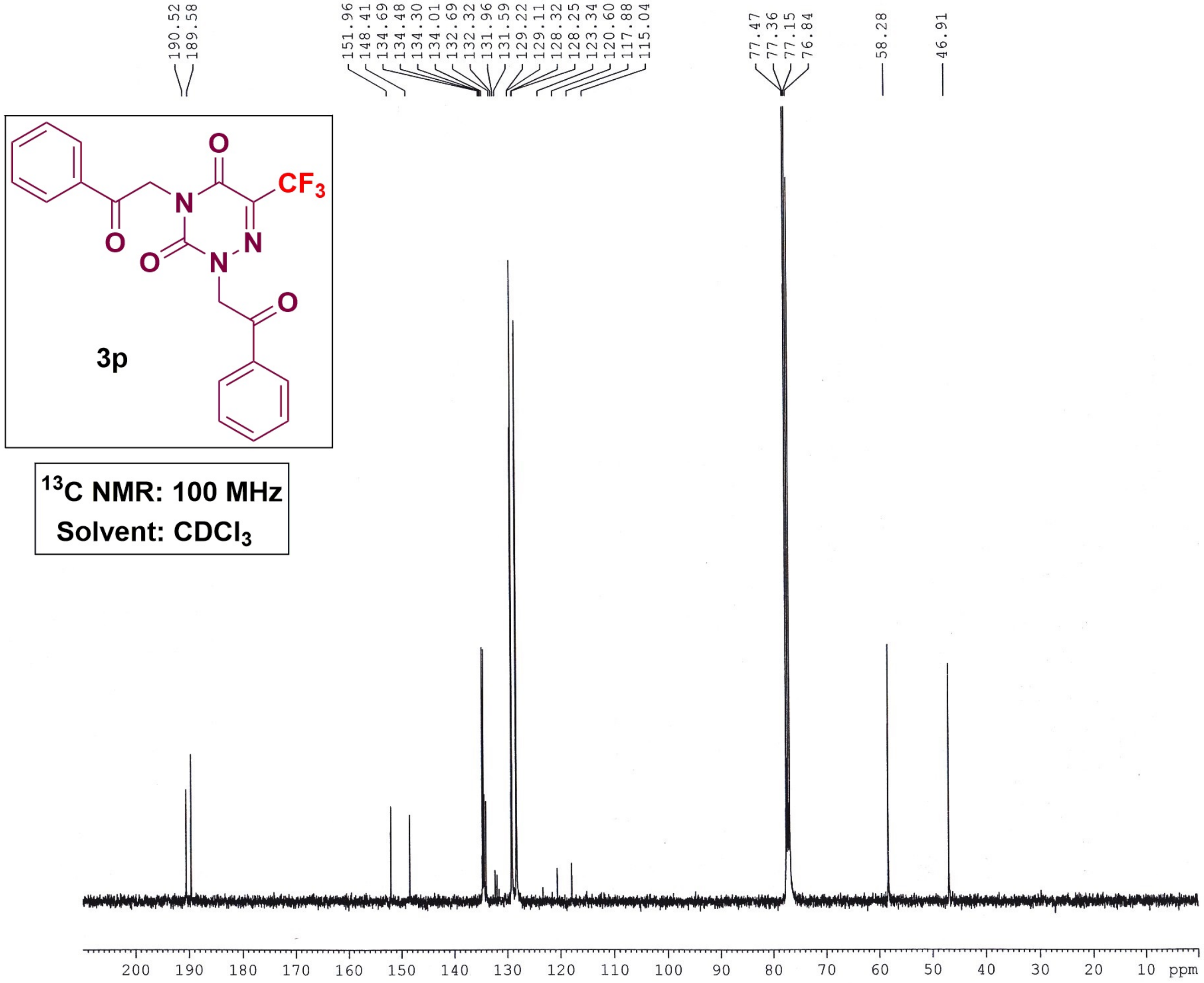


3p

^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

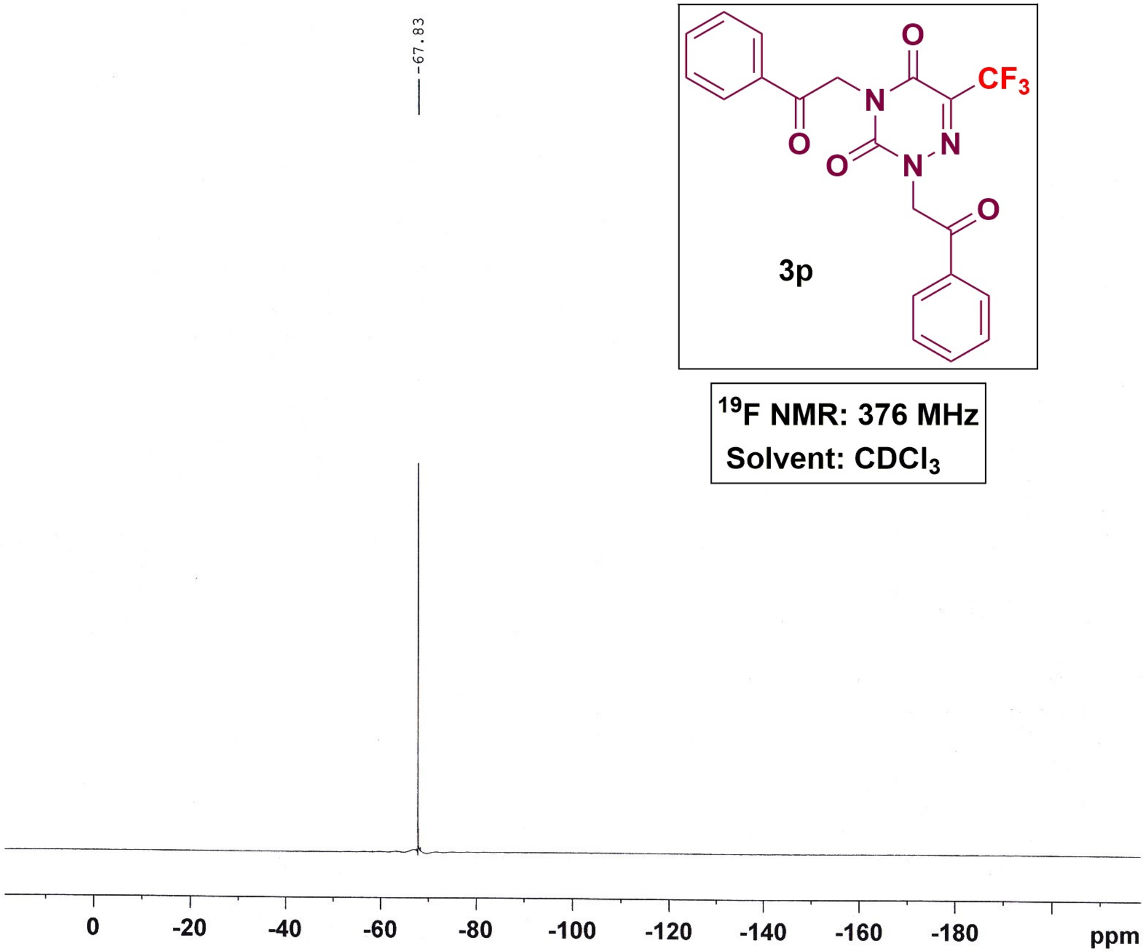
```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                     564
PROCNO                      1

F2 - Acquisition Parameters
Date_                20240704
Time                    12.21
INSTRUM                 spect
PROBHD     5 mm PABBO BB/
PULPROG                  zg30
TD                      32768
SOLVENT                 CDCl3
NS                          8
DS                          2
SWH                  8223.685 Hz
FIDRES               0.250967 Hz
AQ                  1.9922944 sec
RG                     106.66
DW                     60.800 usec
DE                       6.50 usec
TE                      295.3 K
D1                 1.00000000 sec
TD0                         1

======== CHANNEL f1 ========
SFO1              400.1524711 MHz
NUC1                       1H
P1                      14.75 usec
PLW1              12.00000000 W

F2 - Processing parameters
SI                      16384
SF                400.1500092 MHz
WDW                        EM
SSB              0
LB                       0.30 Hz
GB               0
PC                       1.00
```



^{13}C NMR: 100 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO                    213
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240704
Time                   13.37
INSTRUM                spect
PROBHD   5 mm PABBO BB/
PULPROG              zgpg30
TD                     32768
SOLVENT                CDCl3
NS                      1610
DS                         2
SWH                24038.461 Hz
FIDRES              0.733596 Hz
AQ                 0.6815744 sec
RG                    186.42
DW                    20.800 usec
DE                      6.50 usec
TE                     298.3 K
D1                2.00000000 sec
D11               0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1             100.6278588 MHz
NUC1                     13C
P1                      8.90 usec
PLW1             54.00000000 W

======== CHANNEL f2 ========
SFO2             400.1516006 MHz
NUC2                      1H
CPDPRG[2             waltz16
PCPD2                  90.00 usec
PLW2             12.00000000 W
PLW12             0.32231000 W
PLW13             0.16212000 W

F2 - Processing parameters
SI                     16384
SF               100.6177858 MHz
WDW                       EM
SSB      0
LB                      1.00 Hz
GB       0
PC                      1.40
```

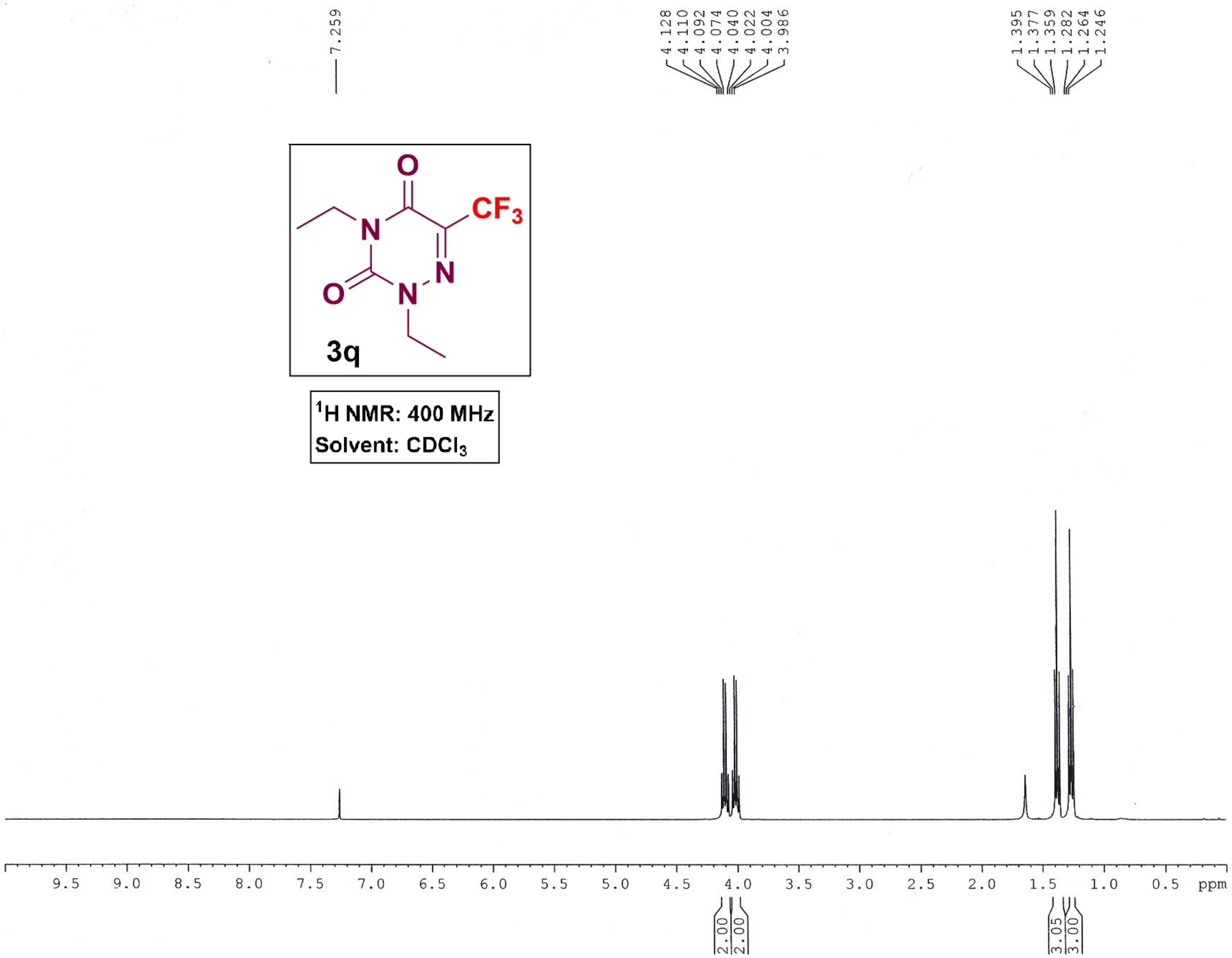


3p

^{19}F NMR: 376 MHz

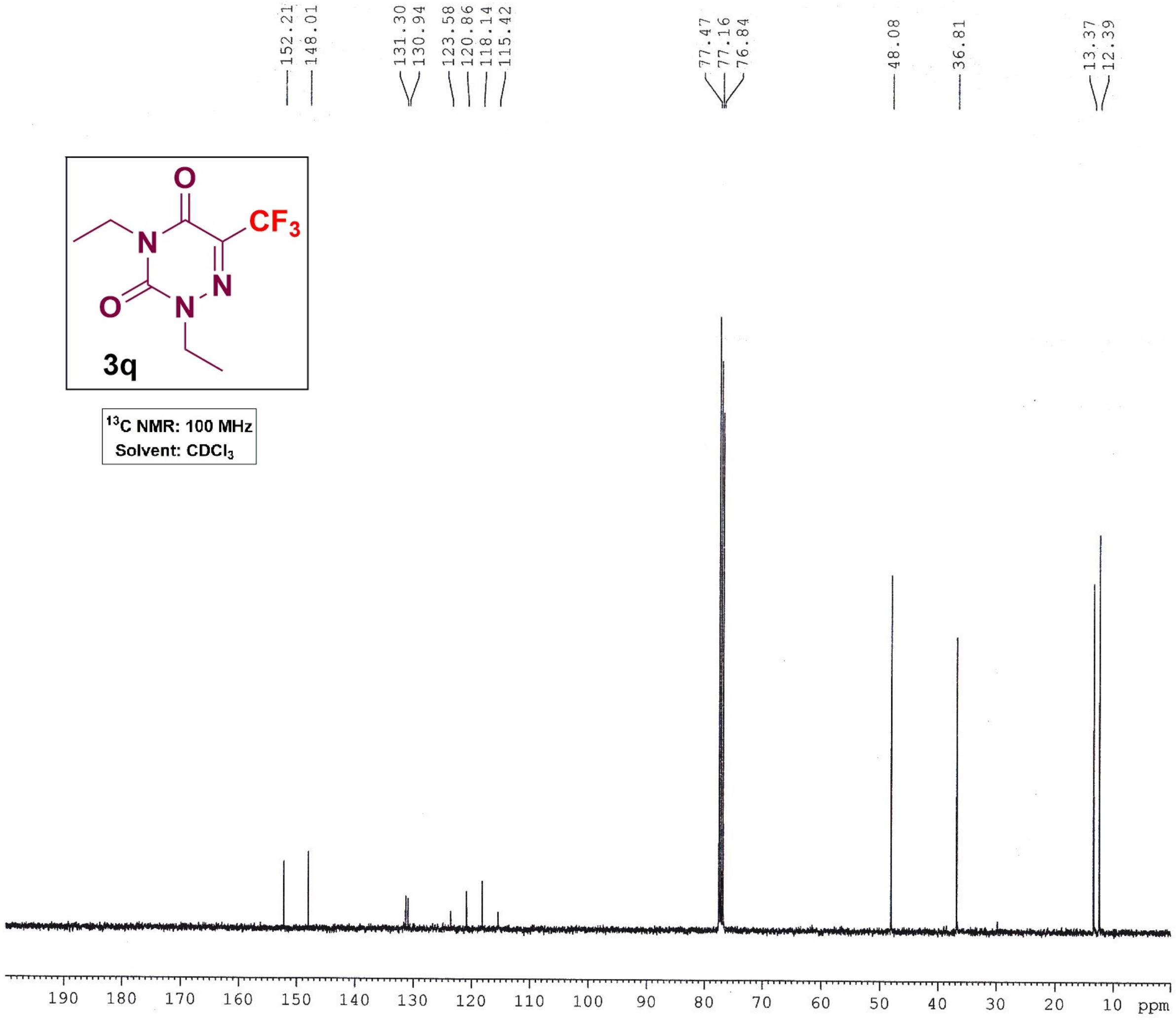
Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                  559
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240703
Time                 13.00
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG            zgflqn
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH             89285.711 Hz
FIDRES           2.724784 Hz
AQ              0.1835008 sec
RG                 186.42
DW                  5.600 usec
DE                   6.50 usec
TE                  294.4 K
D1             1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1         376.4795333 MHz
NUC1                  19F
P1                  12.50 usec
PLW1          20.00000000 W

F2 - Processing parameters
SI                  16384
SF            376.5171850 MHz
WDW                    EM
SSB       0
LB                   0.30 Hz
GB        0
PC                   1.00
```



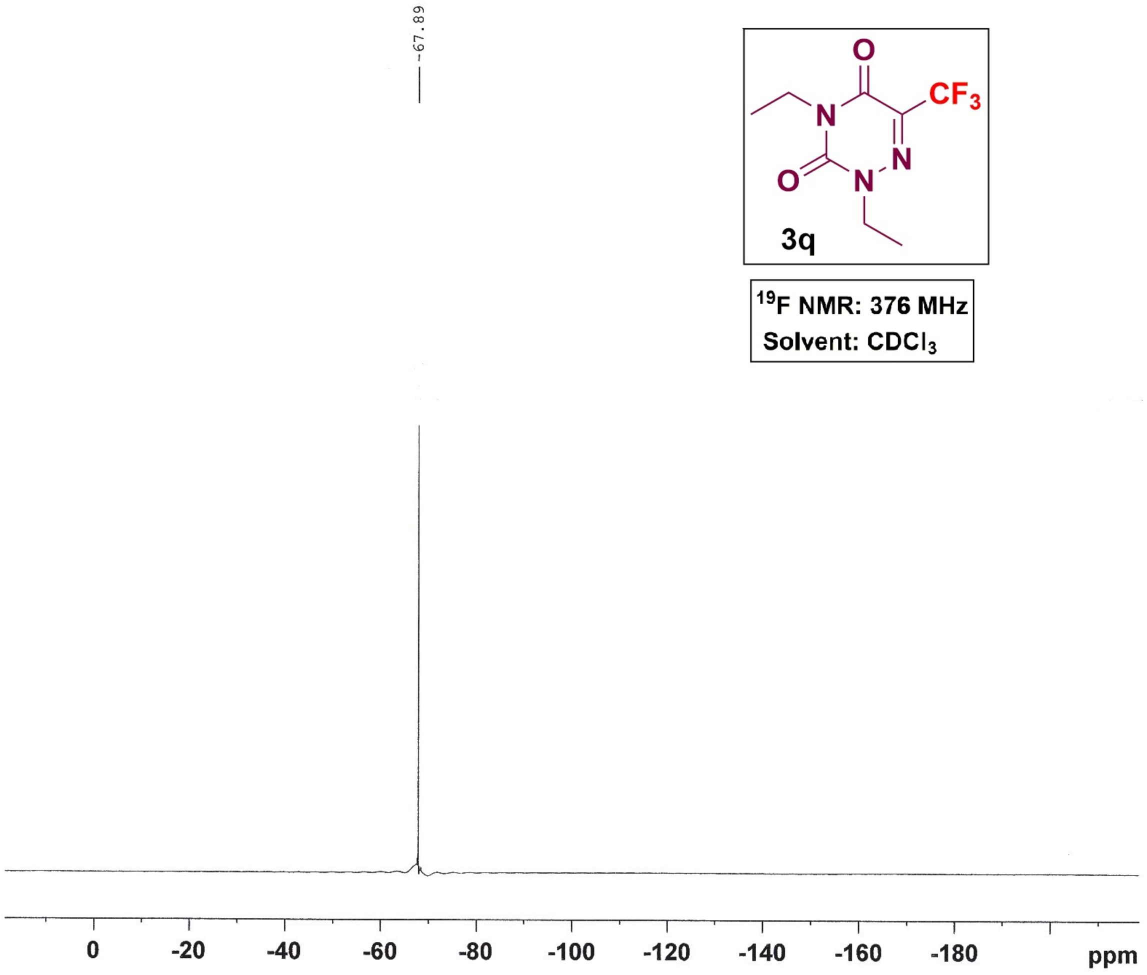
^{1}H NMR: 400 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                  463
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240529
Time                 17.52
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG               zg30
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                  106.66
DW                  60.800 usec
DE                    6.50 usec
TE                   295.5 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1           400.1524711 MHz
NUC1                    1H
P1                   14.75 usec
PLW1           12.00000000 W

F2 - Processing parameters
SI                   16384
SF             400.1500097 MHz
WDW                     EM
SSB      0
LB                    0.30 Hz
GB       0
PC                    1.00
```



^{13}C NMR: 100 MHz
Solvent: $CDCl_3$

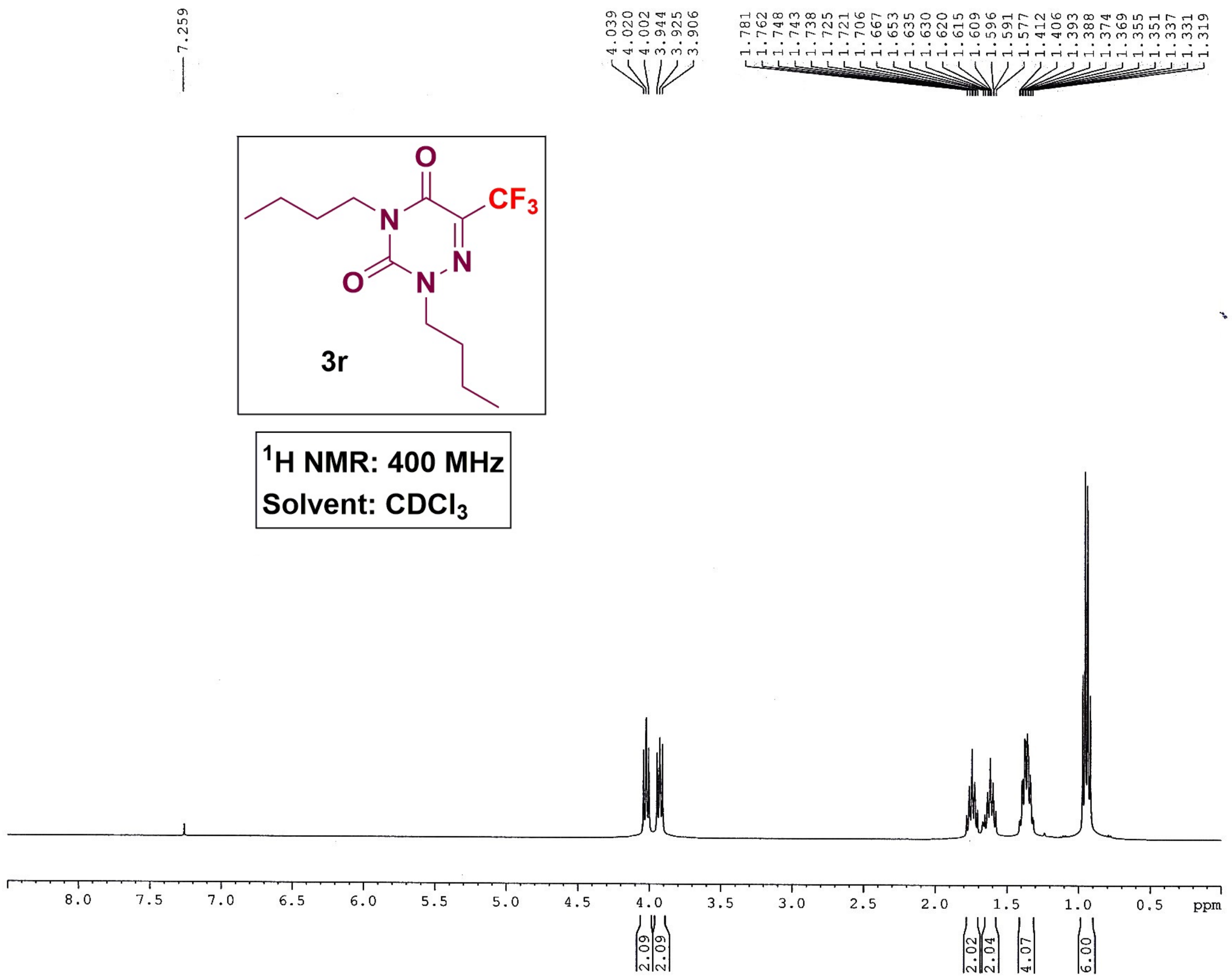
```
Current Data Parameters
NAME     Dr. A HAJRA-2024-13C
EXPNO                  171
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240529
Time                 18.43
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG             zgpg30
TD                   32768
SOLVENT              CDCl3
NS                     960
DS                       2
SWH              24038.461 Hz
FIDRES            0.733596 Hz
AQ               0.6815744 sec
RG                  186.42
DW                  20.800 usec
DE                    6.50 usec
TE                   295.9 K
D1              2.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1         100.6278588 MHz
NUC1                 13C
P1                  8.90 usec
PLW1         54.00000000 W

======== CHANNEL f2 ========
SFO2         400.1516006 MHz
NUC2                  1H
CPDPRG[2          waltz16
PCPD2              90.00 usec
PLW2         12.00000000 W
PLW12         0.32231000 W
PLW13         0.16212000 W

F2 - Processing parameters
SI                 16384
SF           100.6177843 MHz
WDW                   EM
SSB      0
LB                  1.00 Hz
GB       0
PC                  1.40
```



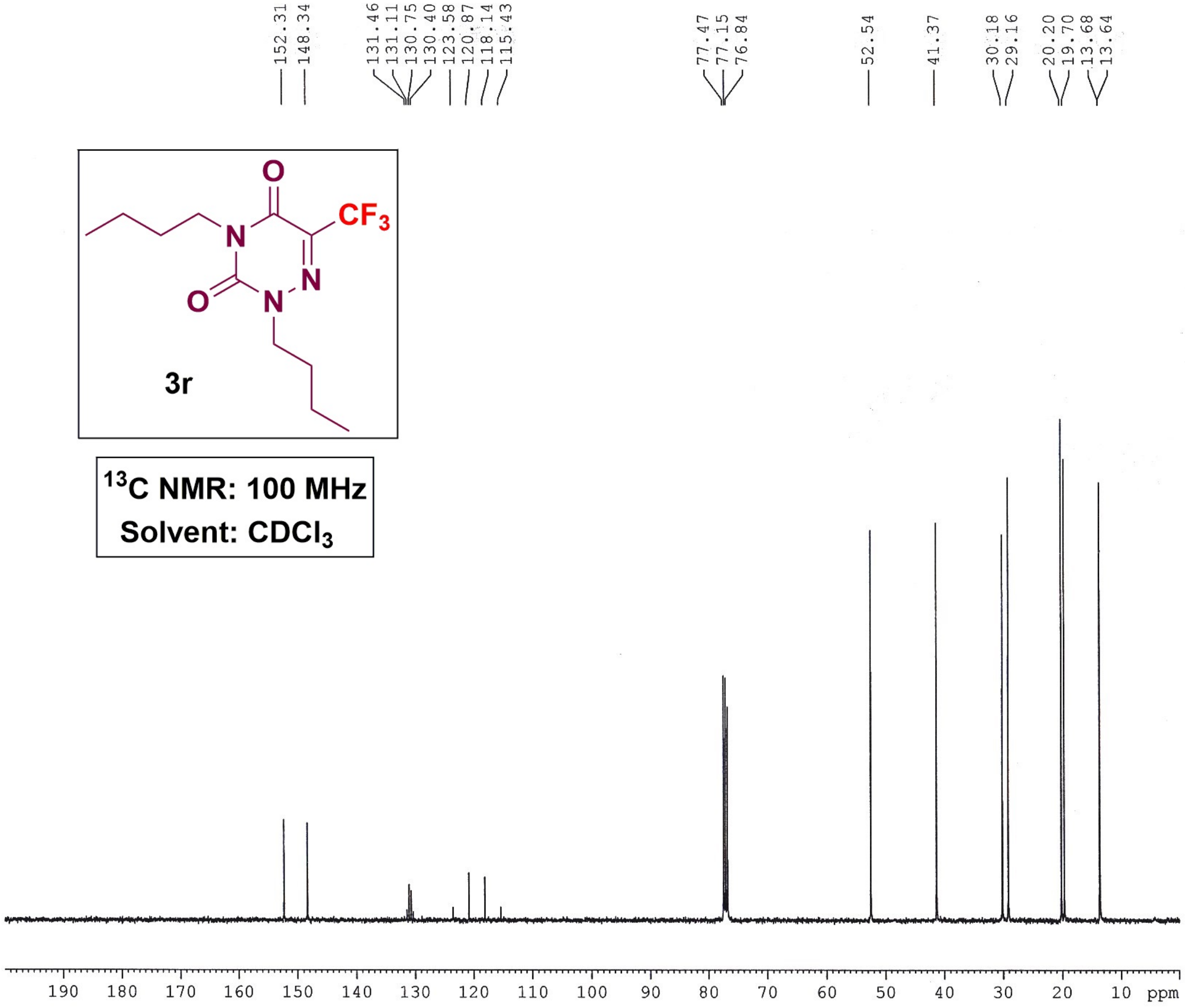
3q

^{19}F NMR: 376 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                    464
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240529
Time                   17.57
INSTRUM                spect
PROBHD      5 mm PABBO BB/
PULPROG              zgflqn
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         2
SWH               89285.711 Hz
FIDRES             2.724784 Hz
AQ                0.1835008 sec
RG                    186.42
DW                     5.600 usec
DE                      6.50 usec
TE                     295.4 K
D1                1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1          376.4795333 MHz
NUC1                    19F
P1                    12.50 usec
PLW1          20.00000000 W

F2 - Processing parameters
SI                    16384
SF            376.5171850 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```



```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   411
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240517
Time                  20.37
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                    40.87
DW                   60.800 usec
DE                     6.50 usec
TE                    297.4 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1         400.1524711 MHz
NUC1                      1H
P1                     14.75 usec
PLW1             12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500096 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```

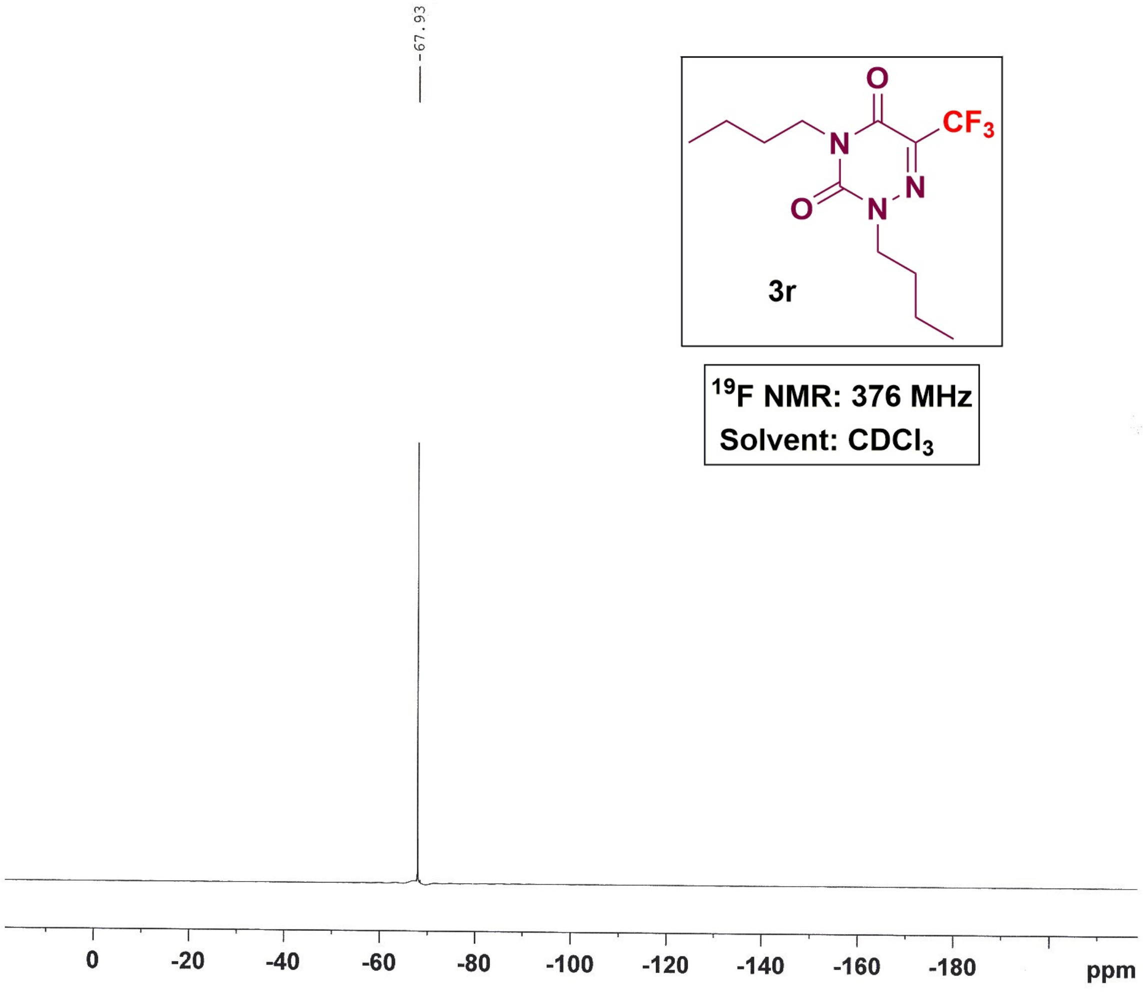


3r

^{13}C NMR: 100 MHz

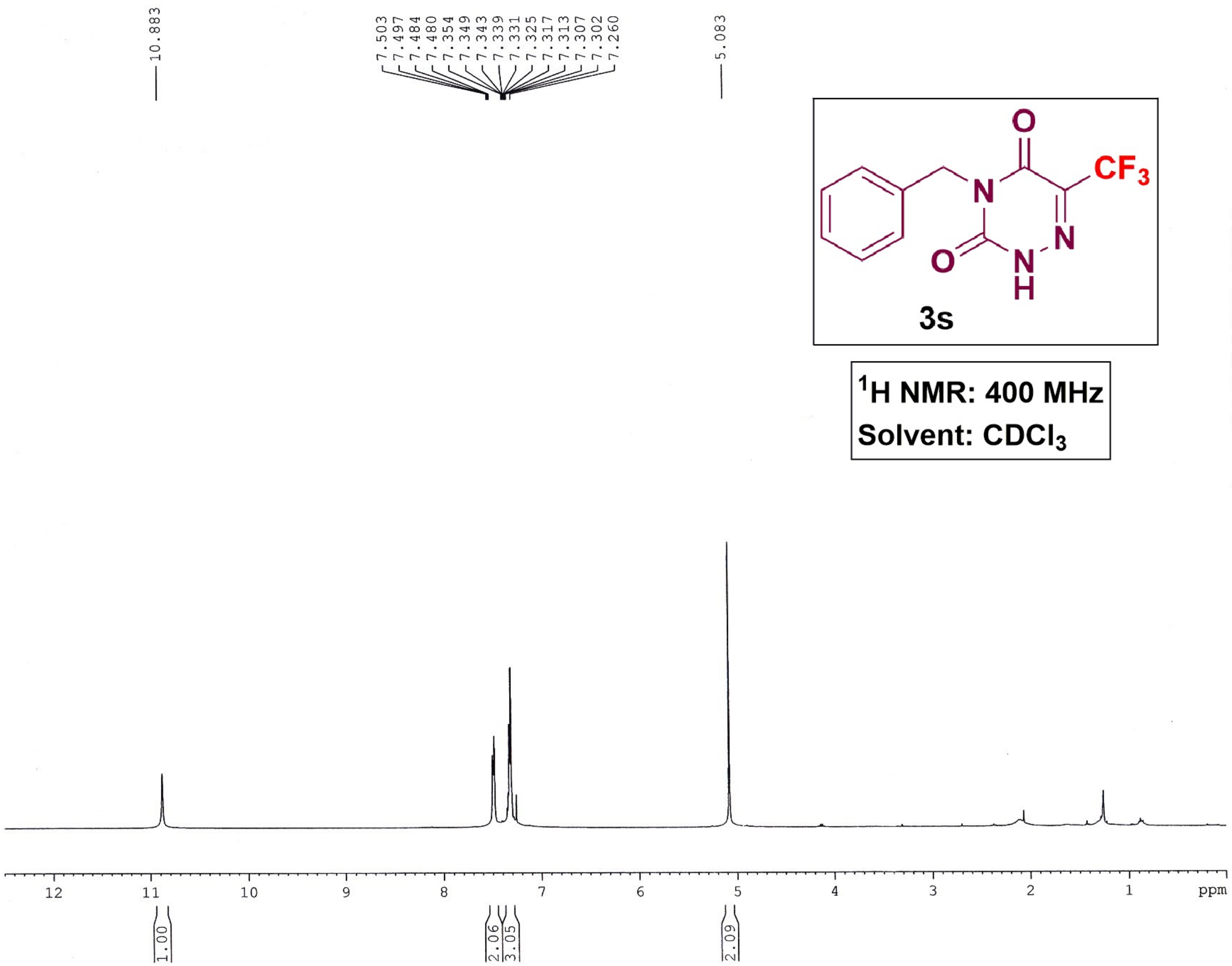
Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO                      158
PROCNO                       1

F2 - Acquisition Parameters
Date_             20240517
Time                 21.06
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                   32768
SOLVENT              CDCl3
NS                     510
DS                       2
SWH              24038.461 Hz
FIDRES            0.733596 Hz
AQ               0.6815744 sec
RG                  186.42
DW                  20.800 usec
DE                    6.50 usec
TE                   297.8 K
D1              2.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1         100.6278588 MHz
NUC1                   13C
P1                    8.90 usec
PLW1           54.00000000 W

======== CHANNEL f2 ========
SFO2         400.1516006 MHz
NUC2                    1H
CPDPRG[2           waltz16
PCPD2                90.00 usec
PLW2           12.00000000 W
PLW12           0.32231000 W
PLW13           0.16212000 W

F2 - Processing parameters
SI                   16384
SF             100.6177843 MHz
WDW                     EM
SSB       0
LB                    1.00 Hz
GB        0
PC                    1.40
```



^{19}F NMR: 376 MHz
Solvent: $CDCl_3$

```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                    412
PROCNO                     1

F2 - Acquisition Parameters
Date_              20240517
Time                  20.40
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG              zgflqn
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH             89285.711 Hz
FIDRES           2.724784 Hz
AQ              0.1835008 sec
RG                   186.42
DW                    5.600 usec
DE                     6.50 usec
TE                    297.3 K
D1             1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1          376.4795333 MHz
NUC1                    19F
P1                    12.50 usec
PLW1          20.00000000 W

F2 - Processing parameters
SI                    16384
SF            376.5171850 MHz
WDW                      EM
SSB       0
LB                     0.30 Hz
GB        0
PC                     1.00
```

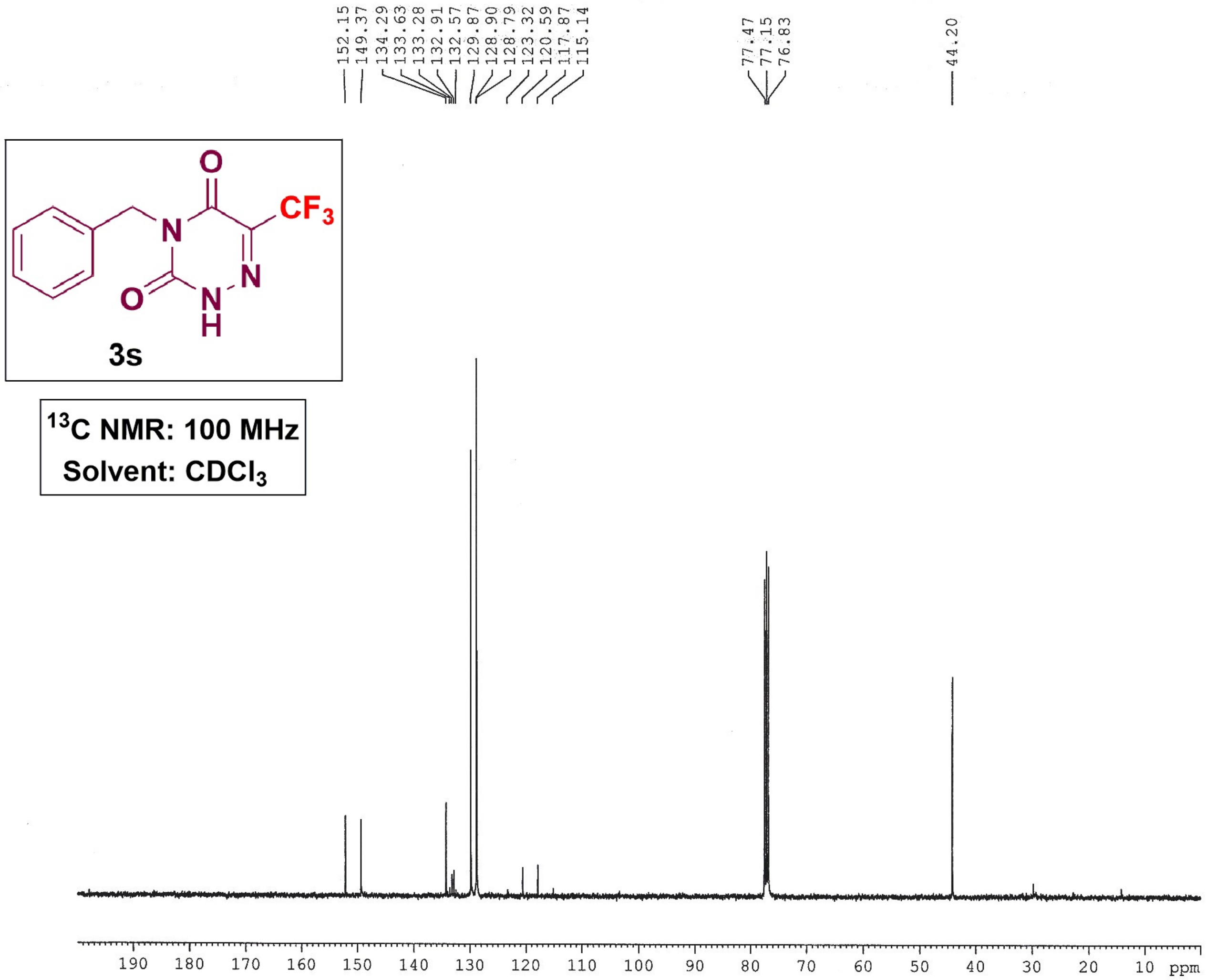


3s

^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

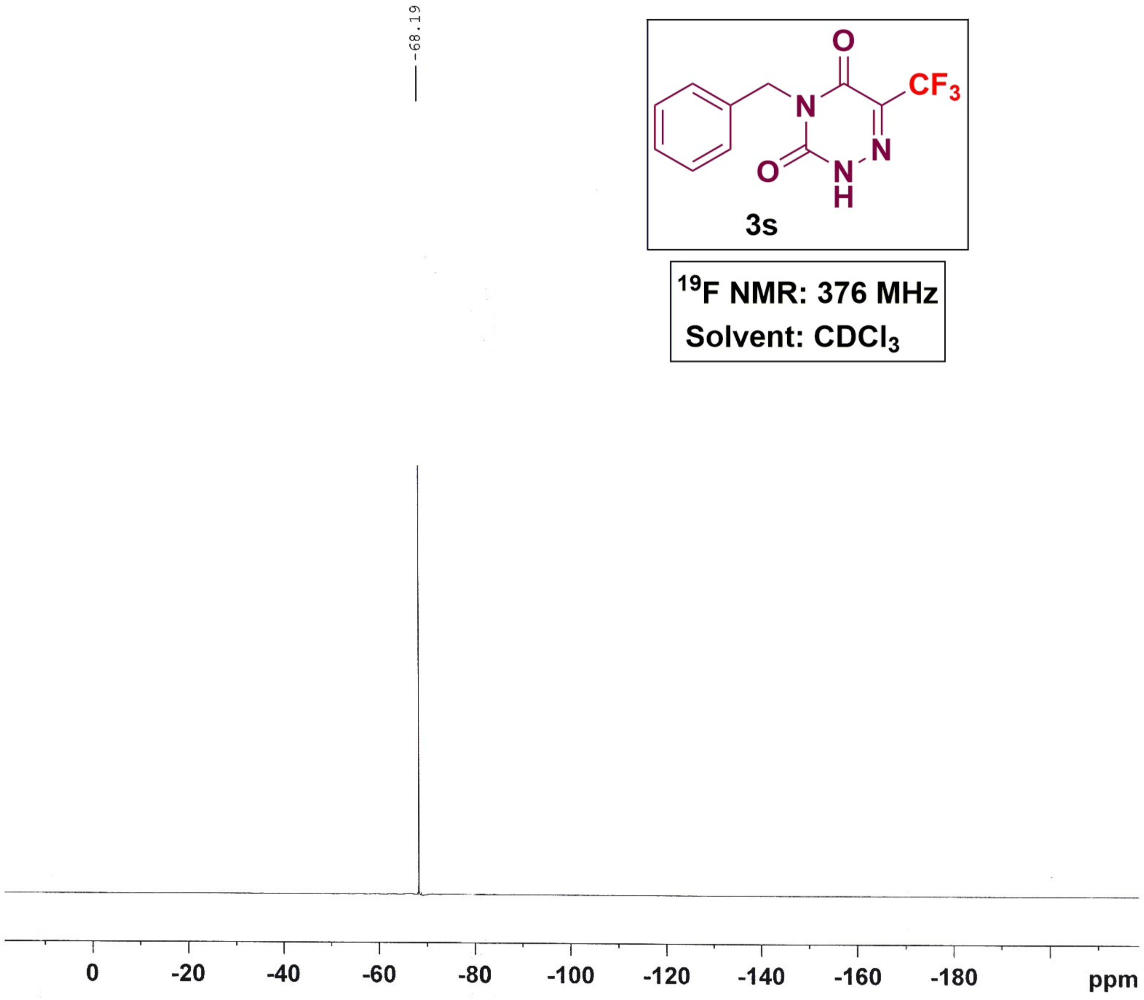
```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   374
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240510
Time                   8.48
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                    93.46
DW                   60.800 usec
DE                     6.50 usec
TE                    288.6 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500094 MHz
WDW                      EM
SSB       0
LB                     0.30 Hz
GB        0
PC                     1.00
```



^{13}C NMR: 100 MHz

Solvent: CDCl$_3$

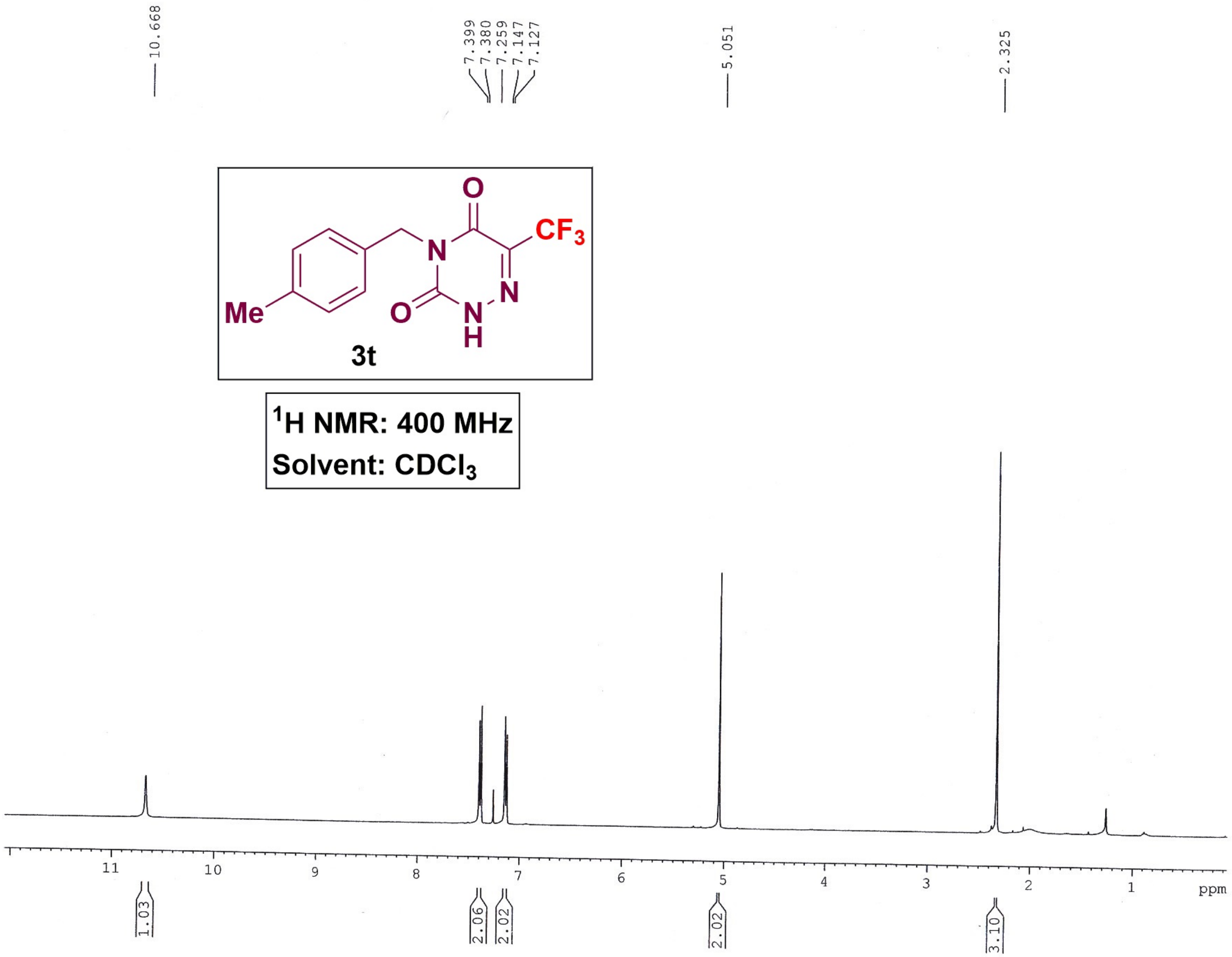
```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO                    141
PROCNO                     1

F2 - Acquisition Parameters
Date_             20240510
Time                  9.30
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG            zgpg30
TD                  32768
SOLVENT             CDCl3
NS                    760
DS                      2
SWH             24038.461 Hz
FIDRES           0.733596 Hz
AQ              0.6815744 sec
RG                 186.42
DW                 20.800 usec
DE                   6.50 usec
TE                  291.4 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1          100.6278588 MHz
NUC1                  13C
P1                   8.90 usec
PLW1          54.00000000 W

======== CHANNEL f2 ========
SFO2          400.1516006 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2               90.00 usec
PLW2          12.00000000 W
PLW12          0.32231000 W
PLW13          0.16212000 W

F2 - Processing parameters
SI                  16384
SF            100.6177887 MHz
WDW                    EM
SSB      0
LB                   1.00 Hz
GB       0
PC                   1.40
```



^{19}F NMR: 376 MHz

Solvent: $CDCl_3$

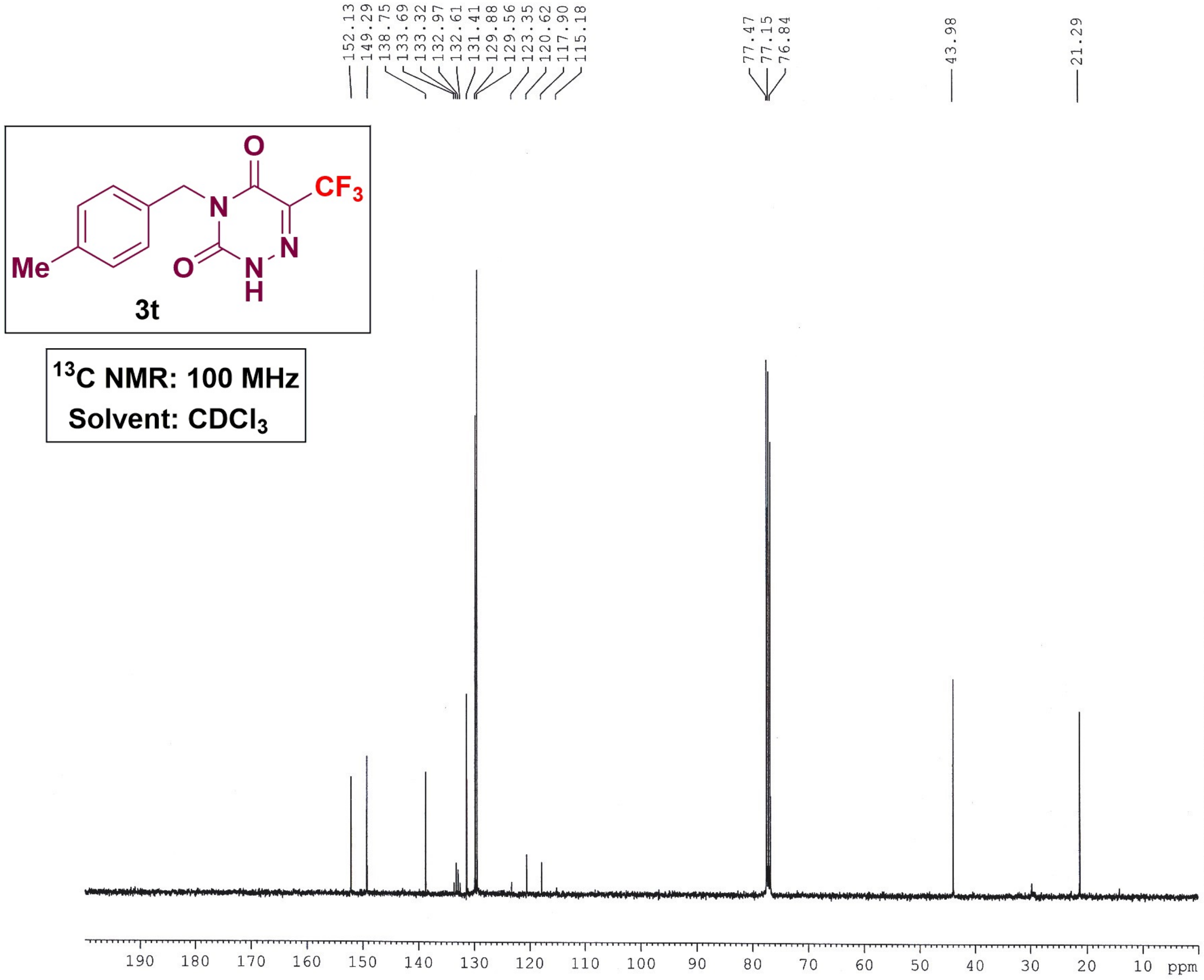
```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   375
PROCNO                    1

F2 - Acquisition Parameters
Date_            20240510
Time                 8.52
INSTRUM             spect
PROBHD    5 mm PABBO BB/
PULPROG            zgflqn
TD                  32768
SOLVENT             CDCl3
NS                      8
DS                      2
SWH             89285.711 Hz
FIDRES           2.724784 Hz
AQ              0.1835008 sec
RG                 186.42
DW                  5.600 usec
DE                   6.50 usec
TE                  288.9 K
D1             1.00000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1         376.4795333 MHz
NUC1                 19F
P1                  12.50 usec
PLW1         20.00000000 W

F2 - Processing parameters
SI                  16384
SF            376.5171850 MHz
WDW                    EM
SSB       0
LB                   0.30 Hz
GB        0
PC                   1.00
```



3t

^{1}H NMR: 400 MHz
Solvent: CDCl$_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   578
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240715
Time                  17.17
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG                zg30
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH                8223.685 Hz
FIDRES             0.250967 Hz
AQ                1.9922944 sec
RG                    93.46
DW                   60.800 usec
DE                     6.50 usec
TE                    296.3 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            400.1524711 MHz
NUC1                     1H
P1                    14.75 usec
PLW1            12.00000000 W

F2 - Processing parameters
SI                    16384
SF              400.1500096 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```

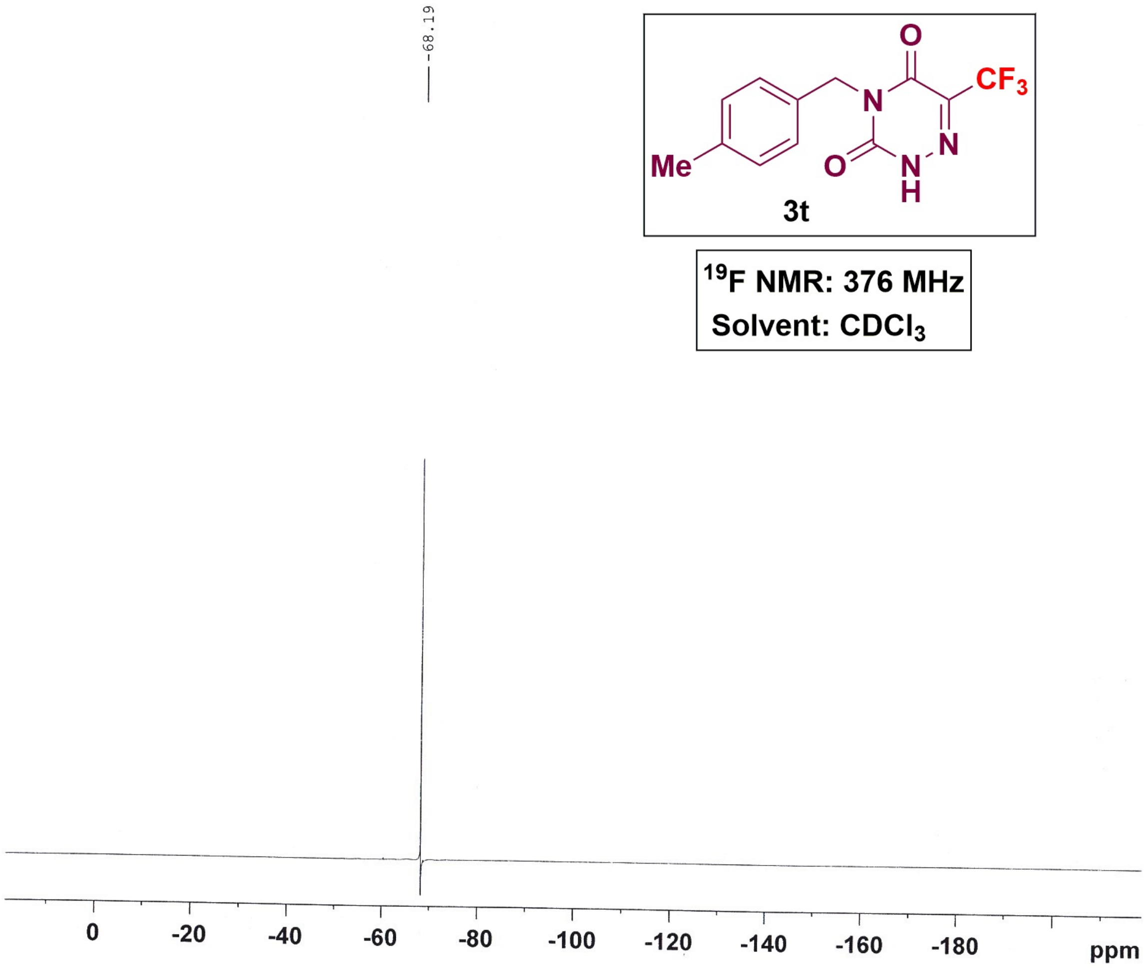


3t

^{13}C NMR: 100 MHz

Solvent: CDCl$_3$

```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO                    219
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240715
Time                   18.05
INSTRUM                spect
PROBHD   5 mm PABBO BB/
PULPROG               zgpg30
TD                     32768
SOLVENT                CDCl3
NS                       910
DS                         2
SWH                24038.461 Hz
FIDRES              0.733596 Hz
AQ                 0.6815744 sec
RG                    186.42
DW                    20.800 usec
DE                      6.50 usec
TE                     296.6 K
D1                2.00000000 sec
D11               0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1             100.6278588 MHz
NUC1                     13C
P1                      8.90 usec
PLW1             54.00000000 W

======== CHANNEL f2 ========
SFO2             400.1516006 MHz
NUC2                      1H
CPDPRG[2             waltz16
PCPD2                  90.00 usec
PLW2             12.00000000 W
PLW12             0.32231000 W
PLW13             0.16212000 W

F2 - Processing parameters
SI                     16384
SF               100.6177858 MHz
WDW                       EM
SSB      0
LB                      1.00 Hz
GB       0
PC                      1.40
```

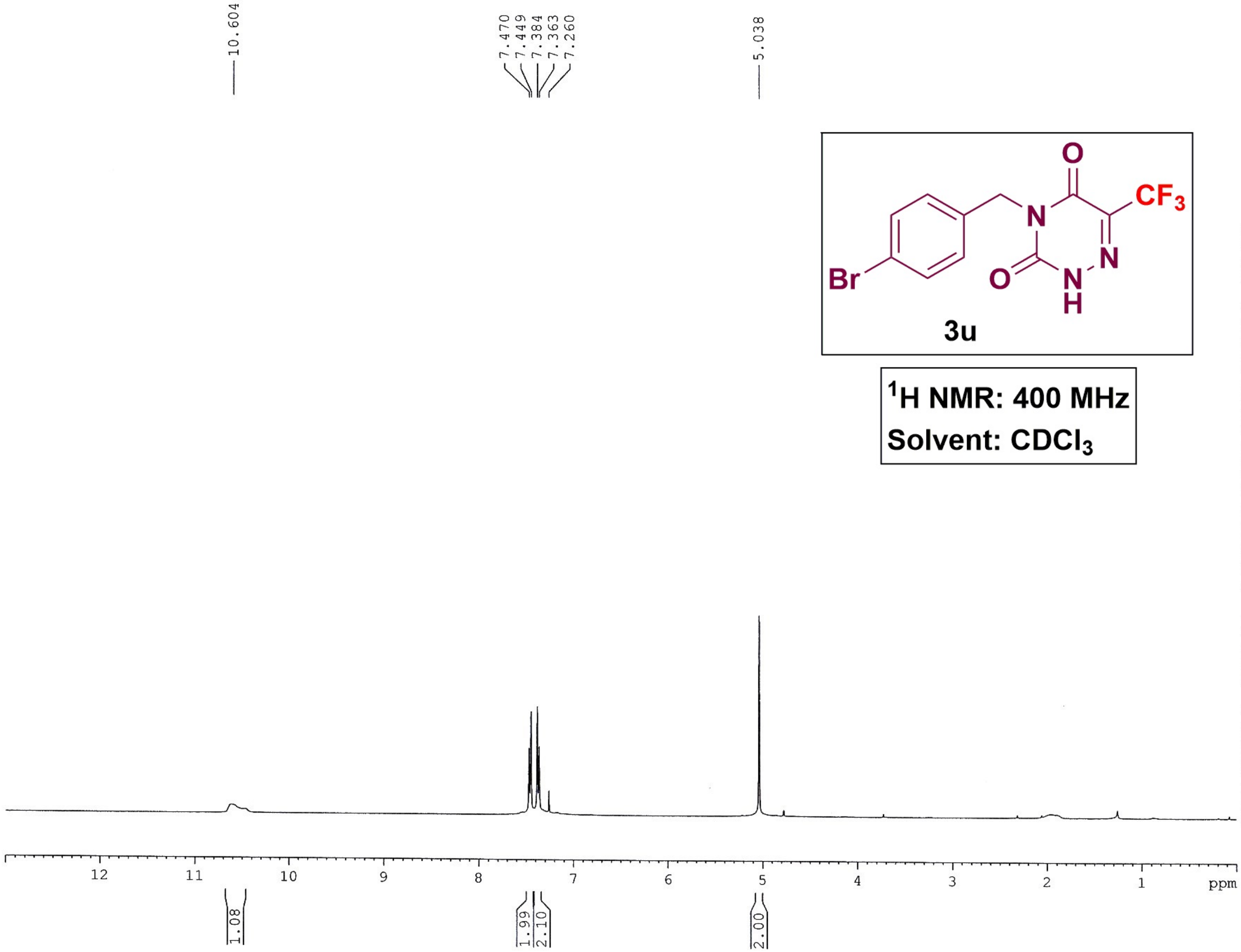


3t

^{19}F NMR: 376 MHz

Solvent: $CDCl_3$

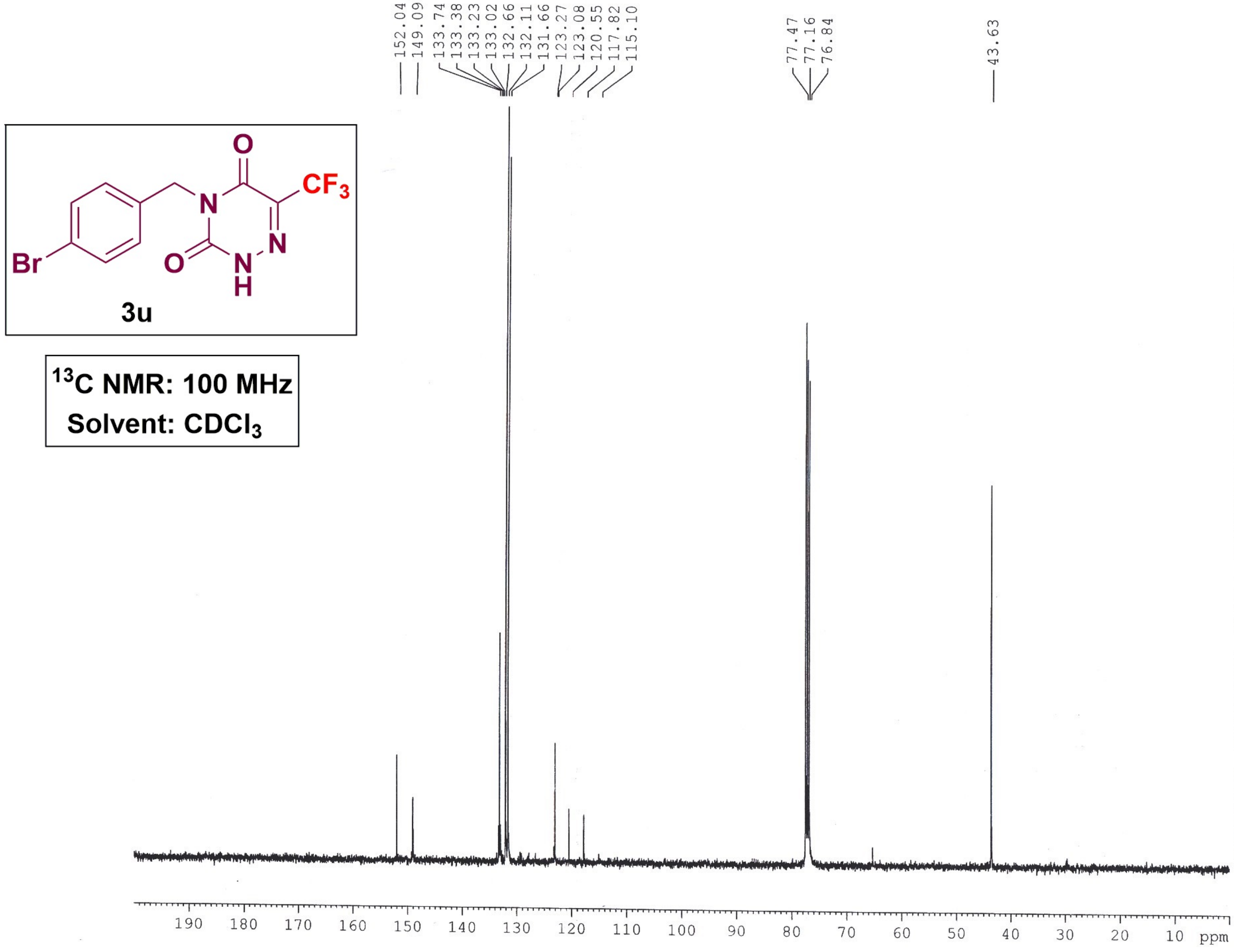
```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                  579
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240715
Time                 17.21
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG             zgflqn
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH              89285.711 Hz
FIDRES            2.724784 Hz
AQ               0.1835008 sec
RG                  186.42
DW                   5.600 usec
DE                    6.50 usec
TE                   296.2 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1          376.4795333 MHz
NUC1                  19F
P1                  12.50 usec
PLW1          20.00000000 W

F2 - Processing parameters
SI                  16384
SF            376.5171850 MHz
WDW                    EM
SSB      0
LB                   0.30 Hz
GB       0
PC                   1.00
```



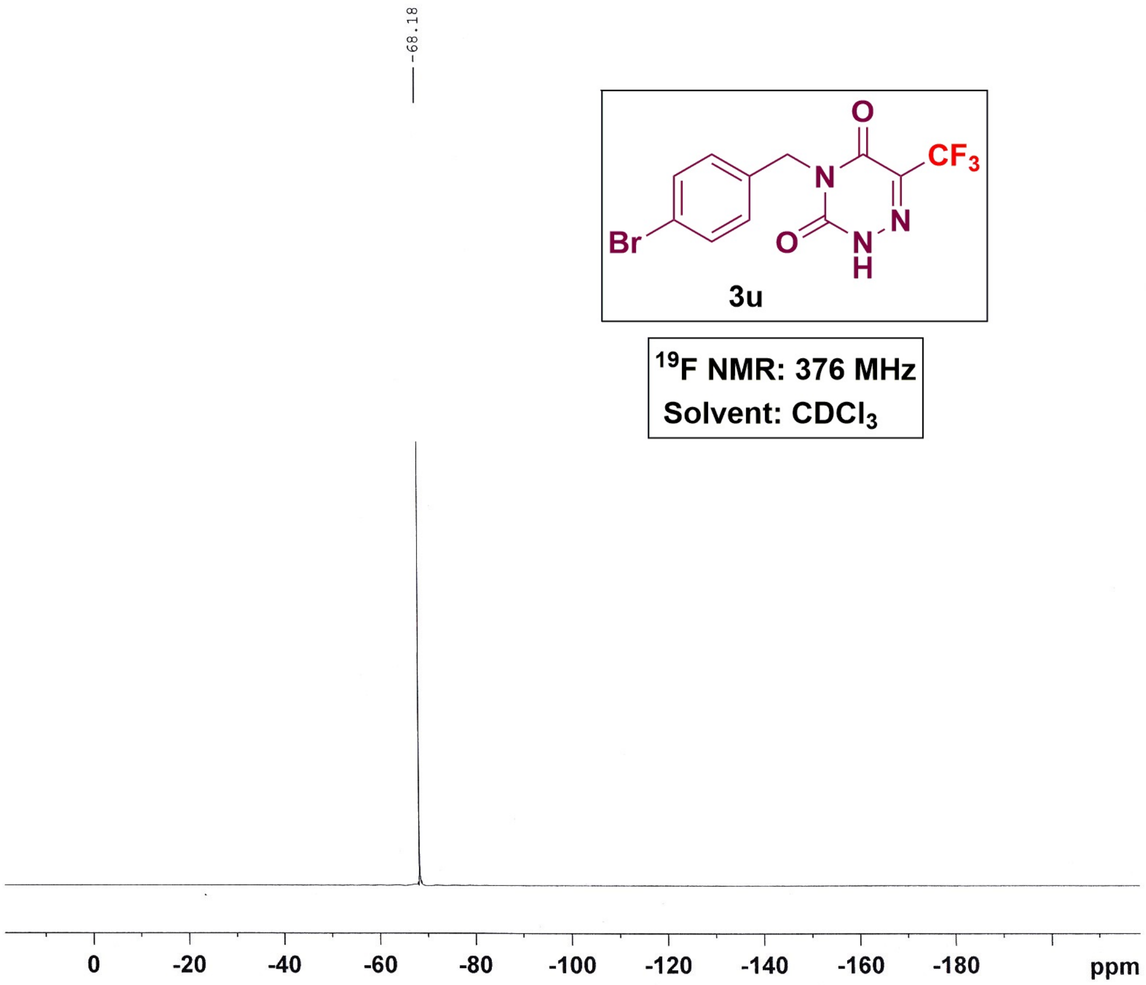
```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                 495
PROCNO                  1

F2 - Acquisition Parameters
Date_            20240614
Time                 9.33
INSTRUM             spect
PROBHD   5 mm PABBO BB/
PULPROG              zg30
TD                  32768
SOLVENT             CDCl3
NS                      8
DS                      2
SWH              8223.685 Hz
FIDRES           0.250967 Hz
AQ              1.9922944 sec
RG                 106.66
DW                 60.800 usec
DE                   6.50 usec
TE                  300.0 K
D1             1.00000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1          400.1524711 MHz
NUC1                   1H
P1                  14.75 usec
PLW1          12.00000000 W

F2 - Processing parameters
SI                  16384
SF            400.1500097 MHz
WDW                    EM
SSB      0
LB                   0.30 Hz
GB       0
PC                   1.00
```

3u

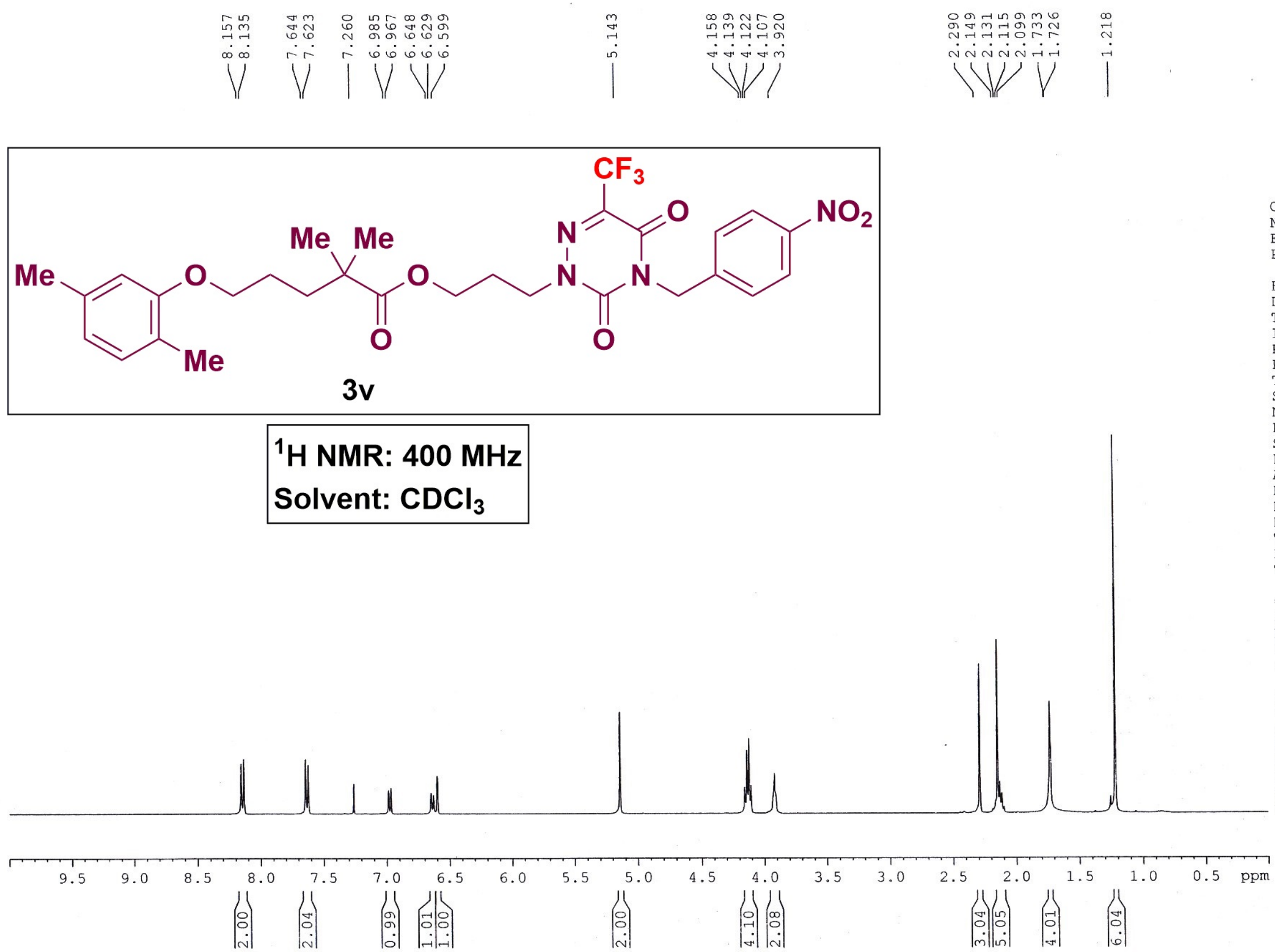
^{13}C NMR: 100 MHz
Solvent: $CDCl_3$



```
Current Data Parameters
NAME      Dr. A HAJRA-2024-13C
EXPNO                    184
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240614
Time                   10.43
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG              zgpg30
TD                     32768
SOLVENT                CDCl3
NS                      1360
DS                         2
SWH                24038.461 Hz
FIDRES              0.733596 Hz
AQ                 0.6815744 sec
RG                    186.42
DW                    20.800 usec
DE                      6.50 usec
TE                     299.6 K
D1                2.00000000 sec
D11               0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1             100.6278588 MHz
NUC1                     13C
P1                      8.90 usec
PLW1             54.00000000 W

======== CHANNEL f2 ========
SFO2             400.1516006 MHz
NUC2                      1H
CPDPRG[2             waltz16
PCPD2                  90.00 usec
PLW2             12.00000000 W
PLW12             0.32231000 W
PLW13             0.16212000 W

F2 - Processing parameters
SI                     16384
SF               100.6177844 MHz
WDW                       EM
SSB       0
LB                      1.00 Hz
GB        0
PC                      1.40
```



```
Current Data Parameters
NAME     Dr. A HAJRA 2024 1H
EXPNO                   496
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240614
Time                   9.37
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG              zgflqn
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH              89285.711 Hz
FIDRES            2.724784 Hz
AQ               0.1835008 sec
RG                  186.42
DW                   5.600 usec
DE                    6.50 usec
TE                   299.7 K
D1              1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1          376.4795333 MHz
NUC1                  19F
P1                   12.50 usec
PLW1          20.00000000 W

F2 - Processing parameters
SI                    16384
SF            376.5171850 MHz
WDW                      EM
SSB      0
LB                     0.30 Hz
GB       0
PC                     1.00
```

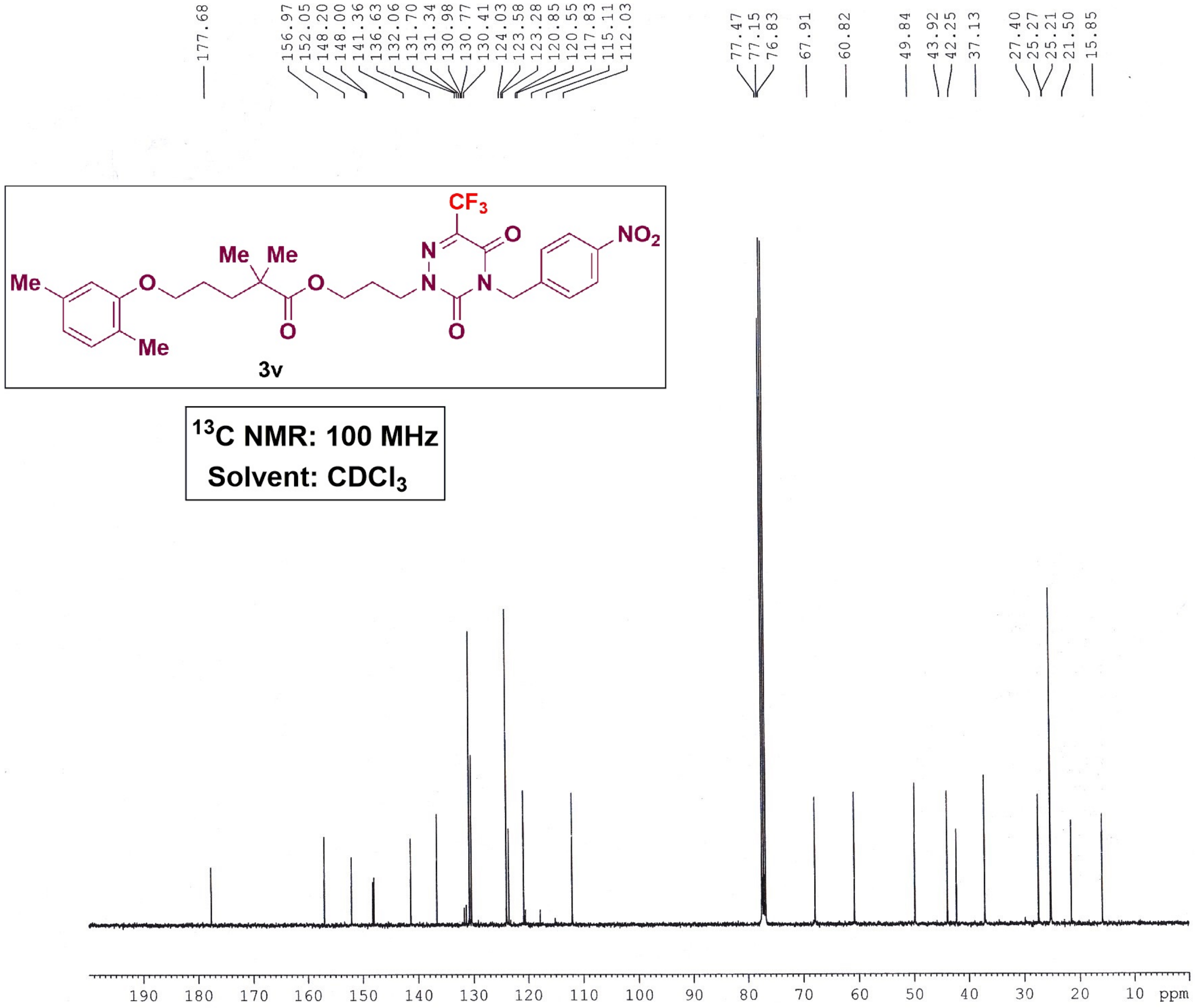


3v

^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME       Dr. A HAJRA 2024 1H
EXPNO                      604
PROCNO                       1

F2 - Acquisition Parameters
Date_               20240811
Time                   10.09
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         2
SWH               8223.685 Hz
FIDRES            0.250967 Hz
AQ               1.9922944 sec
RG                     77.59
DW                    60.800 usec
DE                      6.50 usec
TE                     294.6 K
D1                1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1           400.1524711 MHz
NUC1                    1H
P1                   14.75 usec
PLW1           12.00000000 W

F2 - Processing parameters
SI                     16384
SF               400.1500098 MHz
WDW                       EM
SSB      0
LB                      0.30 Hz
GB       0
PC                      1.00
```

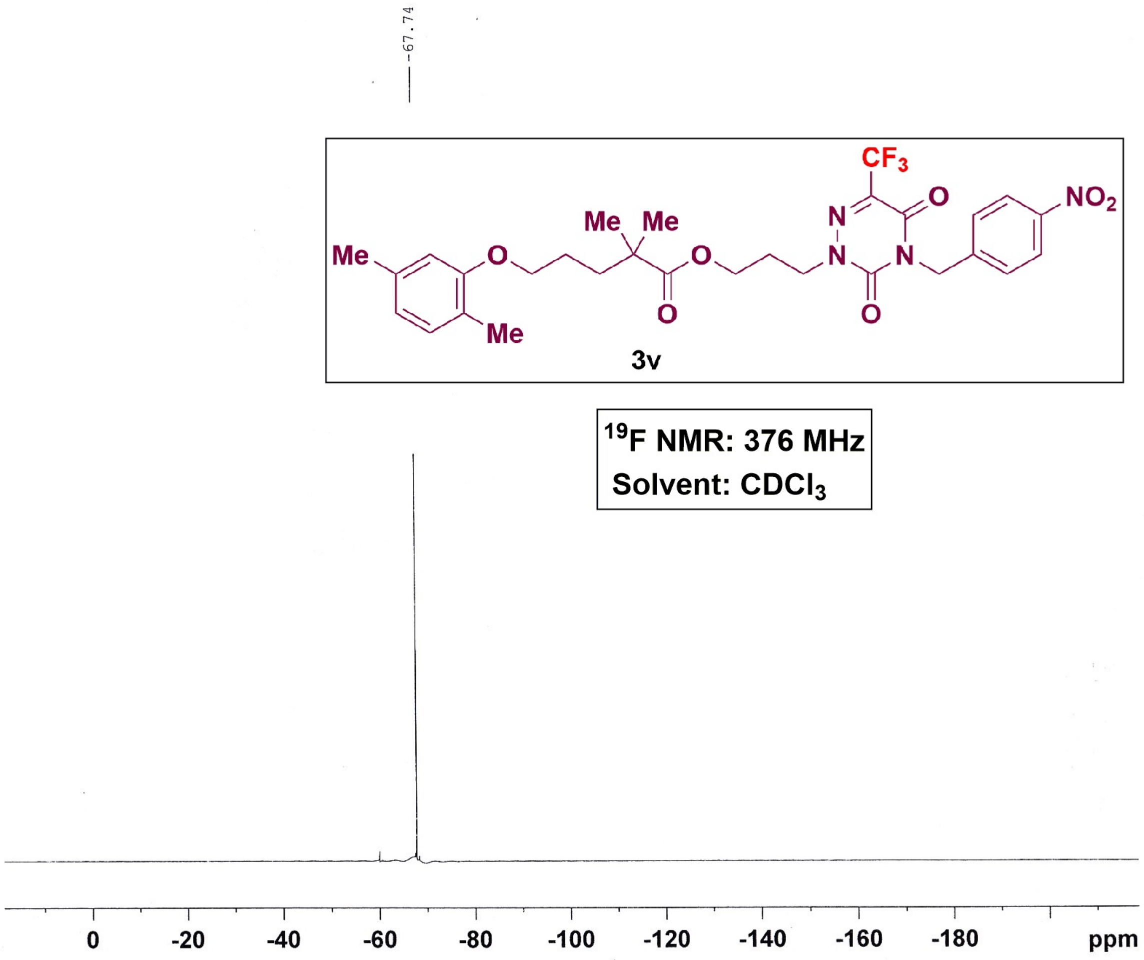


3v

^{13}C NMR: 100 MHz

Solvent: $CDCl_3$

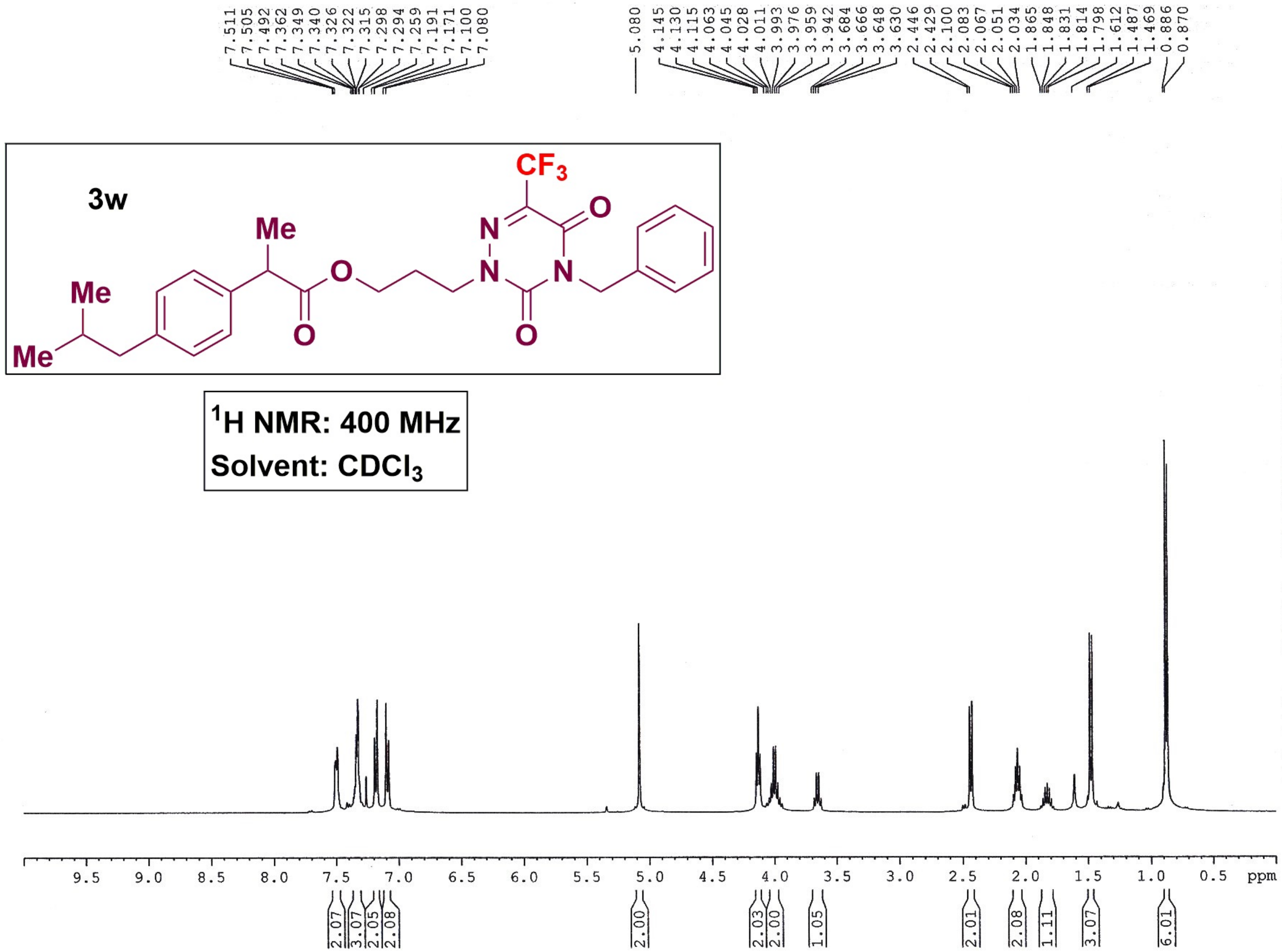
```
Current Data Parameters
NAME     Dr. A HAJRA-2024-13C
EXPNO                     228
PROCNO                      1

F2 - Acquisition Parameters
Date_              20240811
Time                  12.03
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG             zgpg30
TD                   32768
SOLVENT              CDCl3
NS                    2300
DS                       2
SWH              24038.461 Hz
FIDRES            0.733596 Hz
AQ               0.6815744 sec
RG                  186.42
DW                  20.800 usec
DE                    6.50 usec
TE                   295.0 K
D1              2.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1         100.6278588 MHz
NUC1                 13C
P1                  8.90 usec
PLW1         54.00000000 W

======== CHANNEL f2 ========
SFO2         400.1516006 MHz
NUC2                  1H
CPDPRG[2          waltz16
PCPD2              90.00 usec
PLW2         12.00000000 W
PLW12         0.32231000 W
PLW13         0.16212000 W

F2 - Processing parameters
SI                 16384
SF           100.6177873 MHz
WDW                   EM
SSB      0
LB                  1.00 Hz
GB       0
PC                  1.40
```



3v

^{19}F NMR: 376 MHz
Solvent: $CDCl_3$

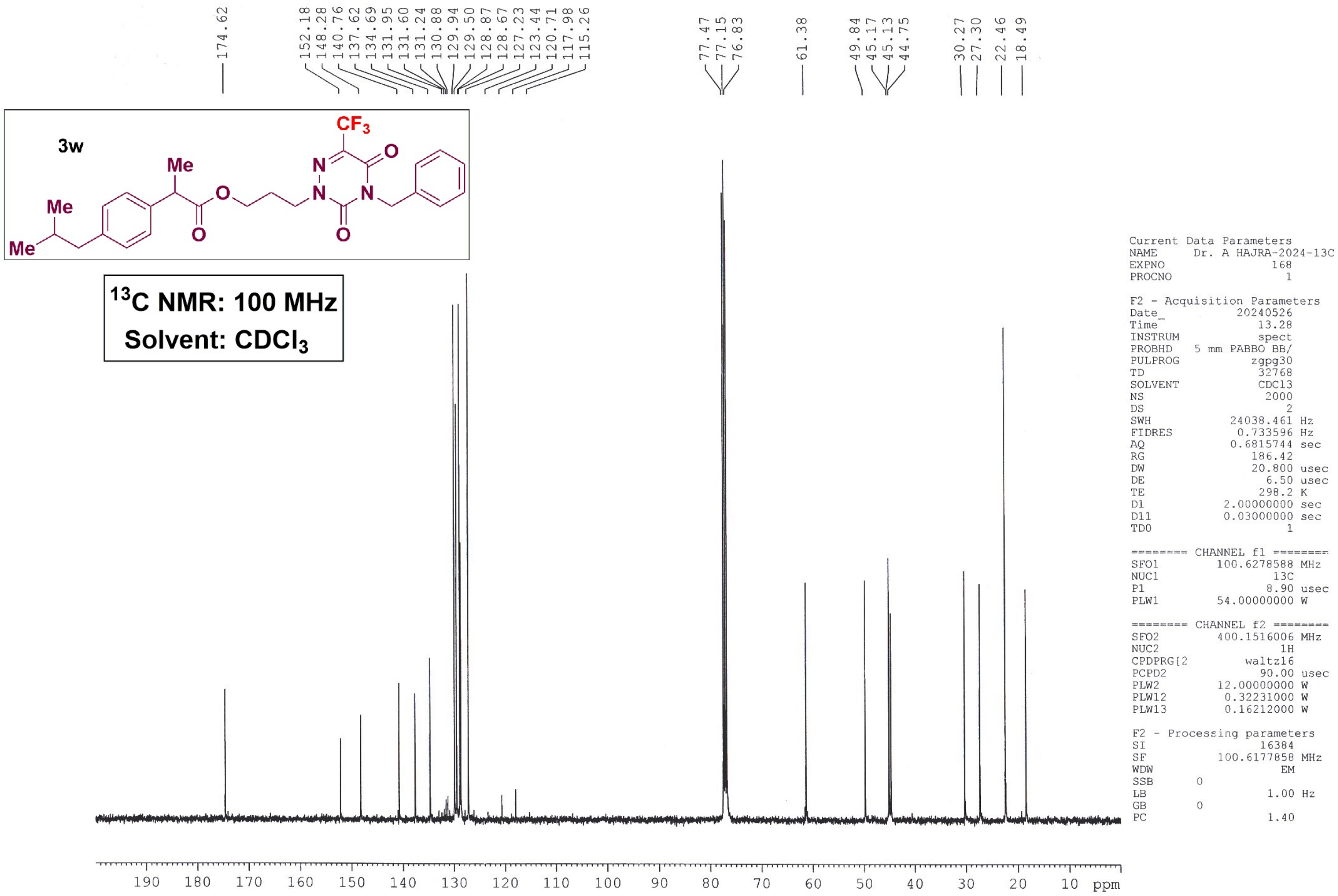
```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                   605
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240811
Time                  10.15
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG              zgflqn
TD                    32768
SOLVENT               CDCl3
NS                        8
DS                        2
SWH               89285.711 Hz
FIDRES             2.724784 Hz
AQ                0.1835008 sec
RG                   186.42
DW                    5.600 usec
DE                     6.50 usec
TE                    294.5 K
D1               1.00000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1         376.4795333 MHz
NUC1                 19F
P1                 12.50 usec
PLW1         20.00000000 W

F2 - Processing parameters
SI                 16384
SF           376.5171850 MHz
WDW                   EM
SSB      0
LB                  0.30 Hz
GB       0
PC                  1.00
```



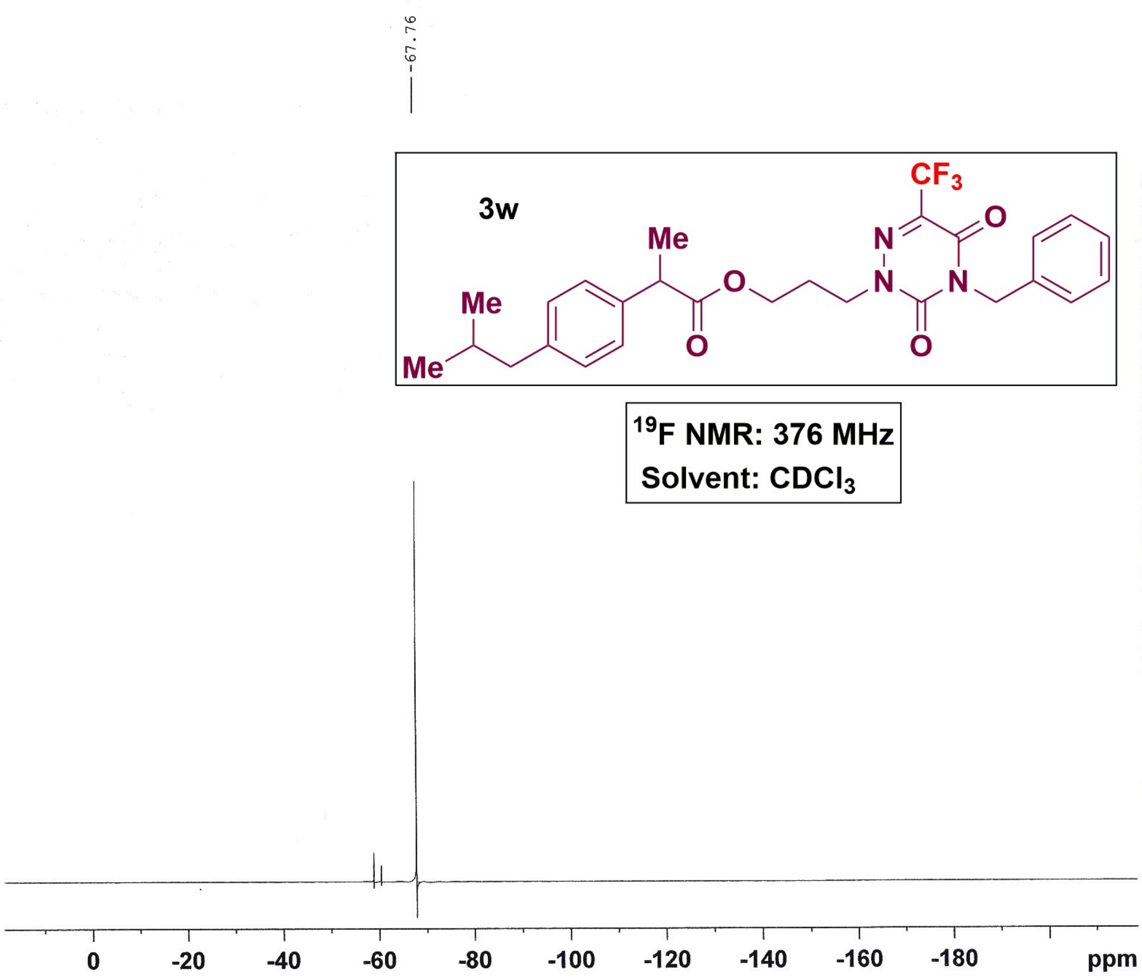
^{1}H NMR: 400 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME        Dr. A HAJRA 2024 1H
EXPNO                    455
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240526
Time                   11.48
INSTRUM                spect
PROBHD   5 mm PABBO BB/
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         2
SWH                 8223.685 Hz
FIDRES              0.250967 Hz
AQ                 1.9922944 sec
RG                     67.81
DW                    60.800 usec
DE                      6.50 usec
TE                     297.4 K
D1                1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1             400.1524711 MHz
NUC1                      1H
P1                     14.75 usec
PLW1             12.00000000 W

F2 - Processing parameters
SI                     16384
SF               400.1500097 MHz
WDW                       EM
SSB      0
LB                      0.30 Hz
GB       0
PC                      1.00
```

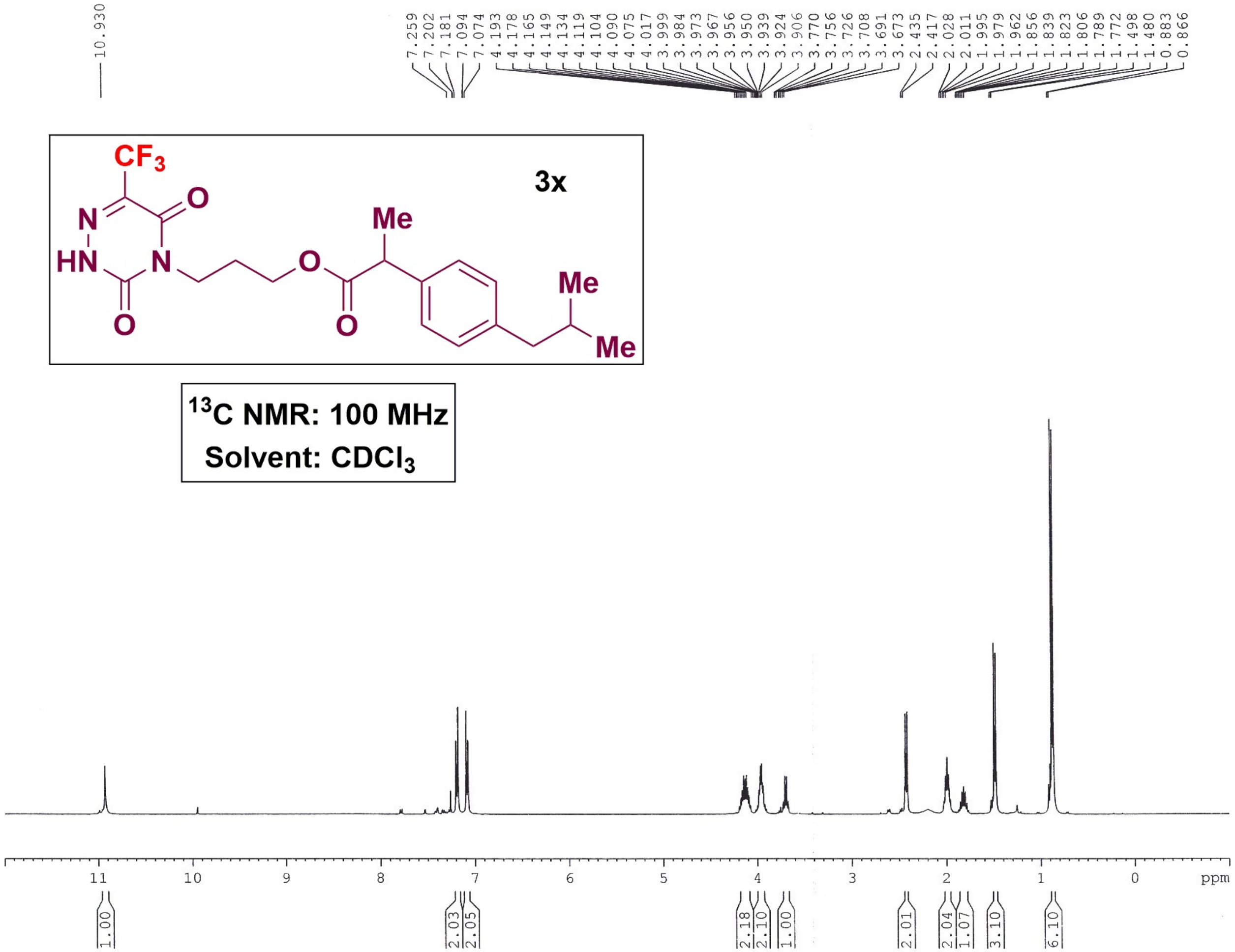


```
Current Data Parameters
NAME       Dr. A HAJRA-2024-13C
EXPNO                   168
PROCNO                    1

F2 - Acquisition Parameters
Date_              20240526
Time                  13.28
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG             zgpg30
TD                    32768
SOLVENT               CDCl3
NS                     2000
DS                        2
SWH               24038.461 Hz
FIDRES             0.733596 Hz
AQ                0.6815744 sec
RG                   186.42
DW                   20.800 usec
DE                     6.50 usec
TE                    298.2 K
D1               2.00000000 sec
D11              0.03000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1            100.6278588 MHz
NUC1                    13C
P1                     8.90 usec
PLW1            54.00000000 W

======== CHANNEL f2 ========
SFO2            400.1516006 MHz
NUC2                     1H
CPDPRG[2            waltz16
PCPD2                 90.00 usec
PLW2            12.00000000 W
PLW12            0.32231000 W
PLW13            0.16212000 W

F2 - Processing parameters
SI                    16384
SF              100.6177858 MHz
WDW                      EM
SSB      0
LB                     1.00 Hz
GB       0
PC                     1.40
```



^{19}F NMR: 376 MHz
Solvent: $CDCl_3$

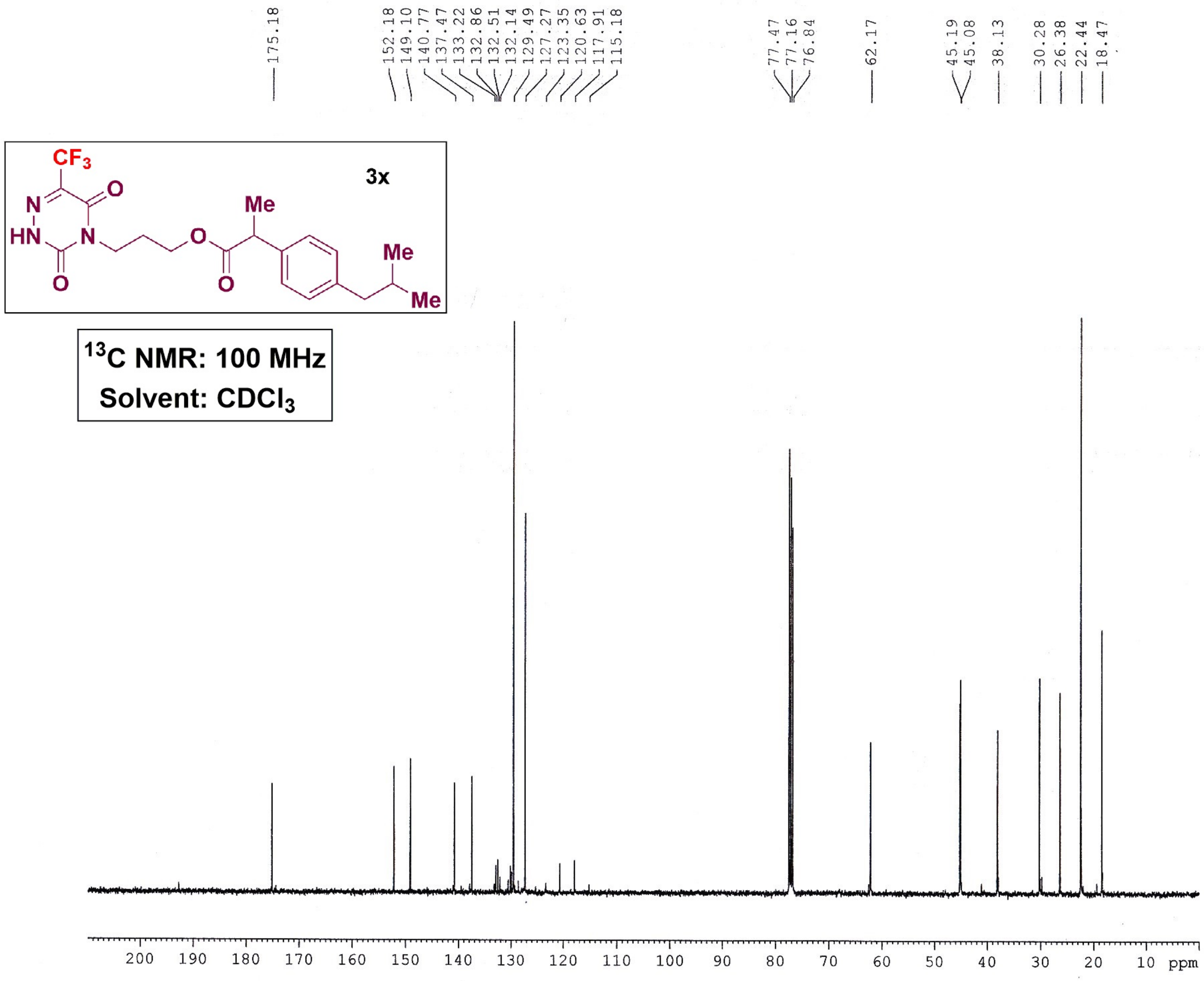
```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                  456
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240526
Time                 11.55
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG             zgflqn
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH              89285.711 Hz
FIDRES            2.724784 Hz
AQ               0.1835008 sec
RG                  186.42
DW                   5.600 usec
DE                    6.50 usec
TE                   297.4 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1         376.4795333 MHz
NUC1                 19F
P1                  12.50 usec
PLW1         20.00000000 W

F2 - Processing parameters
SI                   16384
SF            376.5171850 MHz
WDW                     EM
SSB      0
LB                    0.30 Hz
GB       0
PC                    1.00
```



^{13}C NMR: 100 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME     Dr. A HAJRA 2024 1H
EXPNO                    482
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240608
Time                    8.44
INSTRUM                spect
PROBHD   5 mm PABBO BB/
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                         8
DS                         2
SWH                 8223.685 Hz
FIDRES              0.250967 Hz
AQ                 1.9922944 sec
RG                     40.87
DW                    60.800 usec
DE                      6.50 usec
TE                     289.8 K
D1                1.00000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1             400.1524711 MHz
NUC1                      1H
P1                     14.75 usec
PLW1             12.00000000 W

F2 - Processing parameters
SI                     16384
SF               400.1500095 MHz
WDW                       EM
SSB      0
LB                      0.30 Hz
GB       0
PC                      1.00
```

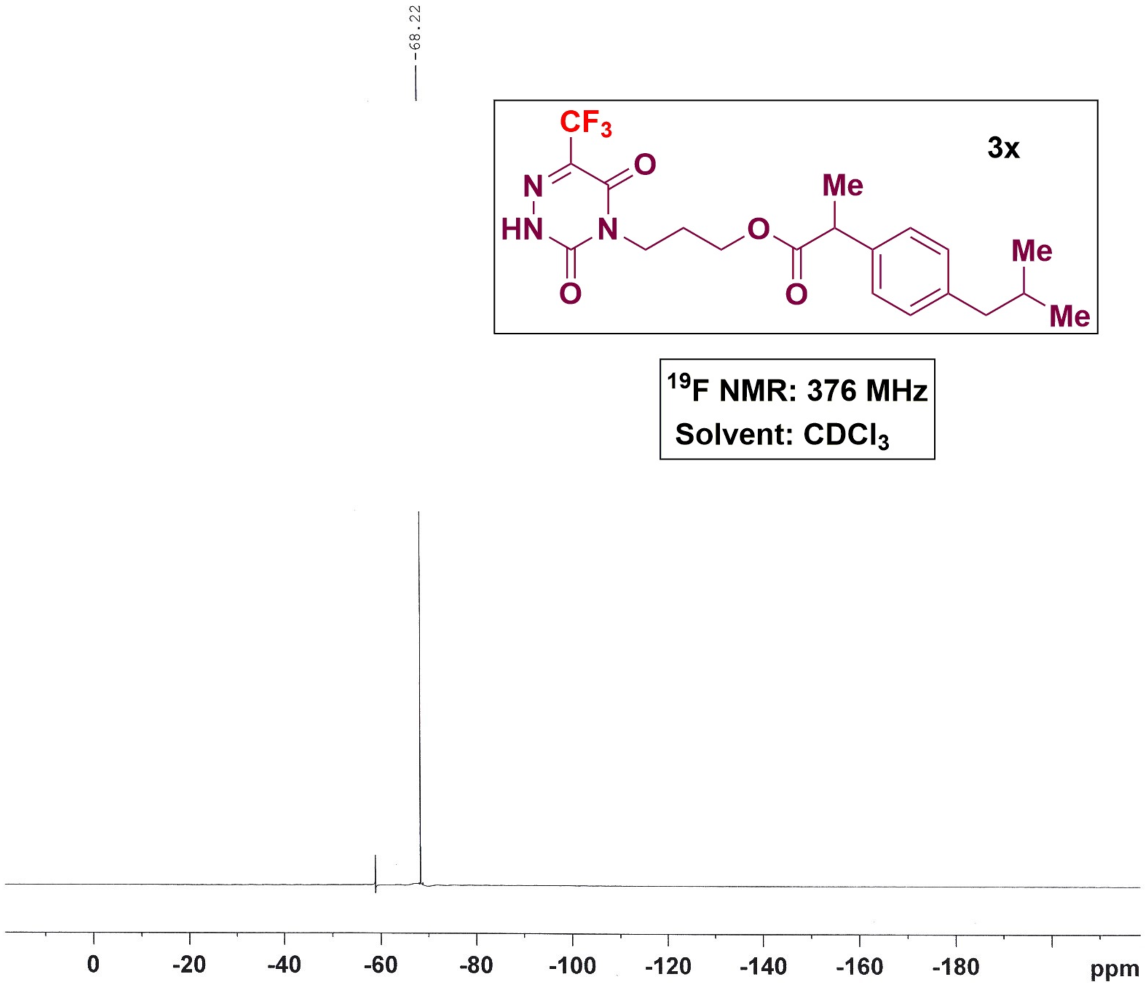


3x

^{13}C NMR: 100 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME        Dr. A HAJRA-2024-13C
EXPNO                    179
PROCNO                     1

F2 - Acquisition Parameters
Date_               20240608
Time                    9.31
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG              zgpg30
TD                     32768
SOLVENT                CDC13
NS                       780
DS                         2
SWH               24038.461 Hz
FIDRES             0.733596 Hz
AQ                0.6815744 sec
RG                   186.42
DW                    20.800 usec
DE                     6.50 usec
TE                    292.3 K
D1               2.00000000 sec
D11              0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1            100.6278588 MHz
NUC1                     13C
P1                      8.90 usec
PLW1             54.00000000 W

======== CHANNEL f2 ========
SFO2            400.1516006 MHz
NUC2                      1H
CPDPRG[2             waltz16
PCPD2                  90.00 usec
PLW2             12.00000000 W
PLW12             0.32231000 W
PLW13             0.16212000 W

F2 - Processing parameters
SI                     16384
SF              100.6177887 MHz
WDW                       EM
SSB      0
LB                      1.00 Hz
GB       0
PC                      1.40
```



3x

^{19}F NMR: 376 MHz

Solvent: $CDCl_3$

```
Current Data Parameters
NAME      Dr. A HAJRA 2024 1H
EXPNO                  483
PROCNO                   1

F2 - Acquisition Parameters
Date_             20240608
Time                  8.51
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG             zgflqn
TD                   32768
SOLVENT              CDCl3
NS                       8
DS                       2
SWH             89285.711 Hz
FIDRES           2.724784 Hz
AQ              0.1835008 sec
RG                  186.42
DW                   5.600 usec
DE                    6.50 usec
TE                   290.2 K
D1              1.00000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1          376.4795333 MHz
NUC1                   19F
P1                   12.50 usec
PLW1           20.00000000 W

F2 - Processing parameters
SI                   16384
SF            376.5171850 MHz
WDW                     EM
SSB      0
LB                    0.30 Hz
GB       0
PC                    1.00
```