Electronic Supplementary Material (ESI) for RSC Advances.

- Electronic Supplementary Information-

Copper-Mediated Etherification of Arenes with Alkoxysilanes Directed by (2-Aminophenyl)pyrazole Group

Jayaraman Selvakumar, Gowri Sankar Grandhi, Harekrishna Sahoo, Mahiuddin Baidya.*

Department of Chemistry, Indian Institute of Technology Madras,

Chennai – 600 036, India.

Email: mbaidya@iitm.ac.in

Table of Contents

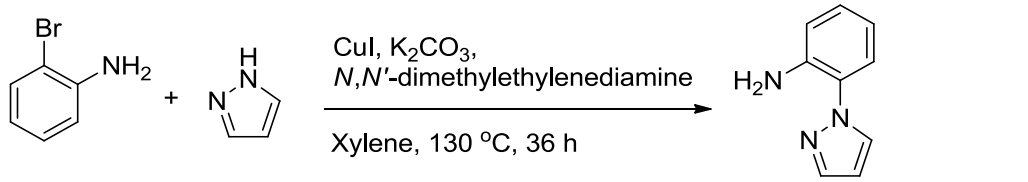
.

1. General Information

All non-aqueous reactions were carried out under an atmosphere of nitrogen unless otherwise stated. All reactions were carried out using anhydrous solvent. Anhydrous Et_3N and CH_2Cl_2 were dried over calcium hydride. The anhydrous $Cu(OAc)_2$ and orthosilicates are purchased from Alfa-Aesar company. All the alcohols used were commercially purchased and used without further purification. Extra dry DMSO was purchased from Acros Organics Company. All reactions were monitored by thin layer chromatography (TLC) on Merck 60 F 254 precoated silica plates and visualized using a UV lamp (366 or 254 nm) or by use of potassium permanganate, 5 g K_2CO_3, / 100 mL water. Products were isolated by column chromatography (Merck silica gel 100-200μm). Yields refer to chromatographically and spectroscopically homogenous materials unless noted otherwise. ^{13}C and ^{1}H NMR spectra were recorded on a Bruker 400 or Bruker 500 MHz spectrometers. Chemical shift values (δ) are reported in ppm and calibrated to the residual solvent peak $CDCl_3$ δ = 7.2600 ppm for ^{1}H, δ = 77.16 for ^{13}C; or calibrated to tetramethylsilane (δ = 0.00). All NMR spectra were recorded at ambient temperature (290 K) unless otherwise noted. ^{1}H NMR spectra are reported as follows: chemical shift (multiplicity, coupling constant, integration). The following abbreviations are used to indicate multiplicities: s, singlet; d, doublet; t, triplet; q, quartet; quint, quintet; sext, sextet; sept, septet; m, multiplet; dd, doublet of doublet; dt, doublet of triplet; dq, doublet of quartet; td, triplet of doublet; tt, triplet of triplet; dq, doublet of quartet; br, broad. Mass spectra were recorded by electron spry ionization (ESI) method on a Q-TOF Micro with lock spray source. The crystal data were collected and integrated using a BrukerAxs kappa apex2 CCD diffractometer, with graphite monochromated Mo-Kα radiation.

2. Synthesis of the 2-APP directing group and amides 1a-t.

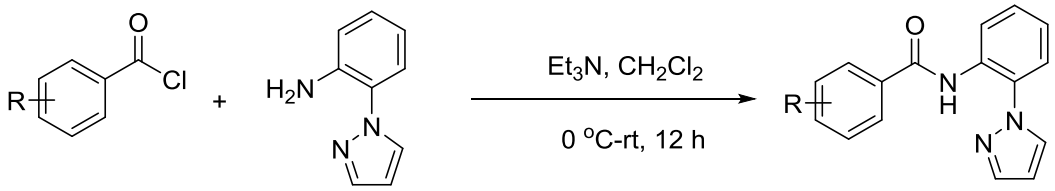
2.1. Synthesis of the APP directing group[1]



1-(2-aminophenyl)pyrazole
(2-APP Directing Group)

An oven dried two neck round bottom flask bearing septum in side arm was cooled to room temperature under a steady stream of nitrogen gas flow. The flask was charged with stirring bar, 2-bromoaniline (10 mmol), pyrazole (1.2 equiv), powdered K_2CO_3 (2.1 equiv), 20 mol% *N*,*N*′-dimethylethylenediamine, and 10 mL of *p*-xylene. The mixture was degased for 15 min and CuI was added (5 mol %). The resulting mixture was kept stirring on the pre heated oil bath (130 ^oC) for 36 h (monitored by TLC). After cooling to room temperature, 100 mL of H_2O and a few crystals of EDTA were added to facilitate workup. The mixture was extracted with three 100 mL portions of CH_2Cl_2. The combined organic layer was dried over $MgSO_4$ and filtered. The solvent was removed by rotary evaporation to leave oily residue. The residue was purified by column chromatography by using 4:1 hexanes : ethyl acetate as the eluent to provide pure product as pale yellow solid (1.08 g, 68% yield).

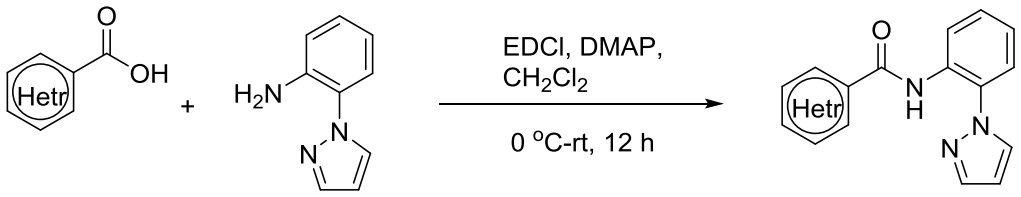
2.2. Synthesis of the amides 1a-1t[2]



An acid chloride (3 mmol, prepared from the corresponding carboxylic acid or commercially purchased) and 1-(2-aminophenyl)pyrazole (3 mmol) were added to a 50 mL round-bottom flask and then dissolved with CH_2Cl_2 (10 mL). Et_3N (5 mmol) was added to the vigorously stirred solution via a syringe. The reaction mixture was stirred at room

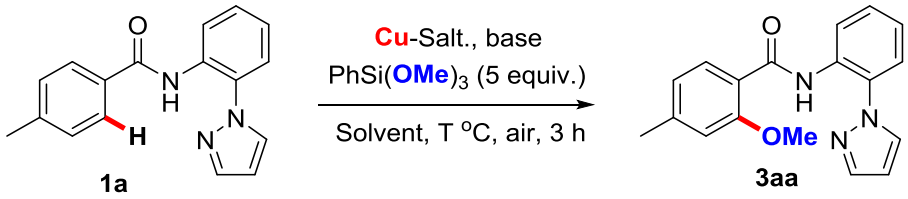
temperature for 12 h and quenched with saturated $NaHCO_3$ solution. After adding H_2O (75 mL), it was extracted with CH_2Cl_2 (75 mL x 3). Combined organic phase was washed with brine, dried over $MgSO_4$, and then filtered. The solvent was removed in a rotary evaporator and resulting crude product was purified by column chromatography on silica gel by using hexane : ethyl acetate as the eluent (90-95% yields).

2.3. Synthesis of the amides 1o-p[2]



A heterocyclic carboxylic acid (4 mmol) and 1-(2-aminophenyl)pyrazole (5 mmol) were taken to a 50 mL round-bottom flask and dissolved with CH_2Cl_2 (20 mL). DMAP (0.5 mmol) and EDCI (6 mmol) were added to the mixture under ice bath and then stirred for 12 h at room temperature. Saturated $NaHCO_3$ solution was added to the mixture to quench the reaction and then extracted with CH_2Cl_2 (100 mL x 3). Combined organic phase was washed with saturated brine solution, dried over Na_2SO_4, and then filtered. The solvent was removed in a rotary evaporator. The crude product was purified by column chromatography on silica gel by using hexane : ethyl acetate as the eluent (70-80% yields).

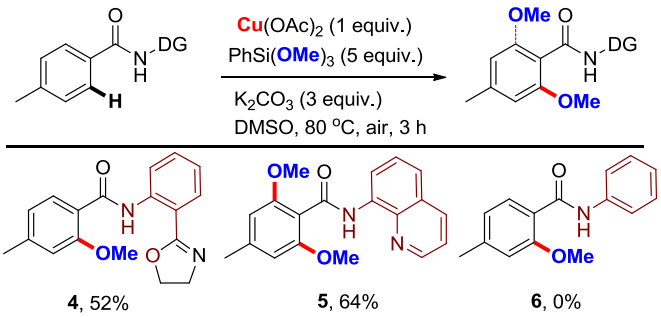
3. Optimization of the methoxylation reaction with amide 1a and phenyltrimethoxysilane[a]



S.No	Cu-Salt	Base (equiv)	Oxidant (equiv)	Solvent (1 mL)	Temp. (°C)	Atm. (N_2/Air)	Yield (%)[b]
1	$Cu(OAc)_2$	$KHCO_3$ (3)	--	DMSO	80	Air	78
2	$Cu(OAc)_2$	Na_2CO_3 (3)	--	DMSO	80	Air	48
3	**$Cu(OAc)_2$**	**K_2CO_3 (3)**	--	**DMSO**	**80**	**Air**	**87**
4	$Cu(OAc)_2$	Ag_2CO_3 (1)	--	DMSO	80	Air	23
5	$Cu(OAc)_2$	K_2CO_3 (3)	--	DMSO	80	N_2	26
6	$Cu(OAc)_2$	K_2CO_3 (3)	--	DMSO	100	Air	50
7	$Cu(OAc)_2$	K_2CO_3 (3)	--	DMSO	90	Air	82
8	$Cu(OAc)_2$	K_2CO_3 (2)	--	DMSO	80	Air	80
9	$Cu(OAc)_2$	K_2CO_3 (1)	--	DMSO	80	Air	58
10[c]	$Cu(OAc)_2$	K_2CO_3 (3)	--	DMSO	80	Air	78
11[d]	$Cu(OAc)_2$	K_2CO_3 (3)	--	DMSO	80	Air	62
12[e]	$Cu(OAc)_2$	K_2CO_3 (3)	--	DMSO	80	Air	16
13[f]	$Cu(OAc)_2$	K2CO_3 (3)	--	DMSO	80	Air	41
14	$Cu(OAc)_2{\cdot}H_2O$	K_2CO_3 (3)	--	DMSO	80	Air	83
15	$CuCl_2$	K_2CO_3 (3)	--	DMSO	80	Air	54
16	$Cu(TFA)_2{\cdot}H_2O$	K_2CO_3 (3)	--	DMSO	80	Air	Trace
17	$Cu(OTf)_2$	K_2CO_3 (3)	--	DMSO	80	Air	Trace
18	$(CuOH)_2CO_3{\cdot}H_2O$	K_2CO_3 (3)	--	DMSO	80	Air	28
19	$Cu(OAc)_2$	K_2CO_3 (3)	--	DMF	80	Air	46
20	$Cu(OAc)_2$	K_2CO_3 (3)	--	PhMe	80	Air	0
21	$Cu(OAc)_2$	K2CO_3 (3)	--	MeCN	80	Air	0
22[e]	$Cu(OAc)_2$	Ag_2CO_3 (1)	--	DMSO	80	N_2	Trace
23[e]	$Cu(OAc)_2$	K_2CO_3 (1)	Ag_2CO_3 (2)	DMSO	80	N_2	Trace
24[e]	$Cu(OAc)_2$	K_2CO_3 (1)	Ag_2O (2)	DMSO	80	N_2	Trace
25[e]	$Cu(OAc)_2$	K_2CO_3 (1)	$K_2S_2O_8$ (2)	DMSO	80	N_2	Trace
26[e]	$Cu(OAc)_2$	K_2CO_3 (1)	MnO_2 (2)	DMSO	80	N_2	Trace
27[e]	$Cu(OAc)_2$	K_2CO_3 (1)	$PhI(OAc)_2$	DMSO	80	N_2	Trace

[a]Conditions: **1a** (0.1 mmol), $Cu(OAc)_2$ (0.1 mmol), $PhSi(OMe)_3$ (**2a**), Base (3 equiv.), air, DMSO (1 mL), 80 °C, 3h. [b]Yields are isolated quantities. [c]4 equivalent of **2a** was used.[d]3 equivalent of **2a** was used. [e]$Cu(OAc)_2$ (30 mol%) was used. [f]$Cu(OAC)_2$(50 mol%) was used.

3.1 Scope of the directing groups for methoxylation reaction



4 Typical copper mediated Csp^2-H alkoxylation reaction using alkoxysilanes.

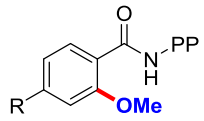
To an oven dried reaction tube (10 × 1.5 cm) was added amides **1a-1p** (0.1 mmol, 1 equiv.), $Cu(OAc)_2$ (0.1 mmol), alkoxysilane (0.5 mmol, 5 equiv.), K_2CO_3 (0.3 mmol), and DMSO (1 mL). The reaction mixture was stirred at 80 ^oC (or given time in respective table) for stipulated time under air. After completion (TLC monitored), it was cooled and NH_4OH (2 ml) was added. The reaction mixture was transferred to a separating funnel and partitioned between CH_2Cl_2 and H_2O. Aqueous layer was extracted with CH_2Cl_2 (3 x 30 mL), then washed with brine, dried over $MgSO_4$ and evaporated under reduced pressure. In order to get pure alkoxylated product, the resulting residue was purified by column chromatography on silica gel with a gradient eluent of hexane and ethyl acetate. For the amides **1k**, **1l**, **1o** and **1p** TBAI (1 equiv.) was added as an additive along with the reagents.

5 Typical copper mediated Csp^2-H alkoxylation reaction using alcohols.

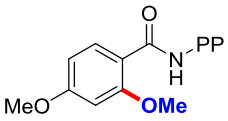
To an oven dried reaction tube (10 × 1.5 cm) was added amide **1** (0.1 mmol, 1 equiv.), $Cu(OAc)_2$ (0.1 mmol), alcohol (15 / 5 / 2 equiv.), Si_2Me_6 (1 equiv.), K_2CO_3 (0.3 mmol), and DMSO (1 mL). The reaction mixture was stirred at 80 ^oC for stipulated time under air. After completion (TLC monitored), NH_4Cl (2 ml) was added to the reaction tube and the reaction mixture was transferred to a separating funnel and partitioned between CH_2Cl_2 and H_2O. Aqueous layer was extracted with CH_2Cl_2 (3 x 30 mL), then washed with brine, dried over $MgSO_4$ and evaporated under reduced pressure. In order to get pure alkoxylated product, the resulting residue was purified by column chromatography on silica gel with a gradient eluent of hexane and ethyl acetate. For the amides **1k** and **1o**, TBAI (1 equiv.) was added as an additive along with the reagents.

Product Table

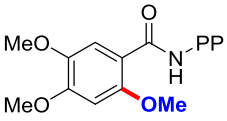
Table 2



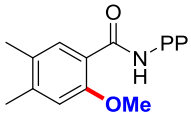
R = Me, 3aa, 87% (27 mg)
R = H, 3ba, 74% (22 mg)



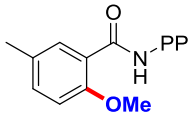
3ca, 79% (26 mg)



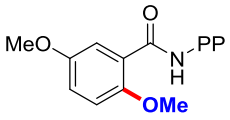
3da, 75% (27 mg)



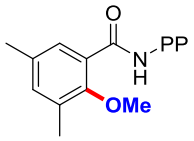
3ea, 73% (23 mg)



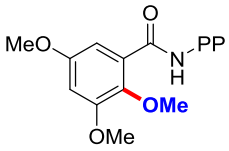
3fa, 66% (20 mg)



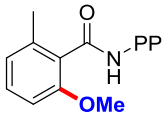
3ga, 73% (24 mg)



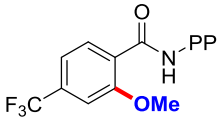
3ha, 74% (24 mg)



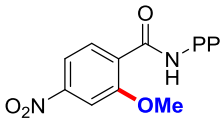
3ia, 63% (22 mg)



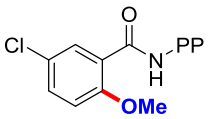
3ja, 57% (18 mg)



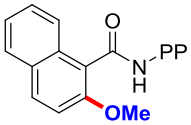
3ka, 59% (21 mg)



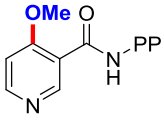
3la, 50% (17 mg)



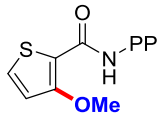
3ma, 52% (17 mg)



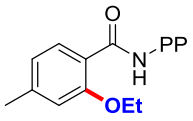
3na, 70% (24 mg)



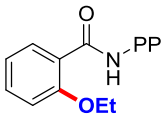
3oa, 67% (20 mg)



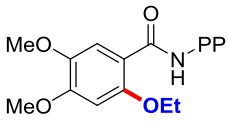
3pa, 50% (15 mg)



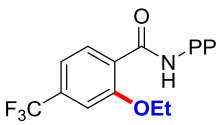
3ab, 78% (25 mg)
73% (23 mg)



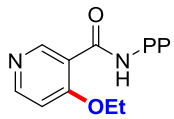
3bb, 80% (25 mg)



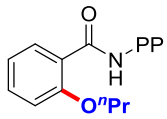
3db, 71% (26 mg)



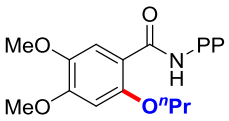
3kb, 68% (26 mg)



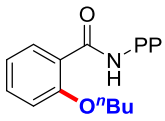
3ob, 76% (23 mg)



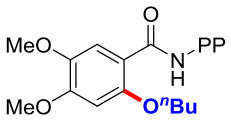
3bc, 66% (21 mg)



3dc, 72% (28 mg)

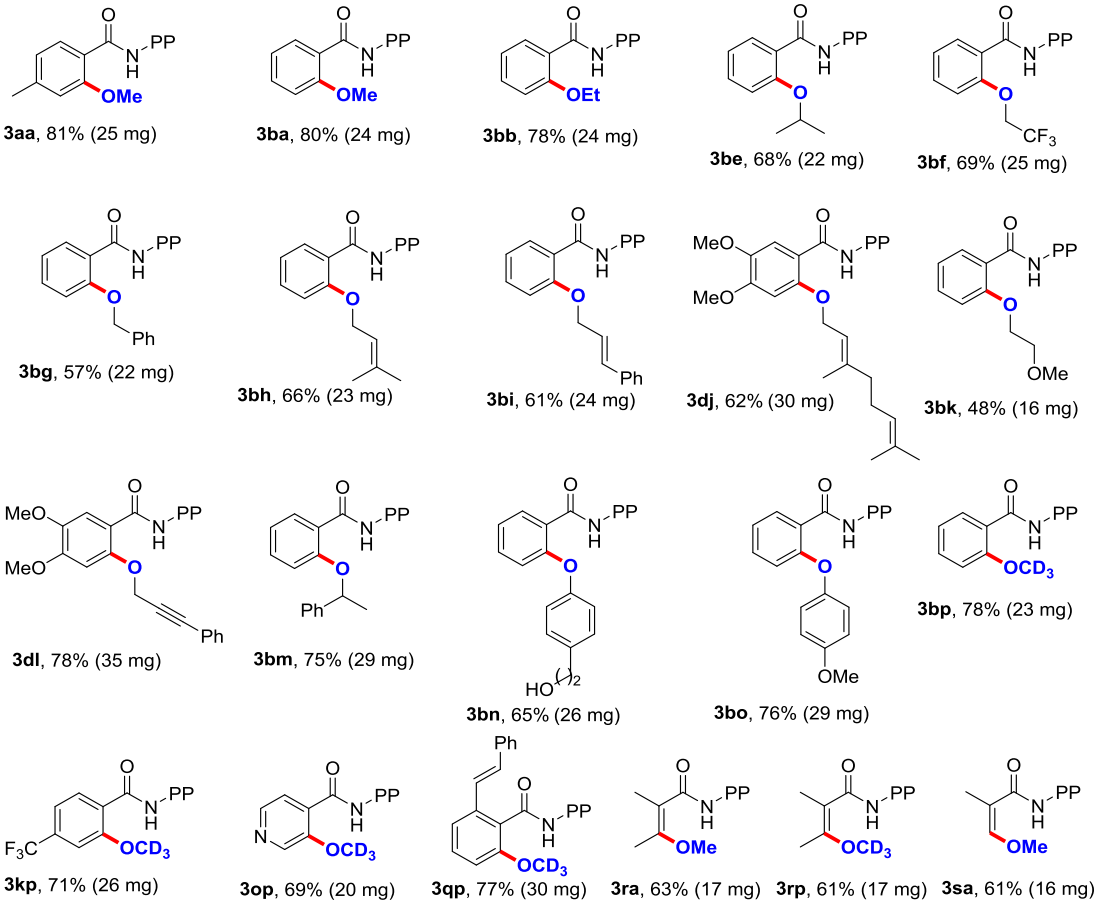


3bd, 64% (22 mg)

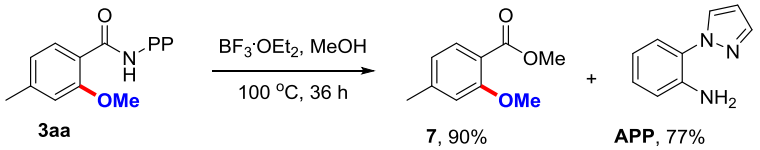


3dd, 84% (33 mg)

Table 3



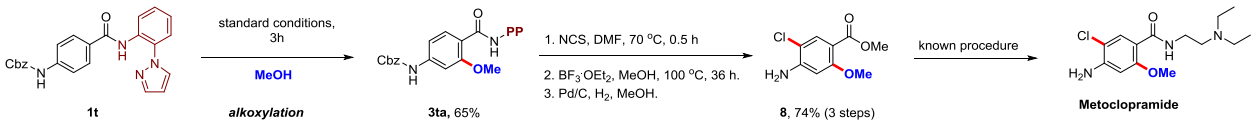
6. General procedure for the removal of the directing group[3]



To a 10 mL pressure tube equipped with a stir bar was added **3aa** (62 mg, 0.2 mmol, 1 equiv.). Then, $BF_3{\cdot}Et_2O$ (0.18 mL, 6 equiv.) and dry methanol (3.5 mL) was added drop wise to the stirred solution in this sequence. The resulting mixture was stirred at 100 °C for 36 h. After cooling to rt, Et_3N (0.32 mL, 10 equiv.) was added drop wise to the reaction mixture with stirring. After removal of the volatile components, the crude reaction mixture was directly loaded onto silica gel column and purification with gradient eluent of hexane and

ethyl acetate (9:1) mixture to give the pure product **7** as colorless oil (32 mg, 90% yield) and 2-APP directing group in 77% yield (25 mg).

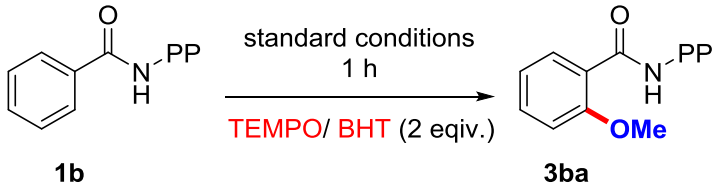
7. Formal Synthesis of Metoclopramide



The standardized methoxylation condition for the amide **1t** (4.0 mmol) delivered the methoxylated product **3ta** in 65% yield (1.17 g). Electrophilic chlorination of **3ta** (0.25 mmol) using *N*-chlorosuccinimide[4] was carried out at 70 °C in DMF solvent for 30 minutes. The crude chlorinated product was sequentially subjected to the general procedure for the removal of the 2-APP directing group and the Pd/C hydrogenative removal of the Cbz protection[5] to give the metoclopramide precursor **8** in 74% yield (40.0 mg). Synthesis of metoclopramide was previously reported with compound **8** [(a). S. Kato, T. Morie, T. Kon, N. Yoshida, T. Karasawa and J. Matsumoto, *J. Med. Chem.,* 1991, **34**, 616. (b). C. G. Jørgensen, B. Frølund, J. Kehler, A. A. Jensen, *ChemMedChem* 2011, **6**, 725].

8. Control Experiments

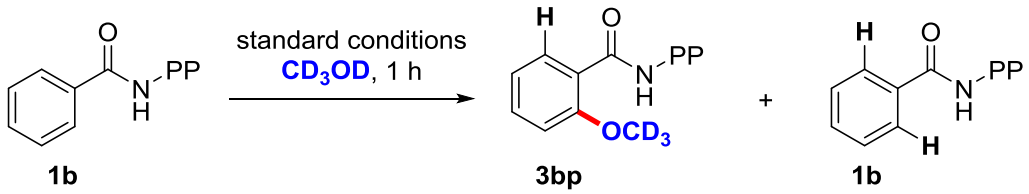
8.1 Reactions with radical scavengers



	$PhSi(OMe)_3$	MeOH
TEMPO	trace	0%
BHT	trace	0%

In order to probe the reaction mechanism, we have performed methoxylation reaction in presence of radical scavenger under our stander reaction condition for 1 h. When stoichiometric amount of radical scavengers TEMPO or BHT used, trace amount of methoxylated product was observed when phenyltrimethoxy silane is used as methoxy source where as in the case of methanol reaction was completely arrested.

8.2 Reactions with methanol-d_4

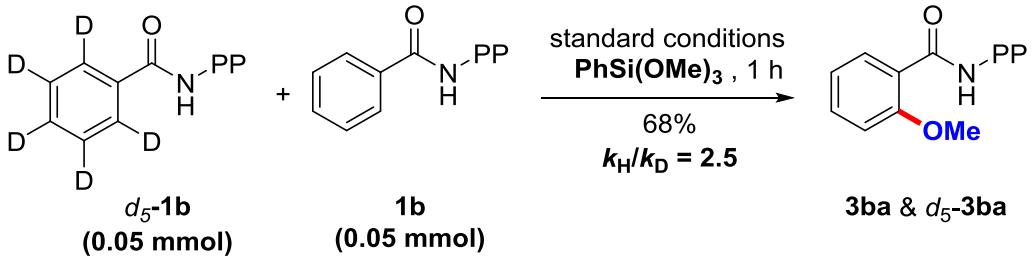


1b **3bp** **1b**

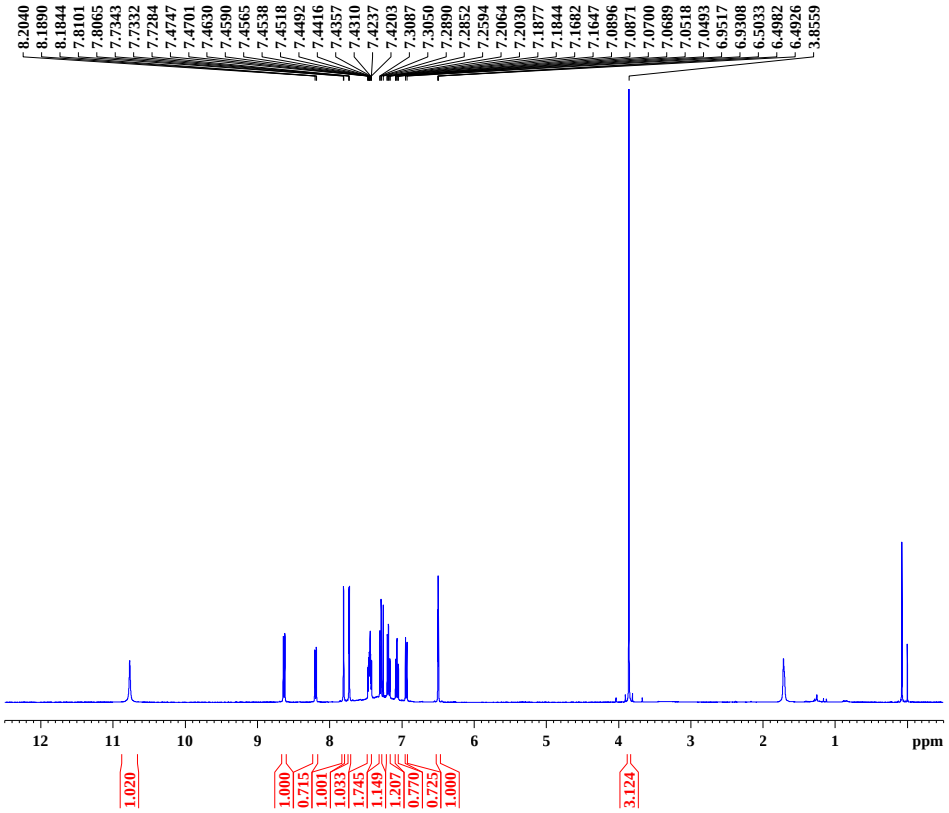
To investigate the reversibility of the copper mediated C-H bond cleavage, the methoxylation reaction was performed with methanol-d_4 under standard reaction condition for 1 h. From ^{1}H-NMR spectrum, confirm no deuterium incorporation was detected in the product as well in recovered starting material.

8.3 Intermolecular Kinetic Isotope Effect Experiments:

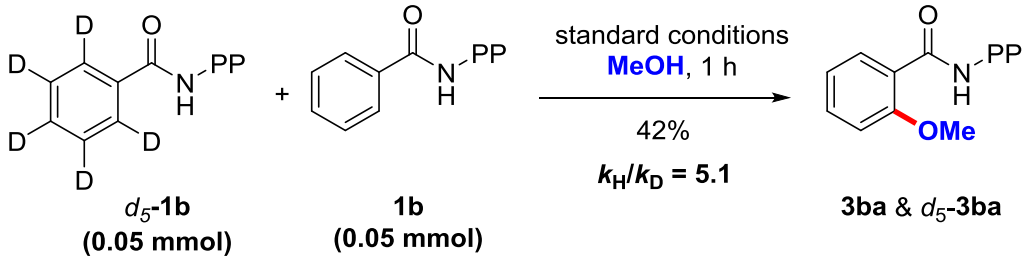
To demonstrate the intermolecular kinetic isotope effect (KIE), a 1 : 1 mixture of **1b** and the pentadueuterated substrate ***d*$_5$-1b** was subjected to the standard reaction condition for 1 h and the products were isolated by column chromatography (silica gel, 15 % EtOAc : Hexane). From the ^{1}H NMR, analysis of the H/D ratio on the phenyl ring revels that, intermolecular KIE of k_H/k_D nearly 2.5 with phenyltrimethoxysilane as nucleophile (68% conversion) and k_H/k_D is nearly 5.1 when methanol is used as nucleophile (42% conversion).

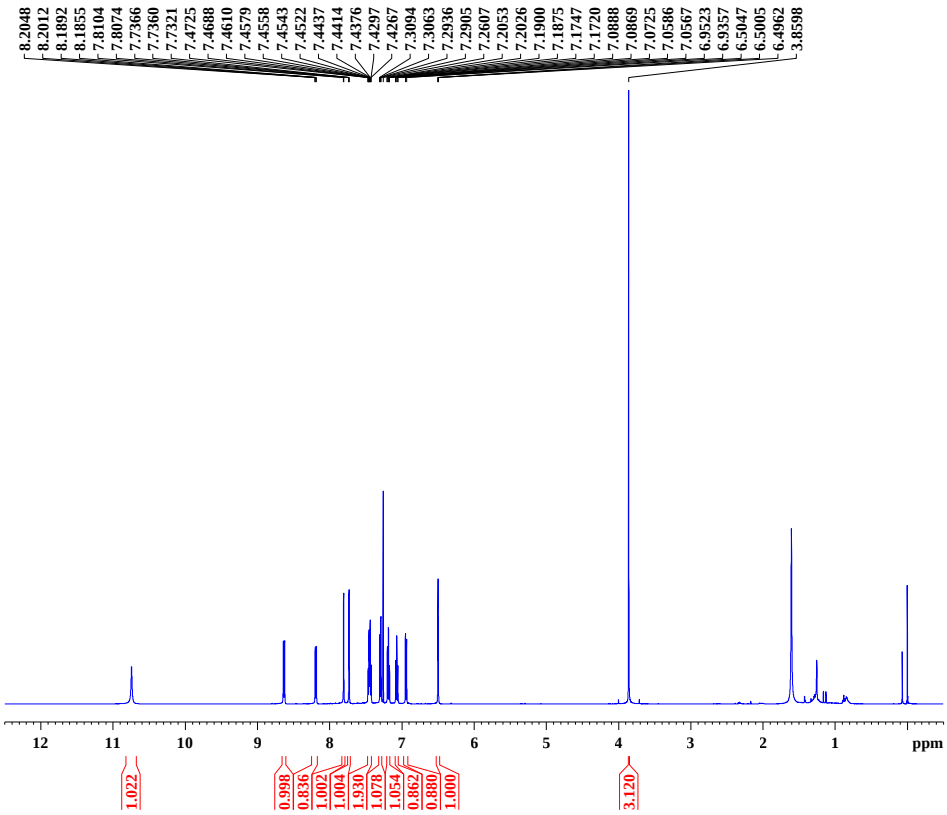


d_5-**1b** (0.05 mmol) + **1b** (0.05 mmol) → **3ba** & d_5-**3ba**



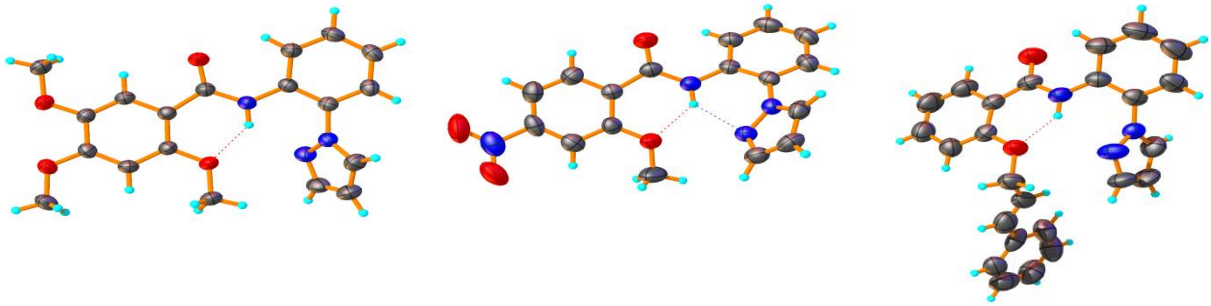

```
Current Data Parameters
NAME                  JSK-KIE
EXPNO                     199
PROCNO                      1

F2 - Acquisition Parameters
Date_               20151120
Time                    0.41
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     65536
SOLVENT                CDCl3
NS                        16
DS                         2
SWH                 8012.820 Hz
FIDRES              0.122266 Hz
AQ                  4.0894465 sec
RG                     153.13
DW                     62.400 usec
DE                      6.50 usec
TE                     292.1 K
D1                0.50000000 sec
TD0                        1

======== CHANNEL f1 ========
NUC1                       1H
P1                     15.70 usec
PLW1              7.75000000 W
SFO1            400.1320007 MHz

F2 - Processing parameters
SI                         65536
SF              400.1300097 MHz
WDW                        EM
SSB          0
LB                      0.30 Hz
GB           0
PC                      1.00
```






```
Current Data Parameters
NAME                  JSK-KIE
EXPNO                      92
PROCNO                      1

F2 - Acquisition Parameters
Date_               20151123
Time                   16.27
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG                 zg30
TD                     32768
SOLVENT                CDCl3
NS                        32
DS                         2
SWH                10000.000 Hz
FIDRES             0.305176 Hz
AQ                 1.6384000 sec
RG                    162.95
DW                    50.000 usec
DE                     6.50 usec
TE                    299.5 K
D1                 0.50000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1             500.1525008 MHz
NUC1                       1H
P1                     11.75 usec
PLW1            15.30000019 W

F2 - Processing parameters
SI                         65536
SF               500.1500223 MHz
WDW                        EM
SSB          0
LB                      0.30 Hz
GB           0
PC                      1.00
```

ORTEP diagram



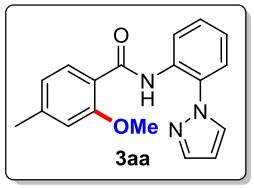
3da (CCDC 1479824)

3la (CCDC 1479825)

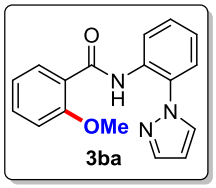
3bi (CCDC 1479826)

9. Spectroscopic data

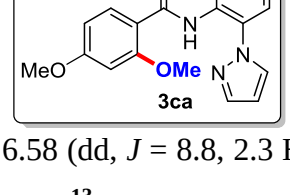
2-Methoxy-4-methyl-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3aa): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.66 (s, 1H), 8.62 (dd, *J* = 8.3, 1.2 Hz, 1H), 8.08 (d, *J* = 7.8 Hz, 1H), 7.806-7.801 (m, 1H), 7.72-7.71 (m, 1H), 7.45-7.41 (m, 1H), 7.30-7.27 (m, 1H), 7.19-7.15 (m, 1H), 6.88-6.86 (m, 1H), 6.73 (s, 1H), 6.49-6.48 (m, 1H), 3.83 (s, 3H), 2.38 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 163.88, 144.18, 140.92, 133.43, 132.42, 130.84, 130.51, 128.78, 125.12, 123.89, 123.82, 122.01, 111.95, 106.93, 55.60, 21.74. **HRMS-ESI**: Calcd. for $C_{18}H_{17}N_3O_2Na$ $[M+Na]^+$ 330.1218, found 330.1243.



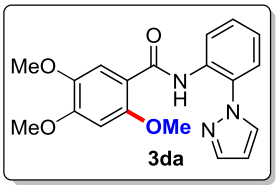
2-Methoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3ba): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.74 (s, 1H), 8.63 (dd, *J* = 8.3, 1.2 Hz, 1H), 8.19 (dd, *J* = 7.79, 1.85 Hz, 1H), 7.80-7.79 (m, 1H), 7.73-7.72 (m, 1H), 7.46-7.41 (m, 2H), 7.30-7.27 (m, 1H), 7.19-7.15 (m, 1H), 7.08-7.04 (m, 1H), 6.94-6.92 (m, 1H), 6.49-6.48 (m, 1H), 3.84 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 163.85, 157.39, 140.97, 133.23, 132.44, 130.83, 130.55, 128.79, 125.04, 124.07, 123.85, 121.97, 121.16, 111.21, 106.99, 55.68. **HRMS-ESI**:Calcd. For $C_{17}H_{16}N_3O_2[M+H]^+$294.1237, found 294.1237.



2,4-Dimethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3ba): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.59 (s, 1H), 8.61 (dd, *J* = 8.37, 1.24 Hz, 1H), 8.17 (d, *J* = 8.7 Hz, 1H), 7.806-7.802 (m, 1H), 7.719-7.714 (m, 1H), 7.44-7.40 (m, 1H), 7.28 (dd, *J* = 7.8, 1.6 Hz, 1H), 7.18-7.14 (m, 1H), 6.58 (dd, *J* = 8.8, 2.3 Hz, 1H), 6.49-6.48 (m, 1H), 6.43 (d, *J* = 2.3 Hz, 1H), 3.84 (s, 3H), 3.82 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 163.85, 163.61, 158.82, 140.91, 134.19, 133.47, 130.88, 130.53, 128.80, 125.17, 123.84, 114.79, 106.95, 105.37, 98.33, 55.68, 55.55.

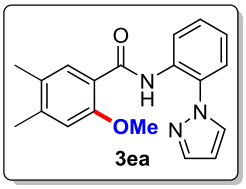


2,4,5-Trimethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3ba): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.66 (s, 1H), 8.61 (dd, *J* = 8.3, 1.2 Hz, 1H), 7.82-7.81 (m, 1H), 7.75 (s, 1H), 7.72 (dd, *J* = 2.4, 0.49 Hz, 1H), 7.46-7.41 (m, 1H), 7.29 (dd, *J* = 7.9, 1.5 Hz, 1H), 7.17 (td, *J* = 7.7, 1.4 Hz, 1H), 6.51-



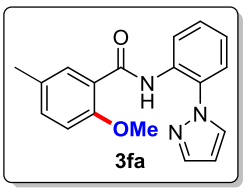
6.49 (m, 1H), 6.48 (s, 1H), 3.93 (s, 3H), 3.90 (s, 3H), 3.84 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 163.56, 152.91, 152.77, 143.30, 140.93, 133.52, 130.89, 130.56, 128.83, 125.29, 123.89, 123.81, 114.19, 113.22, 106.96, 96.29, 56.35, 56.31, 56.15.

2-Methoxy-4,5-dimethyl-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3ea): colorless semi-solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.62 (s, 1H), 8.63–8.60 (m, 1H), 7.94 (s, 1H), 7.80-7.79 (m, 1H), 7.717-7.710 (m, 1H), 7.45-7.41 (m, 1H), 7.29 (dd, *J* = 7.9, 1.5 Hz, 1H), 7.19-7.14 (m, 1H), 6.70 (s, 1H), 6.49-6.48 (m, 1H), 3.80 (s, 3H), 2.28 (s, 3H), 2.23 (s, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 164.08, 155.46, 142.63, 140.96, 133.51, 133.14, 130.91, 130.59, 129.24, 128.88, 125.28, 123.91, 123.82, 118.94, 112.68, 106.98, 55.73, 20.32, 18.70.



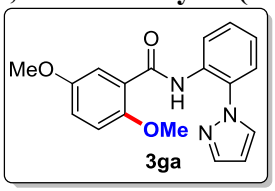
3ea

2-Methoxy-5-methyl-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3fa): colorless semi-solid, **^{1}H-NMR** (500 MHz, $CDCl_3$): δ 10.70 (s, 1H), 8.63–8.61 (m, 1H), 7.99 (s, 1H), 7.804-7.801 (m, 1H), 7.724-7.720 (m, 1H), 7.45-7.42 (m, 1H), 7.30-7.28 (m, 1H), 7.25-7.23 (m, 1H), 7.19-7.16 (m, 1H), 6.83-6.82 (m, 1H), 6.496-6.493 (m, 1H), 3.81 (s, 3H), 2.32 (s, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 164.03, 155.40, 140.99, 134.15, 133.71, 133.36, 132.69, 130.87, 130.59, 130.52, 128.85, 127.76, 125.17, 124.03, 123.83, 121.50, 111.22, 106.98, 55.77, 20.36.



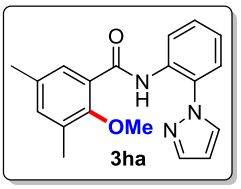
3fa

2,5-Dimethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3ga): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.71 (s, 1H), 8.54 (dd, *J* = 8.3, 1.1 Hz, 1H), 7.74 (d, *J* = 1.6 Hz, 1H), 7.68 (d, *J* = 3.2 Hz, 1H), 7.66 (d, *J* = 2.0 Hz, 1H), 7.39-7.35 (m, 1H), 7.23 (dd, *J* = 7.7, 1.5 Hz, 1H), 7.12 (td, *J* = 7.7, 1.3 Hz, 1H), 6.94 (dd, *J* = 9.0, 3.2 Hz, 1H), 6.80 (d, *J* = 9.0 Hz, 1H), 6.43 (t, *J* = 2.0 Hz, 1H), 3.74 (s, 3H), 3.73 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 163.61, 153.77, 151.74, 140.94, 133.25, 130.91, 130.63, 128.87, 125.21, 124.19, 123.89, 119.97, 115.71, 112.73, 107.03, 56.20, 55.86.

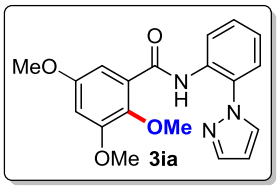


3ga

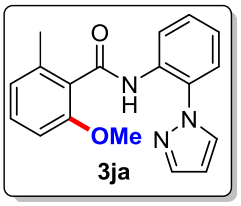
2-Methoxy-3,5-dimethyl-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3ha): colorless semi solid, **^{1}H-NMR** (500 MHz, $CDCl_3$): δ 10.85 (s, 1H), 8.69 (d, *J* = 8.3 Hz, 1H), 7.81 (s, 1H), 7.724-7.720 (m, 1H), 7.67 (s, 1H), 7.46-7.43 (m, 1H), 7.31-7.30 (m, 1H), 7.20-7.17 (m, 1H), 7.11 (s, 1H), 6.50-6.49 (m, 1H), 3.51 (s, 3H), 2.30 (s, 3H), 2.26 (s, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 164.63, 154.51, 141.42, 135.56, 133.82, 133.29, 131.40, 130.44, 129.59, 128.75, 124.78, 124.05, 123.47, 107.15, 61.25, 20.66, 15.88.



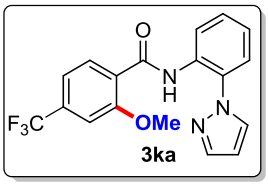
2,3,5-Trimethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3ia): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.94 (s, 1H), 8.67–8.65 (m, 1H), 7.85-7.84 (m, 1H), 7.72-7.71 (m, 1H), 7.47-7.42 (m, 1H), 7.32-7.29 (m, 1H), 7.22-7.18 (m, 2H), 6.62-6.61 (m, 1H), 6.51-6.50 (m, 1H), 3.85 (s, 3H), 3.82 (s, 3H), 3.65 (s, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 163.80, 155.94, 153.48, 142.08, 141.54, 133.24, 130.65, 130.53, 128.77, 126.89, 125.16, 124.25, 123.67, 107.26, 104.55, 104.13, 61.47, 56.08, 55.73.



2-Methoxy-6-methyl-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3ja): colorless semi-solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.11 (s, 1H), 8.63-8.61 (m, 1H), 7.80-7.79 (m, 1H), 7.67-7.66 (m, 1H), 7.45-7.40 (m, 1H), 7.34-7.32 (m, 1H), 7.23-7.18 (m, 2H), 6.82-6.80 (m, 1H), 6.75-6.72 (m, 1H), 6.47-6.45 (m, 1H), 3.66 (s, 3H), 2.32 (s, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 166.24, 156.24, 141.09, 137.49, 131.97, 130.33, 130.11, 129.74, 128.29, 126.57, 124.28, 123.64, 123.10, 122.89, 108.37, 106.98, 55.66, 19.33.

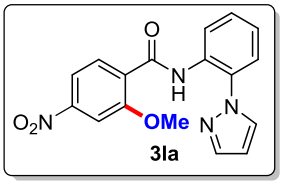


2-Methoxy-4-trifluoromethyl-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)-benzamide (3ka): colorless semi-solid, **^{1}H-NMR** (500 MHz, $CDCl_3$): δ 10.87 (s, 1H), 8.63 (dd, *J* = 8.3, 1.2 Hz, 1H), 8.28-8.26 (m, 1H), 7.81-7.80 (m, 1H), 7.76-7.75 (m, 1H), 7.46-7.43 (m, 1H), 7.34-7.30 (m, 2H), 7.22-7.19 (m, 1H), 7.16 (s, 1H), 6.51-6.50 (m, 1H), 3.93 (s, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 162.60, 157.30, 141.07,

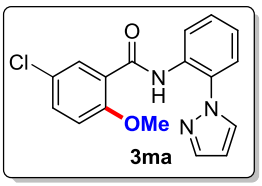


134.67 (q, $J_{C\text{-}F}$ 32.5 Hz), 133.17, 132.62, 130.77, 130.48, 128.75, 125.41, 124.69, 124.57, 123.88, 123.48 (q, $J_{C\text{-}F}$ 272.9 Hz), 117.84 (q, $J_{C\text{-}F}$ 3.6 Hz), 108.34 (q, $J_{C\text{-}F}$ 3.7 Hz), 107.18, 56.12. **HRMS-ESI**: Calcd. for $C_{18}H_{14}F_3N_3O_2Na$ $[M+Na]^+$ 384.0936, found 384.0953.

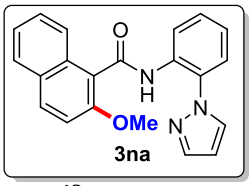
2-Methoxy-4-nitro-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)-benzamide (3la): yellow solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.97 (s, 1H), 8.62 (dd, *J* = 8.3, 1.2 Hz, 1H), 8.32 (d, *J* = 8.65 Hz, 1H), 7.91 (dd, *J* = 8.6, 2.1 Hz, 1H), 7.82-7.80 (m, 2H), 7.78-7.77 (m, 1H), 7.47-7.43 (m, 1H), 7.33-7.31 (m, 1H), 7.25-7.21 (m, 1H), 6.53-6.52 (m, 1H), 3.99 (s, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 161.88, 157.47, 150.53, 141.12, 133.50, 132.23, 130.74, 130.40, 128.72, 127.91, 124.80, 124.48, 123.87, 115.89, 107.28, 106.64, 56.55. **HRMS-ESI**: Calcd. for $C_{17}H_{14}N_4O_4Na$ $[M+Na]^+$ 384.0936, found 384.0911.



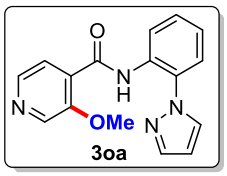
2-Methoxy-5-chloro-*N*-(2-(1*H*-pyrazol-1-yl)phenyl) benzamide (3ma): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.78 (s, 1H), 8.60 (dd, *J* = 8.3, 1.0 Hz, 1H), 8.15 (d, *J* = 2.7 Hz, 1H), 7.80 (d, *J* = 1.6 Hz, 1H), 7.74 (d, *J* = 2.3 Hz, 1H), 7.46-7.42 (m, 1H), 7.38 (dd, *J* = 8.8, 2.7 Hz, 1H), 7.30 (dd, *J* = 7.9, 1.5 Hz, 1H), 7.20 (td, *J* = 7.6, 1.3 Hz, 1H), 6.88 (d, *J* = 8.8 Hz, 1H), 6.51-6.49 (m, 1H), 3.85 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 162.50, 155.89, 141.00, 132.82, 132.75, 132.09, 130.79, 130.53, 128.77, 126.54, 124.88, 124.36, 123.87, 123.44, 112.74, 107.08, 56.10. **HRMS-ESI**: Calcd. for $C_{17}H_{14}ClN_3O_2Na$ $[M+Na]^+$ 350.0672, found 350.0655.



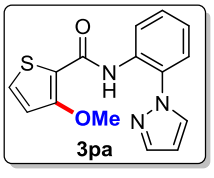
2-Methoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)-1-naphthamide (3na): colorless solid, **^{1}H-NMR** (500 MHz, $CDCl_3$): δ 10.39 (s, 1H), 8.80 (d, *J* = 8.3 Hz, 1H), 8.02-8.00 (m, 1H), 7.89-7.87 (m, 1H), 7.80-7.77 (m, 2H), 7.56 (s, 1H), 7.48-7.43 (m, 2H), 7.36-7.33 (m, 2H), 7.26-7.20 (m, 2H), 6.43-6.42 (m, 1H), 3.79 (s, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 165.68, 153.83, 132.19, 131.66, 130.26, 129.67, 128.86, 128.33, 127.97, 127.58, 124.39, 124.27, 124.13, 123.13, 123.51, 123.12, 120.42, 112.88, 106.96, 56.51. **HRMS-ESI**:Calcd. for$C_{21}H_{18}N_3O_2$$[M+H]^+$344.1394, found 344.1397.



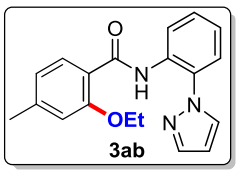
3-Methoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)pyridine-4-carboxamide (3oa): colorless semi-solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.73 (s, 1H), 8.60 (dd, *J* = 8.3, 1.2 Hz, 1H), 8.13 (d, *J* = 8.5 Hz, 1H), 7.80 (d, *J* = 1.5 Hz, 1H), 7.74-7.73 (m, 1H), 7.46-7.42 (m, 1H), 7.31-7.28 (m, 1H), 7.21-7.17 (m, 1H), 7.05 (dd, *J* = 8.5, 1.9 Hz, 1H), 6.94 (d, *J* = 1.9 Hz, 1H), 6.51-6.50 (m, 1H), 3.87 (s, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 162.92, 157.74, 141.00, 138.96, 133.61, 130.82, 130.51, 128.79, 124.88, 124.29, 123.90, 121.50, 120.66, 111.97, 107.00, 56.09. **HRMS-ESI**: Calcd. for $C_{16}H_{14}N_4O_2$ $[M+H]^+$ 317.1006, found 317.1014.



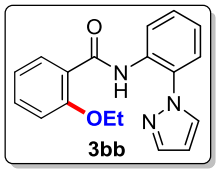
3-Methoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)thiophene-2-carboxamide (3pa): colorless semi-solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.11 (s, 1H), 8.58 (dd, *J* = 8.3, 1.2 Hz, 1H), 7.82 (d, *J* = 1.7 Hz, 1H), 7.72 (d, *J* = 2.3 Hz, 1H), 7.43-7.38 (m, 2H), 7.29-7.26 (m, 1H), 7.15 (td, *J* = 7.6, 1.3 Hz, 1H), 6.81 (d, *J* = 5.5 Hz, 1H), 6.51-6.50 (m, 1H), 3.90 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 160.15, 156.79, 140.90, 133.14, 130.80, 130.13, 128.86, 125.10, 123.82, 123.31, 117.07, 115.44, 107.00, 58.77. **HRMS-ESI**: Calcd. for $C_{15}H_{14}N_3O_2S$ $[M+H]^+$ 300.0807, found 300.0795.



2-Ethoxy-4-methyl-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3ab): colorless semi-solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.56 (s, 1H), 8.50 (dd, *J* = 8.3, 1.2 Hz, 1H), 8.04 (d, *J* = 8.0 Hz, 1H), 7.74-7.71 (m, 2H), 7.44-7.40 (m, 1H), 7.31 (dd, *J* = 8.0, 1.5 Hz, 1H), 7.20-7.16 (m, 1H), 6.88-6.84 (m, 1H), 6.74 (s, 1H), 6.45-6.44 (m, 1H), 4.15 (q, *J* = 7.0 Hz, 2H), 2.36 (s, 3H), 1.33 (t, *J* = 7.0 Hz, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 164.25, 156.60, 143.98, 140.88, 132.68, 132.35, 131.06, 130.61, 128.45, 124.84, 124.66, 124.29, 121.89, 119.71, 113.11, 107.02, 64.48, 21.78, 14.30. **HRMS-ESI**:Calcd. for$C_{19}H_{20}N_3O_2$$[M+H]^+$322.1550, found 322.1549.

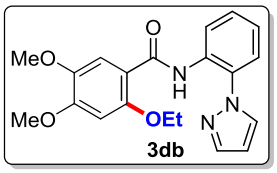


2-Ethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bb): colorless semi-solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.67 (s, 1H), 8.51 (dd, *J* = 8.3, 0.9 Hz, 1H), 8.14 (dd, *J* = 7.8, 1.8 Hz, 1H), 7.75-7.73 (m, 2H), 7.45-7.40 (m, 2H), 7.33 (dd, *J* = 8.0, 1.5 Hz, 1H), 7.22-7.18 (m, 1H), 7.06-7.02 (m, 1H), 6.95-6.93 (m,

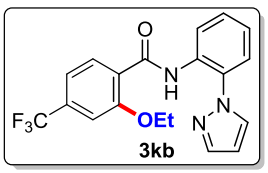


1H), 6.47-6.46 (m, 1H), 4.17 (q, *J* = 7.0 Hz, 2H), 1.35 (t, *J* = 7.0 Hz, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 164.25, 156.63, 140.84, 133.10, 132.54, 132.36, 130.96, 130.67, 128.53, 124.76, 124.66, 124.48, 122.46, 120.98, 112.37, 107.11, 64.56, 14.30.

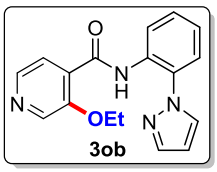
2-Ethoxy-3,4-dimethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bb): colorless semi-solid, **^{1}H-NMR** (500 MHz, $CDCl_3$): δ 10.57 (s, 1H), 8.46–8.44 (m, 1H), 7.766-7.762 (m, 1H), 7.72-7.71 (m, 2H), 7.44-7.41 (m, 1H), 7.33-7.31 (m, 1H), 7.25-7.18 (m, 1H), 6.49, (s, 1H), 6.47-6.46 (m, 1H), 4.14 (q, *J* = 7.0 Hz, 2H), 3.91 (s, 3H), 3.88 (s, 3H), 1.32 (t, *J* = 7.0 Hz, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 163.92, 152.81, 151.92, 143.42, 140.86, 132.81, 131.12, 130.74, 128.57, 125.09, 124.75, 124.38, 114.04, 113.95, 107.08, 97.94, 65.78, 56.29, 56.14, 14.45. **HRMS-ESI**:Calcd. for $C_{20}H_{22}N_3O_4[M+H]^+$388.1605, found 368.1641.



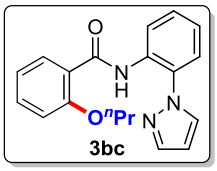
2-Ethoxy-4trifluoromethyl-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3kb): colorless semi-solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.81 (s, 1H), 8.54 (dd, *J* = 8.3, 1.2 Hz, 1H), 8.20 (d, *J* = 8.0 Hz, 1H), 7.76-7.74 (m, 2H), 7.46-7.42 (m, 1H), 7.33 (dd, *J* = 8.0, 1.5 Hz, 1H), 7.31-7.29 (m, 1H), 7.25-7.20 (m, 1H), 7.17 (s, 1H), 6.48-6.47 (m, 1H), 4.23 (q, *J* = 7.0 Hz, 2H), 1.40 (t, *J* = 7.0 Hz, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 163.06, 156.55, 141.02, 134.46 (q, J_{C-F} 31.4 Hz), 132.99, 132.00, 130.72, 130.49, 128.44, 126.07, 124.78, 124.49, 124.28, 123.51 (q, J_{C-F} 274 Hz), 117.65 (q, J_{C-F} 4.1 Hz), 109.35 (q, J_{C-F} 4.0 Hz), 107.26, 65.17, 14.18.



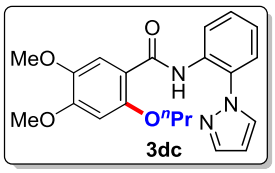
3-Ethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)pyridine-4-carboxamide (3ob): colorless semi-solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.66 (s, 1H), 8.50 (dd, *J* = 8.2, 1.1 Hz, 1H), 8.06 (d, *J* = 8.4 Hz, 1H), 7.74-7.73 (m, 2H), 7.45-7.40 (m, 1H), 7.32 (dd, *J* = 8.0, 1.5 Hz, 1H), 7.22-7.18 (m, 1H), 7.03 (d, *J* = 8.4, 1.9 Hz, 1H), 6.94 (d, *J* = 1.9 Hz, 1H), 6.47-6.46 (m, 1H), 4.17 (q, *J* = 7.0 Hz, 2H), 1.38 (t, *J* = 7.0 Hz, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 163.30, 157.00, 140.93, 138.70, 133.46, 132.25, 130.87, 130.53, 128.42, 124.59, 124.56, 124.49, 121.28, 112.93, 107.14, 65.07, 14.15.



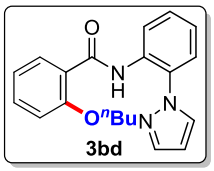
2-Propoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bc): colorless semi-solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.63 (s, 1H), 8.52–8.50 (m, 1H), 8.13-8.11 (m, 1H), 7.73-7.72 (m, 2H), 7.45-7.40 (m, 2H), 7.33-7.31 (m, 1H), 7.22-7.18 (m, 1H), 7.06-7.02 (m, 1H), 6.96-6.94 (m, 1H), 6.46-6.45 (m, 1H), 4.05-4.01 (m, 2H), 1.78-1.69 (m, 2H), 0.94-0.91 (m, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 164.30, 156.81, 140.91, 132.99, 132.45, 132.28, 131.01, 130.52, 128.41, 124.64, 124.43, 122.68, 120.99, 112.54, 107.03, 70.60, 21.84, 10.22. **HRMS-ESI**: Calcd. for $C_{19}H_{20}N_3O_2$ $[M+H]^+$ 322.1556, found 322.1573.



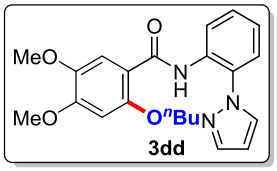
2-Propoxy-4,5-dimethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3dc): colorless semi-solid, **^{1}H-NMR** (500 MHz, $CDCl_3$): δ 10.56 (s, 1H), 8.45 (dd, *J* = 8.3, 1.1 Hz, 1H), 7.74 (d, *J* = 1.6 Hz, 1H), 7.72 (d, *J* = 2.2 Hz, 1H), 7.70 (s, 1H), 7.44-7.41 (m, 1H), 7.33-7.32 (m, 1H), 7.21-7.18 (m, 1H), 6.5 (s, 1H), 6.46-6.45 (m, 1H), 4.01-3.99 (m, 2H), 3.92 (s, 3H), 3.89 (s, 3H), 1.75-1.67 (m, 2H), 0.93-0.90 (m, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 163.96, 152.79, 152.16, 143.42, 140.93, 132.67, 131.20, 130.61, 128.44, 124.98, 124.78, 124.38, 114.08, 113.94, 107.04, 98.04, 71.84, 56.29, 56.13, 22.02, 10.27.



2-Butoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bd): colorless semi-solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.63 (s, 1H), 8.52–8.50 (m, 1H), 8.13-8.11 (m, 1H), 7.74-7.72 (m, 2H), 7.45-7.40 (m, 2H), 7.34-7.32 (m, 1H), 7.22-7.18 (m, 1H), 7.06-7.02 (m, 1H), 6.96-6.94 (m, 1H), 6.46-6.45 (m, 1H), 4.09-4.05 (m, 2H), 1.72-1.65 (m, 2H), 1.41-1.31 (m, 2H), 0.92-0.89 (m, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 164.31, 156.80, 140.92, 132.99, 132.42, 132.29, 131.00, 130.49, 128.38, 124.63, 124.42, 122.68, 120.96, 112.50, 107.04, 68.85, 30.43, 19.00, 13.76.

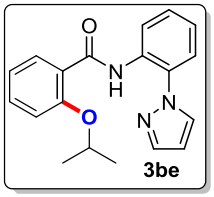


2-Butoxy-4,5-dimethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bd): colorless semi-solid, **^{1}H-NMR** (500 MHz, $CDCl_3$): δ 10.55 (s, 1H), 8.46–8.45 (m, 1H), 7.75-7.72 (m, 2H), 7.70 (s, 1H), 7.44-7.41 (m, 1H), 7.34-7.32 (m, 1H), 7.21-7.18 (m, 1H), 6.50 (s, 1H), 6.46-6.45 (m, 1H), 4.05-4.02 (m, 2H), 3.92 (s, 3H), 3.89 (s, 3H), 1.68-1.62 (m, 2H), 1.39-1.31 (m, 2H), 0.92-0.89 (m, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 163.98, 152.78, 152.15, 143.39, 140.94, 132.62,

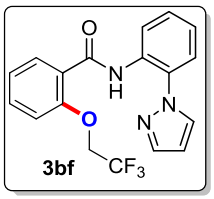


131.19, 130.59, 128.41, 124.97, 124.78, 124.39, 114.05, 113.96, 107.06, 97.97, 70.03, 56.29, 56.13, 30.60, 19.01, 13.80. **HRMS-ESI**: Calcd. for $C_{22}H_{26}N_3O_4$ $[M+H]^+$ 396.1923, found 396.1943.

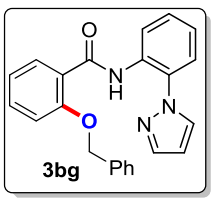
2-Isopropoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3be): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.48 (s, 1H), 8.43 (dd, J = 8.2, 1.0 Hz, 1H), 8.13 (dd, J = 7.8, 1.8 Hz, 1H), 7.74-7.72 (m, 2H), 7.45-7.39 (m, 2H), 7.35 (dd, J = 7.9, 1.5 Hz, 1H), 7.24-7.19 (m, 1H), 7.06-7.02 (m, 1H), 6.96-6.94 (m, 1H), 6.45-6.44 (m, 1H), 4.62 (q, J = 6.1 Hz, 1H), 1.31 (d, J = 6.1 Hz, 6H) **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 164.49, 156.03, 141.13, 132.95, 132.38, 132.10, 131.40, 130.52, 128.27, 125.08, 124.76, 124.67, 123.34, 120.97, 114.12, 107.14, 72.35, 21.79. **HRMS-ESI**:Calcd. for $C_{19}H_{20}N_3O_2[M+H]^+$322.1550, found 322.1551.



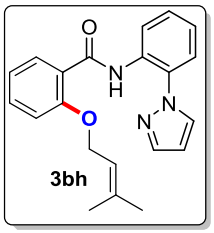
2-(2,2,2-Trifluoroethoxy)-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bf): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.64 (s, 1H), 8.57 (d, J = 8.1 Hz, 1H), 7.98 (dd, J = 7.7, 1.7 Hz, 1H), 7.78-7.72 (m, 1H), 7.48-7.41 (m, 2H), 7.33 (dd, J = 7.9, 1.5 Hz, 1H), 7.23-7.15 (m, 2H), 7.02 (d, J = 8.3 Hz, 1H), 6.47-6.46 (m, 1H), 4.46 (q, J_{H-F} = 8.2 Hz, 2H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 163.74, 155.23, 140.97, 132.82, 132.05, 131.89, 130.42, 130.31, 128.34, 125.37, 124.57, 124.08, 123.78, 123.49, 123.07 (q, J_{C-F} = 279.9 Hz), 114.69, 107.12, 67.37 (q, J_{C-F} = 36 Hz). **HRMS-ESI**:Calcd. for $C_{18}H_{15}F_3N_3O_2[M+H]^+$ 361.0913, found 361.0923.



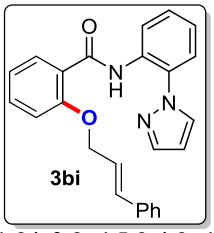
2-benzyloxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bg): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.84 (s, 1H), 8.62 (dd, J = 8.3, 1.0 Hz, 1H), 8.16 (dd, J = 7.8, 1.8 Hz, 1H), 7.67 (d, J = 2.3 Hz, 1H), 7.57 (d, J =1.8 Hz, 1H), 7.46-7.42 (m, 1H), 7.34-7.27 (m, 7H), 7.21-7.17 (m, 1H), 7.05-7.01 (m, 1H), 6.86-6.83 (m, 1H), 6.36-6.34 (m, 1H), 5.25 (s, 2H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 164.10, 156.33, 141.12, 136.31, 132.97, 132.39, 130.69, 130.57, 128.69, 128.62, 127.92, 126.46, 124.87, 124.23, 124.14, 122.86, 121.42, 113.55, 107.00, 70.63. **HRMS-ESI**: Calcd. for $C_{23}H_{20}N_3O_2$ $[M+H]^+$ 370.1556, found 370.1583.



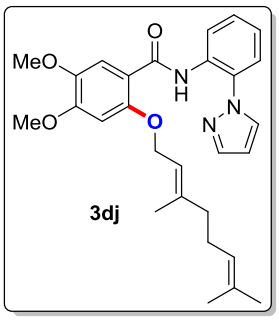
2-(3-methylbut-2-en-1-yl)oxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bh): colorless semi-solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.71 (s, 1H), 8.56 (dd, *J* = 8.3, 1.0 Hz, 1H), 8.17 (dd, *J* = 7.8, 1.8 Hz, 1H), 7.74-7.72 (m, 2H), 7.45-7.38 (m, 2H), 7.32 (dd, *J* = 7.8, 1.5 Hz, 1H), 7.22-7.17 (m, 1H), 7.06-7.02 (m, 1H), 6.92-6.90 (m, 1H), 6.47-6.46 (m, 1H), 5.31-5.29 (m, 1H), 4.67-4.66 (m, 2H), 1.73 (s, 3H), 1.71 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 164.14, 156.61, 141.00, 137.20, 132.96, 132.81, 132.42, 130.92, 130.56, 128.50, 124.84, 124.38, 124.25, 122.52, 121.00, 119.64, 112.97, 106.99, 66.09, 25.68, 18.33. **HRMS-ESI**: Calcd. for $C_{21}H_{22}N_3O_2$ $[M+H]^+$ 348.1712, found 348.1726.

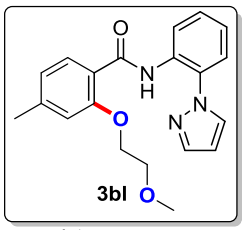


2-cinnamyloxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bi): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.82 (s, 1H), 8.62–8.60 (m, 1H), 8.18-8.16 (m, 1H), 7.72-7.70 (m, 2H), 7.45-7.38 (m, 2H), 7.35-7.17 (m, 7H), 7.07-7.04 (m, 1H), 7.01-6.99 (m, 1H), 6.63 (d, *J* = 15.9 Hz, 1H), 6.43-6.42 (m, 1H), 6.34 (td, *J* = 15.9, 5.4 Hz, 1H), 4.85 (d, *J* = 5.4 Hz, 2H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 164.06, 156.46, 141.12, 136.09, 133.16, 133.04, 132.87, 132.44, 130.71, 130.60, 128.65, 124.57, 128.08, 126.60, 124.73, 124.24, 123.86, 122.77, 121.36, 113.17, 107.04, 69.66. **HRMS-ESI**: Calcd. for $C_{25}H_{21}N_3O_2Na[M+Na]^+$ 418.1512, found 418.1531.

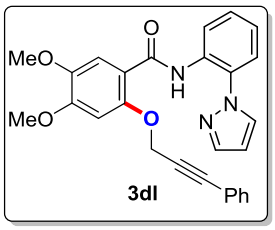


2-((3,7-dimethylocta-2,6-dien-1-yl)oxy)-4,5-dimethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)-benzamide (3dj): colorless semi-solid, **^{1}H-NMR** (500 MHz, $CDCl_3$): δ 10.62 (s, 1H), 8.48-8.47 (m, 1H), 7.70-7.69 (m, 1H), 7.66-7.64 (m, 2H), 7.37-7.34 (m, 1H), 7.24-7.22 (m, 1H), 7.12-7.09 (m, 1H), 6.40-6.39 (m, 2H), 5.25-5.22 (m, 1H), 4.95-4.93 (m, 1H), 4.60-4.59 (m, 2H), 3.81 (s, 1H), 3.80 (s, 3H), 1.99-1.94 (m, 4H), 1.64 (s, 3H), 1.55 (s, 3H), 1.48 (s, 3H). **^{13}C-NMR** (125 MHz, $CDCl_3$): δ 163.83, 152.60, 151.92, 143.32, 141.00, 140.53, 133.24, 132.02, 130.88, 130.70, 128.63, 125.18, 124.24, 124.06, 123.52, 119.94, 113.94, 106.98, 98.42, 67.02, 56.27, 56.00, 39.44, 26.24, 25.62, 17.71, 16.76. **HRMS-ESI**: Calcd. for $C_{28}H_{33}N_3O_4Na$ $[M+Na]^+$ 498.2369, found 498.2371.

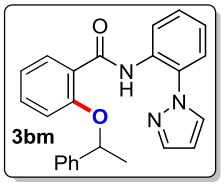


2-(2-methoxyethoxy)-4-methoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3ak): colorless semi-solid, 

^{1}H-NMR (400 MHz, $CDCl_3$): δ 10.52 (s, 1H), 8.36-8.34 (m, 1H), 8.02-8.00 (m, 1H), 7.77-7.74 (m, 2H), 7.45-7.36 (m, 2H), 7.24-7.20 (m, 1H), 6.89-6.87 (m, 1H), 6.80 (s, 1H), 6.46-6.45 (m, 1H), 4.23-4.21 (m, 2H), 3.69-3.66 (m, 2H), 3.31 (s, 3H), 2.37 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 164.21, 156.72, 144.08, 140.51, 132.31, 132.24, 131.45, 130.91, 128.51, 125.33, 124.79, 122.47, 119.95, 113.91, 107.08, 70.23, 68.48, 59.16, 21.76. **HRMS-ESI**: Calcd. for $C_{20}H_{22}N_3O_3[M+H]^+$352.1656, found 352.1655.

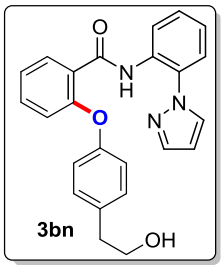
2-((3-phenylprop-2-yn-1-yl)oxy)-4,5-dimethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3dl): colorless solid, 

^{1}H-NMR (400 MHz, $CDCl_3$): δ 10.72 (s, 1H), 8.63 (dd, *J* = 8.3, 1.3 Hz, 1H), 7.91-7.90 (m, 1H), 7.75-7.73 (m, 2H), 7.45-7.41 (m, 1H), 7.39-7.36 (m, 2H), 7.34-7.29 (m, 4H), 7.17 (td, *J* = 7.6, 1.3 Hz, 1H), 6.84 (s, 1H), 6.53-6.51 (m, 1H), 4.95 (s, 2H), 3.93 (s, 3H), 3.91 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 163.44, 152.56, 150.75, 143.92, 141.18, 133.42, 131.65, 130.80, 130.45, 129.00, 128.76, 128.45, 125.04, 123.89, 123.68, 121.81, 114.41, 113.90, 107.05, 98.74, 88.67, 83.21, 58.24, 56.27, 56.17. **HRMS-ESI**: Calcd. for $C_{27}H_{23}N_3O_4$ Na$[M+Na]^+$ 476.1565, found 476.1586.

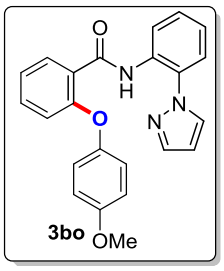
2-(1-phenylethoxy)-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bm): colorless semi-solid, 

^{1}H-NMR (400 MHz, $CDCl_3$): δ 10.68 (s, 1H), 8.46 (d, *J* = 8.2 Hz, 1H), 8.07 (dd, *J* = 7.8, 1.7 Hz, 1H), 7.76-7.75 (m, 1H), 7.66-7.65 (m, 1H), 7.46-7.42 (m, 1H), 7.36-7.28 (m, 6H), 7.27-7.21 (m, 2H), 7.00-6.96 (m, 1H), 6.74-6.72 (m, 1H), 6.43-6.42 (m, 1H), 5.37 (q, *J* = 6.5 Hz, 1H), 1.62 (d, *J* = 6.5 Hz, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 164.54, 156.02, 142.13, 141.29, 132.75, 132.05, 132.02, 131.34, 130.41, 128.70, 128.21, 127.71, 125.45, 125.23, 124.74, 124.46, 123.34, 121.18, 114.87, 107.13, 78.37, 24.24.

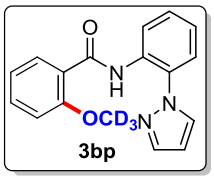
2-(4-(2-hydroxyethyl)phenoxy)-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bn): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): 10.94 (s, 1H), 8.59-8.57 (m, 1H), 8.21 (dd, *J* = 1.7, 7.8 Hz, 1H), 7.67-7.66 (m, 1H), 7.42-7.38 (m, 1H), 7.36-7.32 (m, 1H), 7.26-7.23 (m, 3H), 7.21-7.13 (m, 3H), 6.98-6.96 (m, 2H), 6.79-6.77 (m, 1H), 6.28-6.27 (m, 1H), 3.87 (t, *J* = 6.6 Hz, 2H), 2.88 (t, *J* = 6.6 Hz, 2H), 1.7 (brs, 1H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 163.56, 156.06, 153.81, 141.13, 135.10, 132.97, 132.54, 132.37, 130.56, 130.44, 130.21, 128.37, 124.36, 124.26, 123.85, 123.01, 120.79, 117.24, 106.89, 63.70, 38.50. **HRMS-ESI**:Calcd. for $C_{24}H_{22}N_3O_3[M+H]^+$400.1656, found 400.1650.



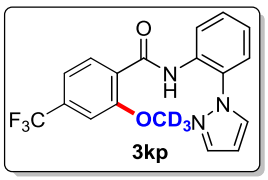
2-(4-methoxyphenoxy)-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bo): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.96 (s, 1H), 8.62 (δd, *J* = 8.4, 0.9 Hz, 1H), 8.24 (dd, *J* = 7.9, 1.9 Hz, 1H),7.66-7.65 (m, 1H), 7.44-7.40 (m, 1H), 7.34-7.29 (m, 1H), 7.26-7.24 (m, 1H), 7.19-7.09 (m, 3H), 7.00-6.93 (m, 4H), 6.71-6.69 (m, 1H), 6.25-6.24 (m, 1H), 3.85 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 163.57, 157.04, 156.90, 148.10, 141.18, 132.95, 132.84, 132.48, 130.64, 130.18, 128.43, 124.50, 124.25, 122.97, 122.42, 122.37, 116.02, 114.94, 106.81, 55.71. **HRMS-ESI**: Calcd. for $C_{23}H_{20}N_3O_3$ $[M+H]^+$ 386.1505, found 386.1519.



2-Trideuteromethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bp): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.75 (s, 1H), 8.64 (dd, *J* = 8.3, 1.1 Hz, 1H), 8.20 (dd, *J* = 7.8, 1.8 Hz, 1H),7.81-7.80 (m, 1H), 7.74-7.73 (m, 1H), 7.47-7.42 (m, 2H), 7.31-7.28 (m, 1H), 7.19 (td, *J* = 7.8, 1.5 Hz, 1H), 7.09-7.05 (m, 1H), 6.93 (dd, *J* = 8.3 0.8 Hz, 1H), 6.50-6.49 (m, 1H). **^{2}D-NMR** (76 MHz, $CDCl_3$): δ 3.83 (s). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 163.84, 157.38, 140.96, 133.24, 132.46, 130.83, 130.55, 128.80, 125.05, 124.06, 123.84, 121.94, 121.14, 111.18, 106.99. **LRMS**: Calcd. for $C_{17}H_{12}D_3N_3O_2Na$ $[M+Na]^+$ 319.1, found 319.3.

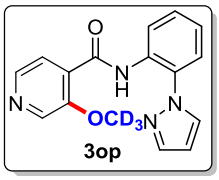


2-Trideuteromethoxy-4-trifluoromethyl-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3bp):



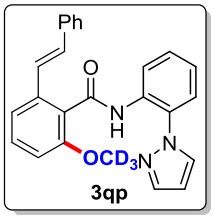
colorless semi-solid, **^{1}H-NMR** (500 MHz, $CDCl_3$): δ 10.89 (s, 1H), 8.63-8.62 (m, 1H), 8.28 (d, *J* = 8.1 Hz, 1H), 7.814-7.810 (m, 1H), 7.76-7.75 (m, 1H), 7.47-7.43 (m, 1H), 7.34-7.31 (m, 1H), 7.21 (td, *J* = 7.5,1.3 Hz, 1H), 7.16 (s, 1H), 6.52-6.51 (m, 1H). **^{2}D-NMR** (76 MHz, $CDCl_3$): δ 3.91 (s). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 162.57, 157.26, 141.03, 134.48 (q, $J_{C\text{-}F}$ = 33.0 Hz), 133.15, 132.61, 130.74, 130.46, 128.73, 125.37, 124.82, 124.67, 124.49, 123.85, 123.46 (q, $J_{C\text{-}F}$ = 273 Hz), 117.80 (q, $J_{C\text{-}F}$ = 3.6 Hz), 108.30 (q, $J_{C\text{-}F}$ = 3.6 Hz), 107.13.

3-Trideuteromethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)pyridine-4-carboxamide (3op):



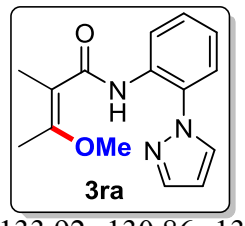
colorless semi-solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.73 (s, 1H), 8.60 (dd, *J* = 8.4, 1.0 Hz, 1H), 8.13 (d, *J* = 8.4 Hz, 1H),7.80 (d, *J* = 1.7 Hz, 1H), 7.73 (d, *J* = 2.4 Hz, 1H), 7.46-7.41 (m, 1H), 7.29 (dd, *J* = 7.9, 1.5 Hz, 1H), 7.21-7.17 (m, 1H), 7.05 (dd, *J* = 8.5 1.9 Hz, 1H), 6.93 (d, *J* = 1.9 Hz, 1H), 6.56-6.50 (m, 1H). **^{2}D-NMR** (76 MHz, $CDCl_3$): δ 3.85 (s). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 162.89, 157.72, 140.97, 138.93, 133.59, 132.91, 130.79, 130.49, 128.76, 124.87, 124.26, 123.86, 121.46, 120.64, 111.94, 107.07.

2-Trideuteromethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)-6-styrylbenzamide (3qp): colorless



solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.18 (s, 1H), 8.56 (dd, *J* = 8.2, 1.2 Hz, 1H), 7.60 (d, *J* = 2.3 Hz, 1H),7.51 (d, *J* = 1.6 Hz, 1H), 7.39-7.35 (m, 1H), 7.31-7.29 (m, 2H), 7.25 (m, 4H), 7.19-7.11 (m, 4H), 6.95 (d, *J* = 16 Hz, 1H), 6.74 (dd, *J* = 7.8, 1.0 Hz, 1H), 6.22-6.21 (m, 1H). **^{2}D-NMR** (76 MHz, $CDCl_3$): δ 3.69 (s). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 165.78, 156.44, 141.00, 137.10, 136.88, 131.74, 131.57, 130.39, 130.12, 129.82, 128.53, 128.22, 127.84, 126.87, 125.73, 125.37, 124.47, 123.82, 122.99, 118.05, 109.83, 106.97.

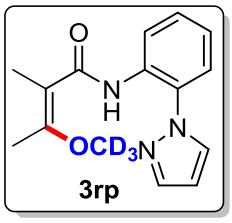
(Z)-3-Methoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)2-methylbut-2-enamide (3ra): colorless solid,



3ra

^{1}H-NMR (400 MHz, $CDCl_3$): δ 10.35 (s, 1H), 8.47 (dd, *J* = 8.4, 1.2 Hz, 1H), 7.71-7.70 (m, 1H), 7.62-7.61 (m, 1H), 7.33-7.28 (m, 1H), 7.16 (dd, *J* = 7.8 1.5 Hz, 1H), 7.06-7.01 (m, 1H), 6.42-6.40 (m, 1H), 3.50 (s, 3H), 1.94 (s, 3H), 1.77 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 160.05, 157.26, 140.89, 133.92, 130.86, 130.04, 128.81, 125.24, 123.25, 109.14, 106.85, 55.80, 15.07, 14.22. **HRMS**: Calcd. for $C_{15}H_{17}N_3O_2Na$ $[M+Na]^+$ 294.1218, found 294.1238.

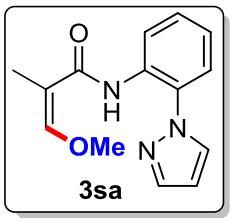
(Z)-3-Trideuteromethoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)2-methylbut-2-enamide (3rp):



3rp

colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.42 (s, 1H), 8.55 (dd, *J* = 8.3, 1.2 Hz, 1H), 7.78-7.77 (m, 1H), 7.69-7.68 (m, 1H), 7.40-7.36 (m, 1H), 7.24 (dd, *J* = 7.8, 1.5 Hz, 1H), 7.11 (td, *J* = 7.5, 1.3 Hz, 1H), 6.49-6.48 (m, 1H), 2.01 (s, 3H), 1.85 (s, 3H). **^{2}D-NMR** (76 MHz, $CDCl_3$): δ 3.55 (s). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 166.07, 157.26, 140.88, 133.93, 130.87, 130.05, 128.82, 125.26, 123.25, 109.06, 106.84, 15.08, 14.21.

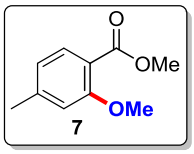
3-Methoxy-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)2-methylacrylamide (3sa): colorless semi-solid,



3sa

^{1}H-NMR (400 MHz, $CDCl_3$): δ 9.98 (s, 1H), 8.58 (dd, *J* = 8.4, 4.8 Hz, 1H), 7.78 (d, *J* = 1.4 Hz, 1H), 7.68-7.67 (m, 1H), 7.41-7.37 (m, 1H), 7.25 (dd, *J* = 7.8, 1.5 Hz, 1H), 7.14-7.10 (m, 1H), 6.49-6.48 (m, 1H), 6.40 (q, *J* =1.3 Hz, 1H), 3.67 (s, 3H), 1.74 (d, *J* = 1.3 Hz, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 164.93, 151.17, 140.80, 133.79, 130.87, 129.95, 128.97, 125.40, 123.39, 122.92, 108.82, 106.97, 61.29, 14.74.

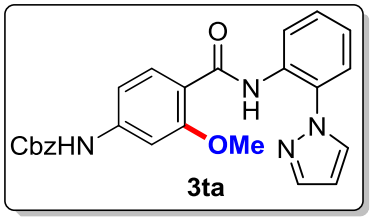
Methyl-2-methoxy-4-methyl benzoate (7): colorless oil, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 7.73-



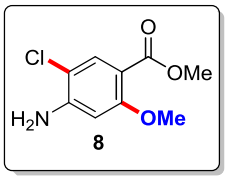
7

7.71(m, 1H), 6.80-6.78 (m, 2H), 3.89 (s, 3H), 3.87 (s, 3H), 2.38 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 166.61, 159.36, 144.63, 131.86, 120.96, 112.78, 55.94, 51.85, 21.95.

2-methoxy-4-benzylcarbamate-*N*-(2-(1*H*-pyrazol-1-yl)phenyl)benzamide (3qa): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 10.63 (s, 1H), 8.57 (dd, *J* = 8.4, 1.2 Hz, 1H), 8.10 (d, *J* = 8.5 Hz, 1H), 7.82-7.81 (m, 1H), 7.73-7.72 (m, 1H), 7.49 (s, 1H), 7.44-7.34 (m, 7H), 7.29 (dd, *J* = 7.8, 1.3 Hz, 1H), 7.21-7.17 (td, *J* = 7.3, 1.3 Hz, 1H), 7.02 (s, 1H), 6.71 (dd, *J* = 8.5, 2.0 Hz, 1H), 6.51-6.50 (m, 1H), 5.20 (s, 2H), 3.85 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 163.46, 158.48, 152.95, 142.62, 140.78, 135.66, 133.32, 133.26, 131.01, 130.56, 128.91, 128.69, 128.53, 128.30, 125.18, 124.09, 124.04, 116.50, 110.45, 107.04, 101.01, 67.30, 55.79. **HRMS-ESI**: Calcd. for $C_{25}H_{22}N_4O_4Na$ $[M+Na]^+$ 465.1539, found 465.1539.

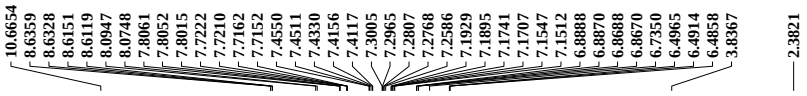


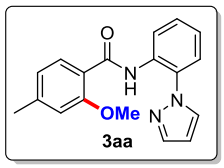
Methyl-4-amino-5-chloro-2-methoxy benzoate (8): colorless solid, **^{1}H-NMR** (400 MHz, $CDCl_3$): δ 7.82 (s, 1H), 6.29 (s, 1H), 4.44 (s, 2H), 3.85 (s, 3H), 3.83 (s, 3H). **^{13}C-NMR** (100 MHz, $CDCl_3$): δ 165.16, 160.19, 147.71, 133.40, 110.03, 109.84, 98.28, 56.16, 51.65.



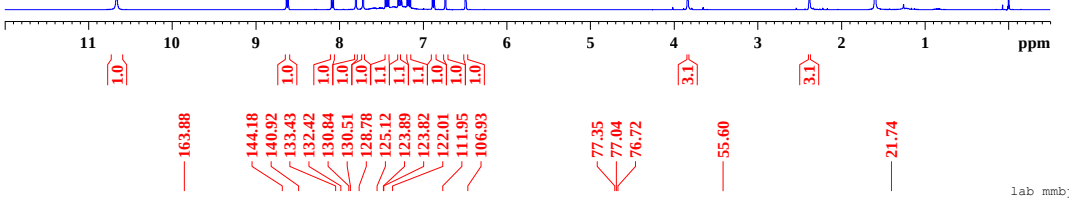
References:

1. B. J. Liddle, R. M. Silva, T. J. Morin, F. P. Macedo, R. Shukla, S. V. Lindeman, and J. R. Gardinier. *J. Org. Chem.*, 2007, **72**, 5637.
2. M. Shang, S. Z. Sun, H. X. Dai and J.-Q. Yu, *J. Am. Chem. Soc.*, 2014, **136**, 3354.
3. L. D. Tran and O. Daugulis, *Angew.Chem. Int. Ed.* 2012, **51**, 5188.
4. S. Kato, T. Morie, T. Kon, N. Yoshida, T. Karasawa and J. Matsumoto, *J. Med. Chem.,* 1991, **34**, 616.
5. T. Terai, H. Ito, K. Kikuchi and T. Nagano, *Chem. Eur. J.*, 2012, **18**, 7377.

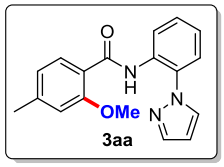


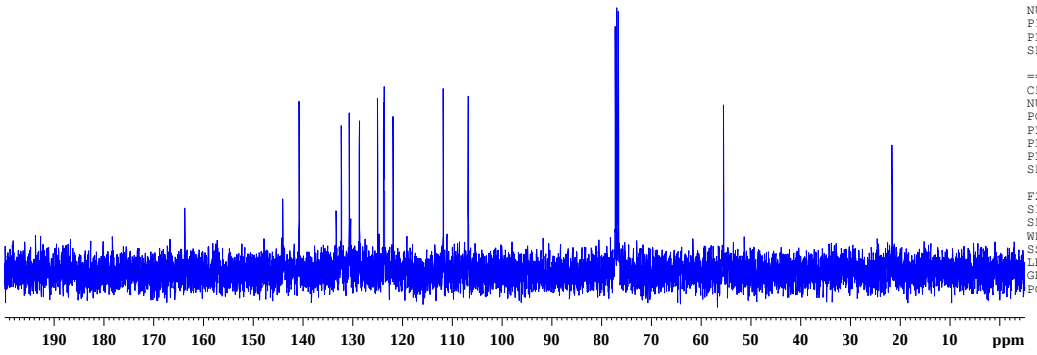


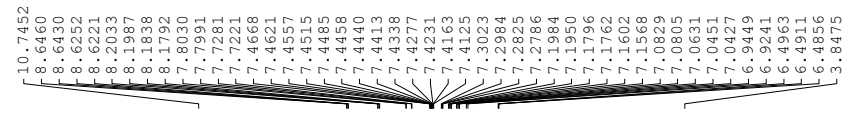

```
lab mmb-jsk-234
.itm-Proton(-5to15) CDCl3 /opt/topspin nmr 10
Current Data Parameters
NAME      JSK-234-4-me-OMe
EXPNO                   36
PROCNO                   1

F2 - Acquisition Parameters
Date_              20150806
Time                 15.56
INSTRUM              spect
PROBHD   5 mm PABBO BB-
PULPROG              zg30
TD                  65536
SOLVENT              CDCl3
NS                      16
DS                       2
SWH               8012.820 Hz
FIDRES            0.122266 Hz
AQ                4.0894465 sec
RG                   200.34
DW                   62.400 usec
DE                    6.50 usec
TE                  298.5 K
D1              0.50000000 sec
TD0                      1

======== CHANNEL f1 ========
NUC1                    1H
P1                   15.70 usec
PLW1          7.75000000 W
SFO1         400.1320007 MHz

F2 - Processing parameters
SI                  65536
SF           400.1300100 MHz
WDW                    EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```

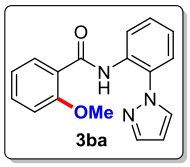



```
lab mmbjsk-1-40-1
iitm_carbonshort CDCl3 /opt/topspin nmr 6

Current Data Parameters
NAME       4-methyl-OMe
EXPNO                 61
PROCNO                 1

F2 - Acquisition Parameters
Date_              20150412
Time                 16.09
INSTRUM              spect
PROBHD   5 mm PABBI 1H/
PULPROG            zgpg30
TD                  16540
SOLVENT              CDCl3
NS                     256
DS                       4
SWH              24038.461 Hz
FIDRES            1.453353 Hz
AQ                0.3440320 sec
RG                   200.34
DW                   20.800 usec
DE                    6.50 usec
TE                  306.1 K
D1              1.00000000 sec
D11             0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
NUC1                   13C
P1                   15.00 usec
PLW1         76.00000000 W
SFO1        100.6228289 MHz

======== CHANNEL f2 ========
CPDPRG[2         waltz16
NUC2                    1H
PCPD2                90.00 usec
PLW2          8.50000000 W
PLW12         0.08500000 W
PLW13         0.06885000 W
SFO2         400.1316005 MHz

F2 - Processing parameters
SI                  32768
SF           100.6127690 MHz
WDW                    EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```

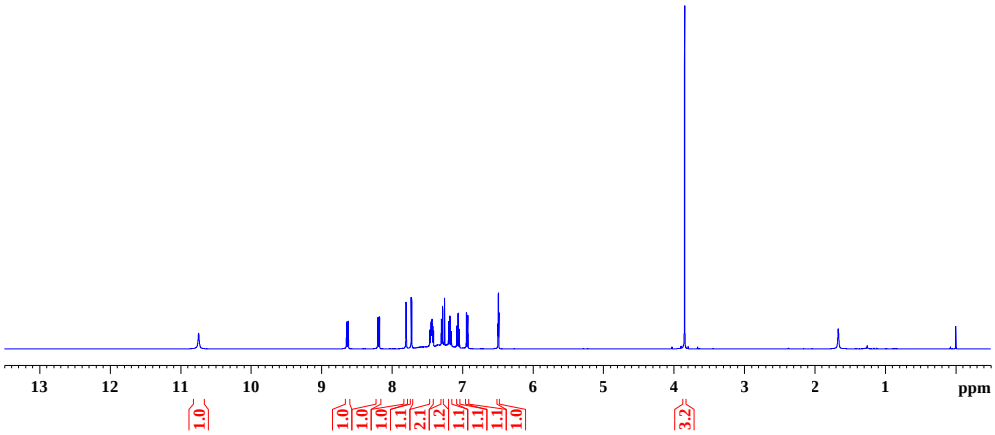




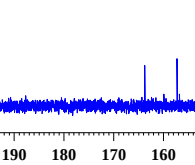


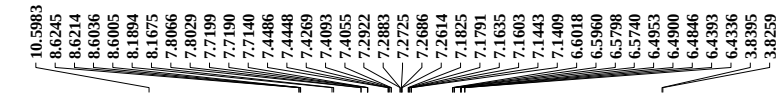


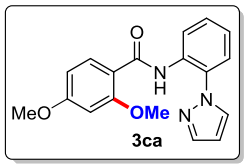

```
Current Data Parameters
NAME      JSK-259-ph-OMe
EXPNO                118
PROCNO                 1

F2 - Acquisition Parameters
Date_           20150820
Time                8.58
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES          0.122266 Hz
AQ              4.0894465 sec
RG                 169.77
DW                 62.400 usec
DE                  6.50 usec
TE                 298.9 K
D1              0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                 15.70 usec
PLW1          7.75000000 W
SFO1        400.1320007 MHz

F2 - Processing parameters
SI                 65536
SF           400.1300114 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```



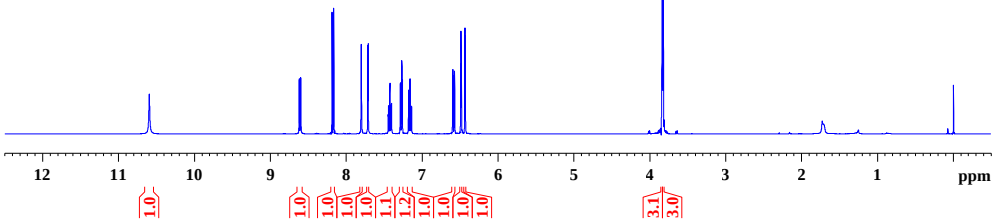

```
lab mmbjsk-260
iitm_carbonshort CDCl3 /opt/topspin nmr 11

Current Data Parameters
NAME      JSK-259-ph-OMe
EXPNO                119
PROCNO                 1

F2 - Acquisition Parameters
Date_           20150820
Time                9.06
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                 16540
SOLVENT            CDCl3
NS                   256
DS                     4
SWH            24038.461 Hz
FIDRES          1.453353 Hz
AQ              0.3440320 sec
RG                 200.34
DW                 20.800 usec
DE                  6.50 usec
TE                 299.7 K
D1              1.00000000 sec
D11             0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  13C
P1                 9.25 usec
PLW1         47.00000000 W
SFO1        100.6228289 MHz

======== CHANNEL f2 ========
CPDPRG[2          waltz16
NUC2                  1H
PCPD2              90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.19103000 W
SFO2        400.1316005 MHz

F2 - Processing parameters
SI                 32768
SF          100.6127690 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```

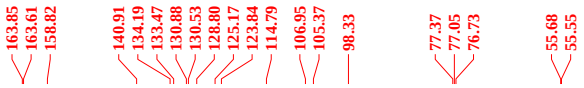




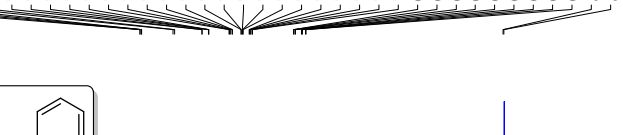


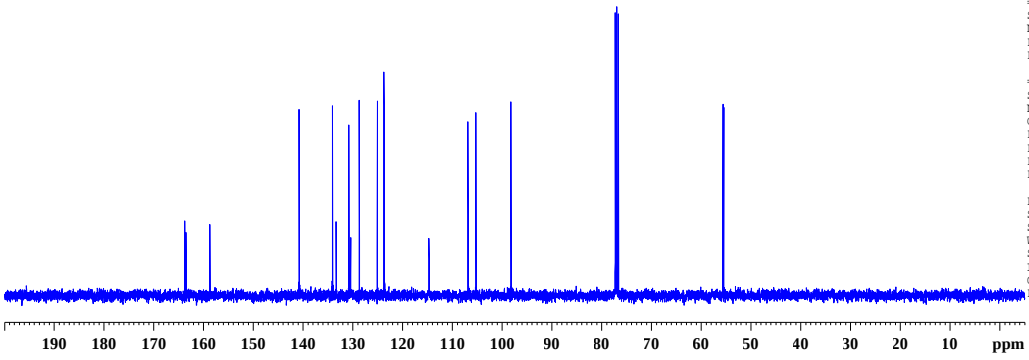

```
Current Data Parameters
NAME      jsk-4-ome-Ome
EXPNO                46
PROCNO                1

F2 - Acquisition Parameters
Date_          20160210
Time              17.56
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG           zg30
TD               65536
SOLVENT          CDCl3
NS                  16
DS                   2
SWH           8012.820 Hz
FIDRES        0.122266 Hz
AQ            4.0894465 sec
RG               138.85
DW               62.400 usec
DE                6.50 usec
TE               297.2 K
D1           0.50000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1        400.1320007 MHz
NUC1               1H
P1               15.70 usec
PLW1         7.75000000 W

F2 - Processing parameters
SI                65536
SF          400.1300092 MHz
WDW                EM
SSB       0
LB              0.30 Hz
GB        0
PC              1.00
```

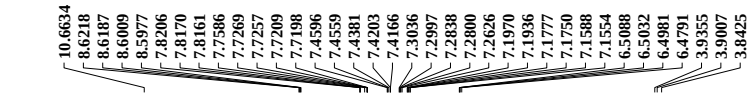


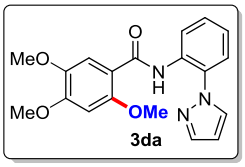



```
lab mmb-jsk-4-ome
iitm_carbonshort CDCl3 /opt/topspin nmr 9

Current Data Parameters
NAME      jsk-4-ome-Ome
EXPNO                49
PROCNO                1

F2 - Acquisition Parameters
Date_          20160210
Time              18.01
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG          zgpg30
TD               16540
SOLVENT          CDCl3
NS                 256
DS                   4
SWH          24038.461 Hz
FIDRES        1.453353 Hz
AQ            0.3440320 sec
RG               200.34
DW               20.800 usec
DE                6.50 usec
TE               297.6 K
D1           1.00000000 sec
D11          0.03000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1        100.6228289 MHz
NUC1               13C
P1                9.25 usec
PLW1        47.00000000 W

======== CHANNEL f2 ========
SFO2        400.1316005 MHz
NUC2               1H
CPDPRG[2         waltz16
PCPD2             90.00 usec
PLW2         7.75000000 W
PLW12        0.23583999 W
PLW13        0.11863000 W

F2 - Processing parameters
SI                32768
SF          100.6127690 MHz
WDW                EM
SSB       0
LB              1.00 Hz
GB        0
PC              1.40
```

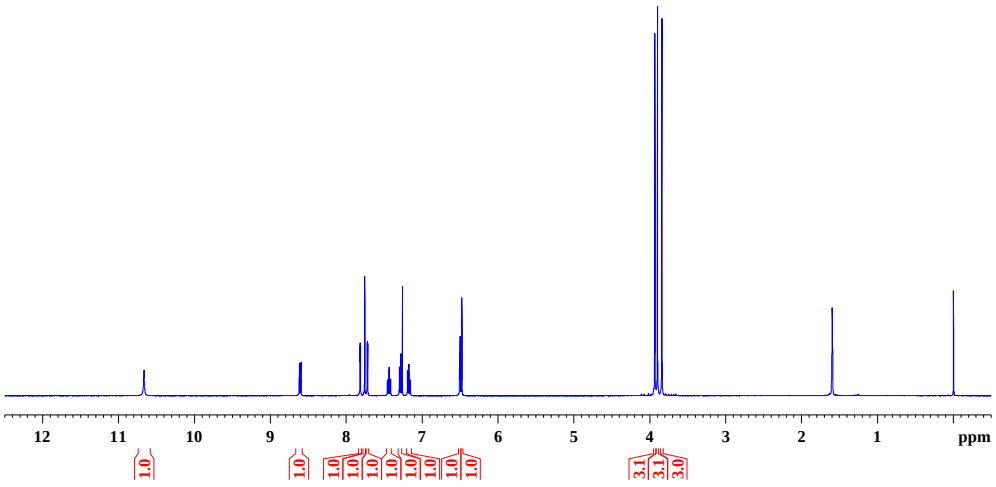


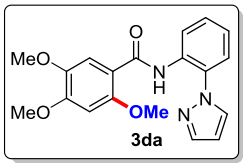




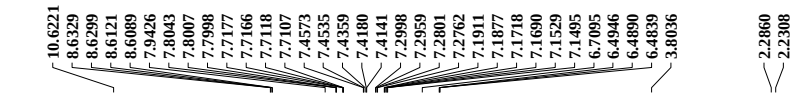


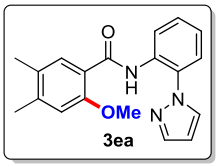

```
Current Data Parameters
NAME           3,4-diome
EXPNO                 28
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160410
Time                3.31
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES          0.122266 Hz
AQ              4.0894465 sec
RG                200.34
DW                62.400 usec
DE                 6.50 usec
TE                299.1 K
D1             0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         400.1320007 MHz
NUC1                   1H
P1                 15.70 usec
PLW1          7.75000000 W

F2 - Processing parameters
SI                 65536
SF           400.1300085 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```



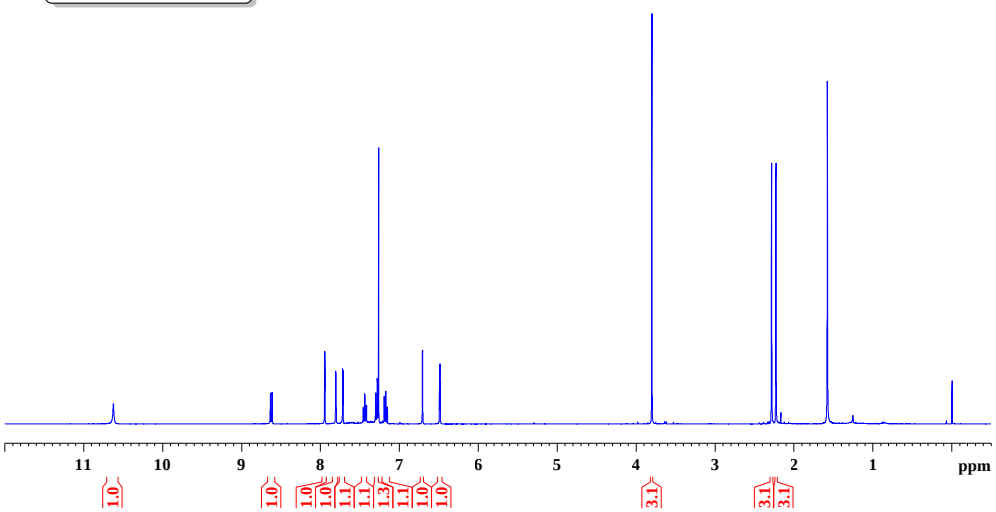


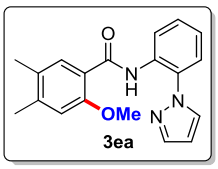

```
lab mmb-jsk-34-ome
iitm_carbonshort CDCl3 /opt/topspin nmr 8

Current Data Parameters
NAME           3,4-diome
EXPNO                 29
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160410
Time                3.44
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                 16540
SOLVENT            CDCl3
NS                   512
DS                     4
SWH            24038.461 Hz
FIDRES          1.453353 Hz
AQ              0.3440320 sec
RG                200.34
DW                20.800 usec
DE                 6.50 usec
TE                299.5 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         100.6228289 MHz
NUC1                  13C
P1                 9.25 usec
PLW1         47.00000000 W

======== CHANNEL f2 ========
SFO2         400.1316005 MHz
NUC2                   1H
CPDPRG[2         waltz16
PCPD2             90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.11863000 W

F2 - Processing parameters
SI                 32768
SF           100.6127690 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```



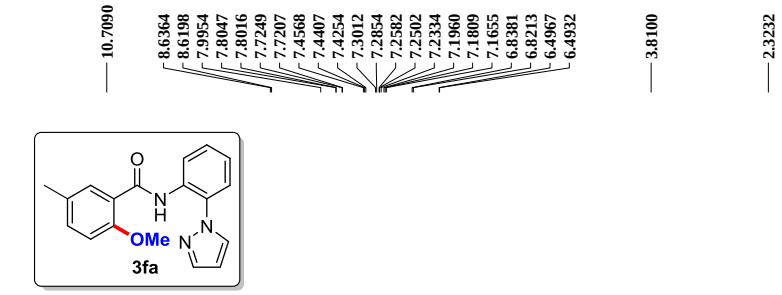



```
Current Data Parameters
NAME                 JSK-264
EXPNO                    186
PROCNO                     1

F2 - Acquisition Parameters
Date_               20150826
Time                   11.59
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                zg30
TD                    65536
SOLVENT               CDCl3
NS                       16
DS                        2
SWH                8012.820 Hz
FIDRES             0.122266 Hz
AQ                 4.0894465 sec
RG                    200.34
DW                    62.400 usec
DE                     6.50 usec
TE                    298.9 K
D1                 0.50000000 sec
TD0                        1

======== CHANNEL f1 ========
NUC1                      1H
P1                     15.70 usec
PLW1              7.75000000 W
SFO1            400.1320007 MHz

F2 - Processing parameters
SI                        65536
SF              400.1300095 MHz
WDW                        EM
SSB          0
LB                     0.30 Hz
GB           0
PC                     1.00
```

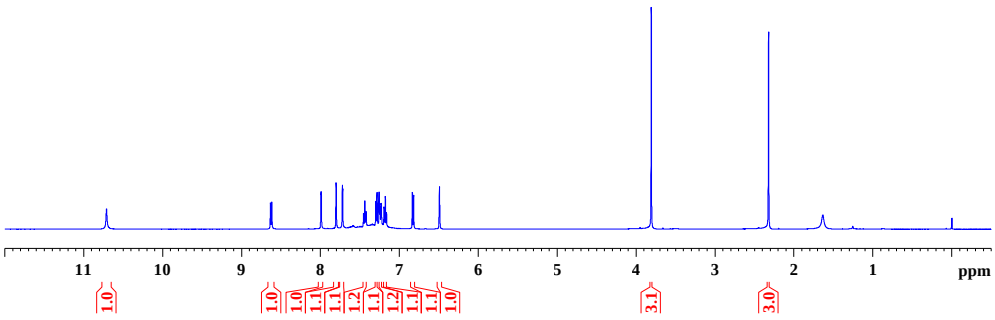




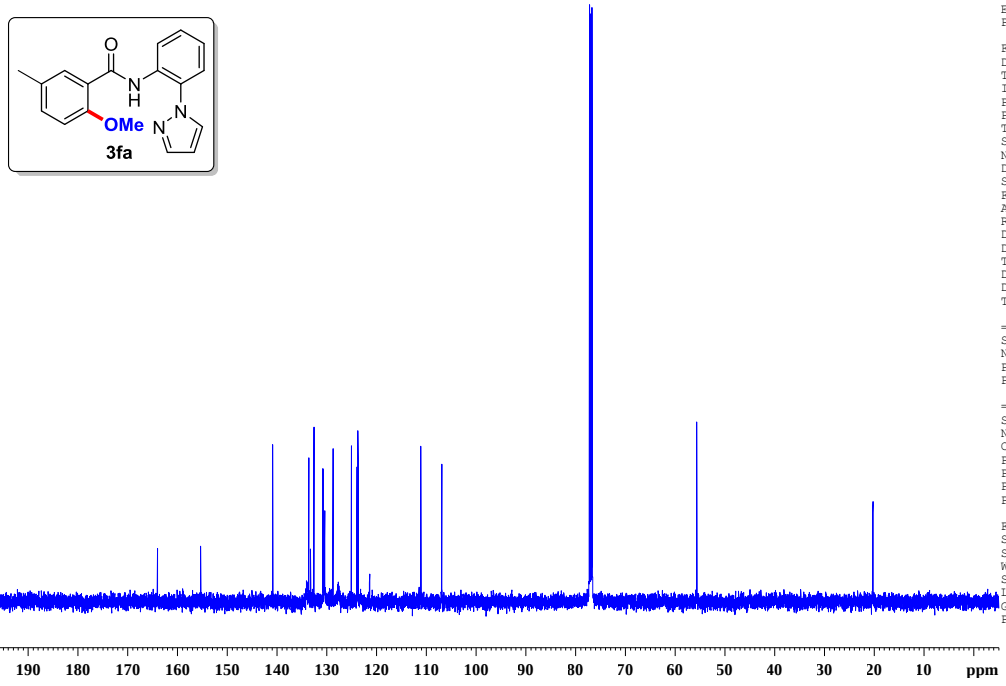

```
Lab mmb
jks-267
iitm_carbonshort CDCl3 /opt/topspin iitm 4
Current Data Parameters
NAME                 JSK-267
EXPNO                     12
PROCNO                     1

F2 - Acquisition Parameters
Date_               20150826
Time                   18.53
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG             zgpg30
TD                    20480
SOLVENT               CDCl3
NS                     2000
DS                        4
SWH               29761.904 Hz
FIDRES             1.453218 Hz
AQ                 0.3440640 sec
RG                    202.34
DW                    16.800 usec
DE                     6.50 usec
TE                    294.2 K
D1                 1.00000000 sec
D11                0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1            125.7753932 MHz
NUC1                      13C
P1                     9.63 usec
PLW1            103.00000000 W

======== CHANNEL f2 ========
SFO2            500.1520006 MHz
NUC2                      1H
CPDPRG[2              waltz16
PCPD2                 80.00 usec
PLW2            15.30000019 W
PLW12            0.33006001 W
PLW13            0.21123999 W

F2 - Processing parameters
SI                        32768
SF              125.7628180 MHz
WDW                        EM
SSB          0
LB                     1.00 Hz
GB           0
PC                     1.40
```

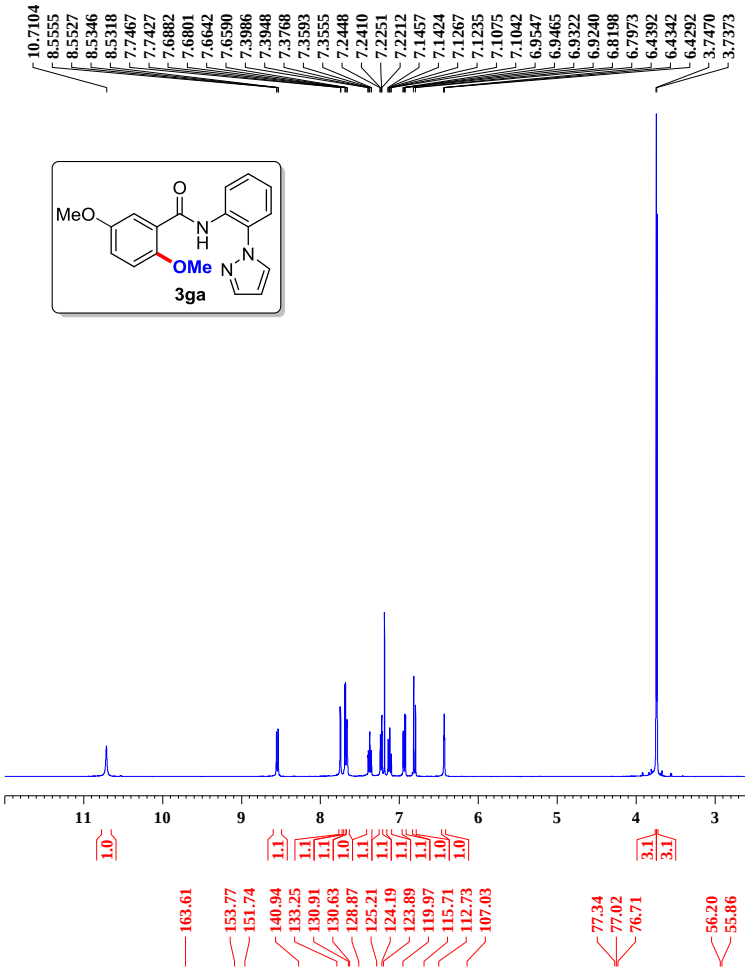



```
Current Data Parameters
NAME      JSK-300 3-me-OMe
EXPNO                 21
PROCNO                 1

F2 - Acquisition Parameters
Date_           20150927
Time              12.43
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG           zg30
TD               32768
SOLVENT           CDCl3
NS                   32
DS                    2
SWH           10000.000 Hz
FIDRES        0.305176 Hz
AQ            1.6384000 sec
RG               138.53
DW               50.000 usec
DE                6.50 usec
TE               296.9 K
D1            0.50000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         500.1525008 MHz
NUC1                 1H
P1                11.75 usec
PLW1         15.30000019 W

F2 - Processing parameters
SI                65536
SF           500.1500232 MHz
WDW                  EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```




```
Lab mmb
jsk-300
iitm_carbonshort CDCl3 /opt/topspin iitm 9

Current Data Parameters
NAME      JSK-300 3-me-OMe
EXPNO                 22
PROCNO                 1

F2 - Acquisition Parameters
Date_           20150927
Time              12.57
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG         zgpg30
TD               20480
SOLVENT           CDCl3
NS                  512
DS                    4
SWH           29761.904 Hz
FIDRES        1.453218 Hz
AQ            0.3440640 sec
RG               202.34
DW               16.800 usec
DE                6.50 usec
TE               297.7 K
D1            1.00000000 sec
D11           0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         125.7753932 MHz
NUC1                13C
P1                 9.63 usec
PLW1        103.00000000 W

======== CHANNEL f2 ========
SFO2         500.1520006 MHz
NUC2                 1H
CPDPRG[2         waltz16
PCPD2             80.00 usec
PLW2         15.30000019 W
PLW12         0.33006001 W
PLW13         0.21123999 W

F2 - Processing parameters
SI                32768
SF           125.7628180 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```

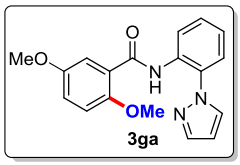




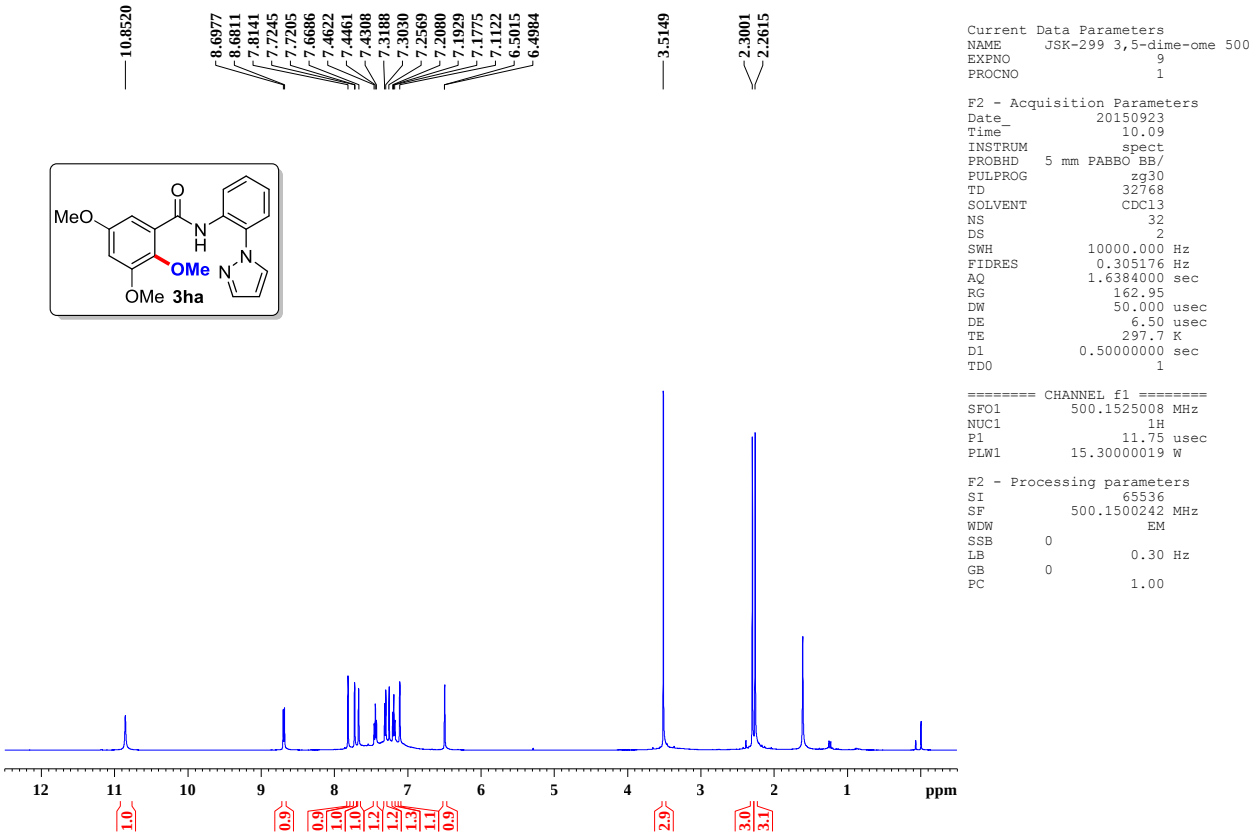

```
Current Data Parameters
NAME      JSK-3-Ome Ome
EXPNO               222
PROCNO                1

F2 - Acquisition Parameters
Date_          20160131
Time              11.45
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG           zg30
TD               65536
SOLVENT          CDCl3
NS                  16
DS                   2
SWH           8012.820 Hz
FIDRES        0.122266 Hz
AQ            4.0894465 sec
RG               200.34
DW               62.400 usec
DE                6.50 usec
TE               297.3 K
D1           0.50000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1        400.1320007 MHz
NUC1                1H
P1                15.70 usec
PLW1         7.75000000 W

F2 - Processing parameters
SI                65536
SF          400.1300378 MHz
WDW                  EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```



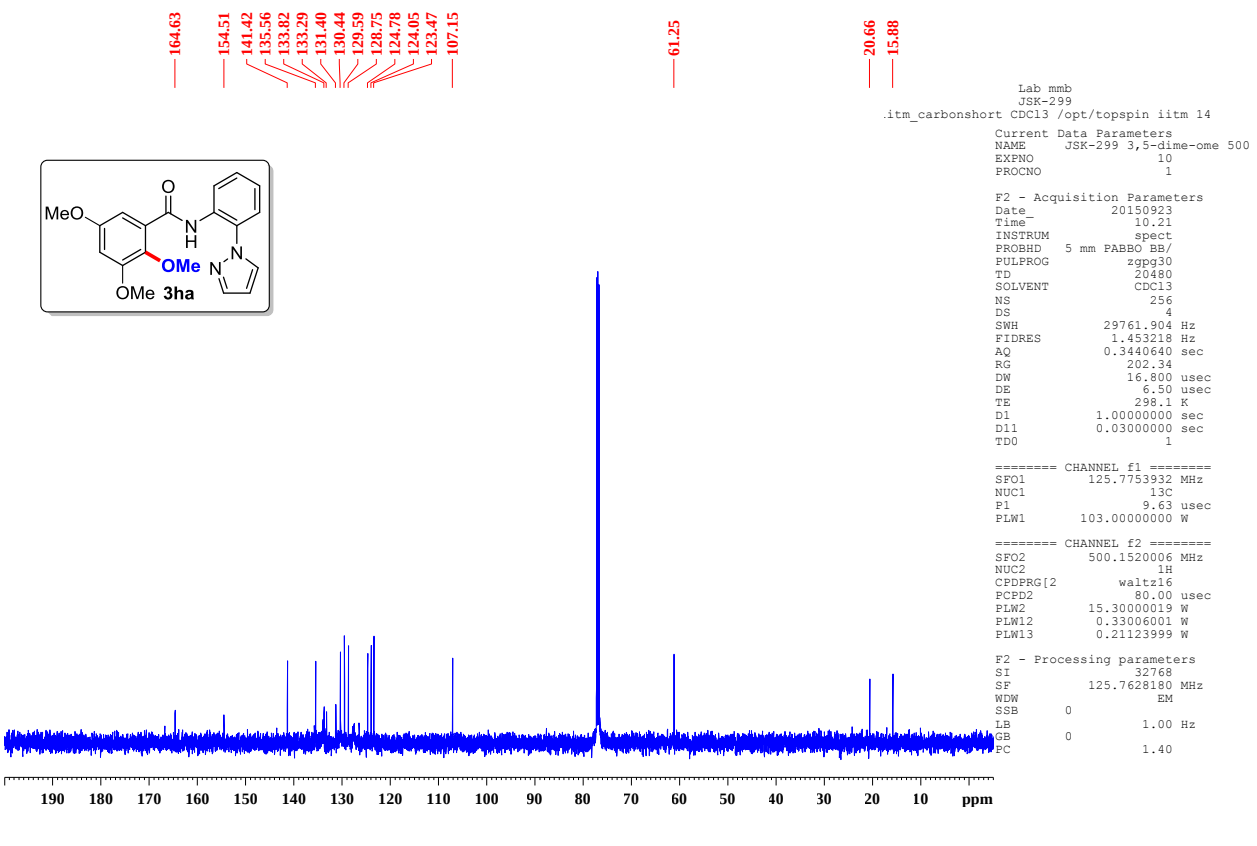
```
lab mmb-jsk-3ome
iitm_carbonshort CDCl3 /opt/topspin nmr 2
```



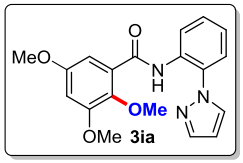

```
Current Data Parameters
NAME      JSK-3-Ome Ome
EXPNO               223
PROCNO                1

F2 - Acquisition Parameters
Date_          20160131
Time              11.51
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG          zgpg30
TD               16540
SOLVENT          CDCl3
NS                 256
DS                   4
SWH          24038.461 Hz
FIDRES        1.453353 Hz
AQ            0.3440320 sec
RG               200.34
DW               20.800 usec
DE                6.50 usec
TE               297.8 K
D1           1.00000000 sec
D11          0.03000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1        100.6228289 MHz
NUC1                13C
P1                9.25 usec
PLW1        47.00000000 W

======== CHANNEL f2 ========
SFO2        400.1316005 MHz
NUC2                1H
CPDPRG[2         waltz16
PCPD2             90.00 usec
PLW2         7.75000000 W
PLW12        0.23583999 W
PLW13        0.11863000 W

F2 - Processing parameters
SI                32768
SF          100.6127690 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```




```
Current Data Parameters
NAME      JSK-299 3,5-dime-ome 500
EXPNO                 9
PROCNO                1

F2 - Acquisition Parameters
Date_           20150923
Time              10.09
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG           zg30
TD               32768
SOLVENT           CDCl3
NS                   32
DS                    2
SWH           10000.000 Hz
FIDRES         0.305176 Hz
AQ            1.6384000 sec
RG               162.95
DW               50.000 usec
DE                6.50 usec
TE               297.7 K
D1           0.50000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         500.1525008 MHz
NUC1                 1H
P1                11.75 usec
PLW1         15.30000019 W

F2 - Processing parameters
SI                65536
SF           500.1500242 MHz
WDW                  EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```

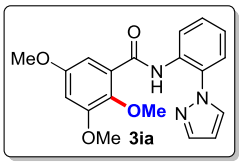


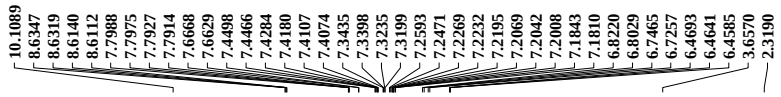

```
Lab mmb
JSK-299
.itm_carbonshort CDCl3 /opt/topspin iitm 14
Current Data Parameters
NAME      JSK-299 3,5-dime-ome 500
EXPNO                10
PROCNO                1

F2 - Acquisition Parameters
Date_           20150923
Time              10.21
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG         zgpg30
TD               20480
SOLVENT           CDCl3
NS                  256
DS                    4
SWH           29761.904 Hz
FIDRES         1.453218 Hz
AQ            0.3440640 sec
RG               202.34
DW               16.800 usec
DE                6.50 usec
TE               298.1 K
D1           1.00000000 sec
D11          0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         125.7753932 MHz
NUC1                 13C
P1                9.63 usec
PLW1        103.00000000 W

======== CHANNEL f2 ========
SFO2         500.1520006 MHz
NUC2                 1H
CPDPRG[2         waltz16
PCPD2             80.00 usec
PLW2         15.30000019 W
PLW12         0.33006001 W
PLW13         0.21123999 W

F2 - Processing parameters
SI                32768
SF           125.7628180 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```

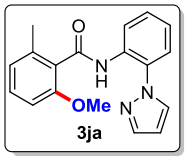



```
Current Data Parameters
NAME                  JSK-283
EXPNO                      27
PROCNO                      1

F2 - Acquisition Parameters
Date_               20150903
Time                   21.08
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                zg30
TD                    65536
SOLVENT               CDCl3
NS                       16
DS                        2
SWH                8012.820 Hz
FIDRES             0.122266 Hz
AQ                 4.0894465 sec
RG                    200.34
DW                    62.400 usec
DE                     6.50 usec
TE                    296.1 K
D1                 0.50000000 sec
TD0                        1

======== CHANNEL f1 ========
NUC1                      1H
P1                     15.70 usec
PLW1              7.75000000 W
SFO1            400.1320007 MHz

F2 - Processing parameters
SI                        65536
SF                400.1300085 MHz
WDW                        EM
SSB          0
LB                     0.30 Hz
GB           0
PC                     1.00
```

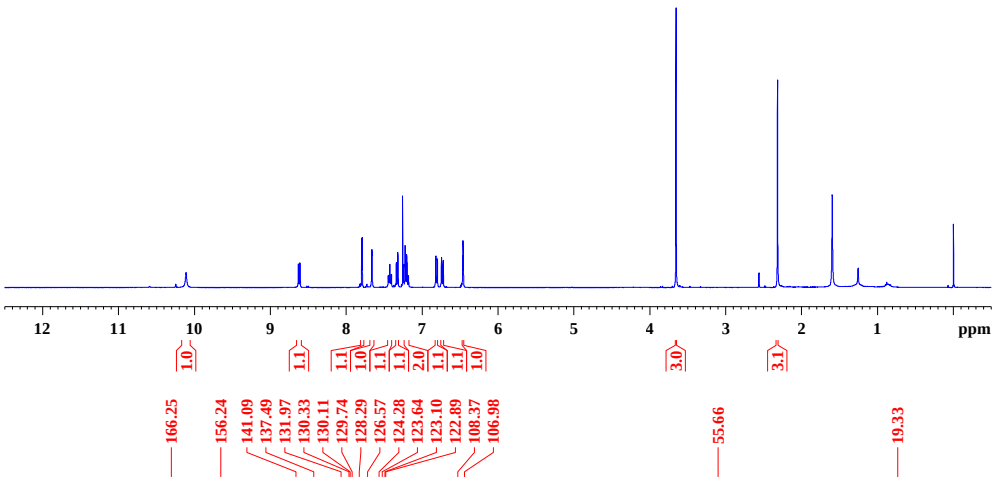

```
Lab mmb
-jsk-35-ome
iitm_carbonshort CDCl3 /opt/topspin iitm 5

Current Data Parameters
NAME                  3,5-ome
EXPNO                      83
PROCNO                      1

F2 - Acquisition Parameters
Date_               20160413
Time                   1.27
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG              zgpg30
TD                    20480
SOLVENT               CDCl3
NS                     2000
DS                        4
SWH               29761.904 Hz
FIDRES             1.453218 Hz
AQ                 0.3440640 sec
RG                    202.34
DW                    16.800 usec
DE                     6.50 usec
TE                    296.0 K
D1                 1.00000000 sec
D11                0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1            125.7753932 MHz
NUC1                      13C
P1                     9.63 usec
PLW1           103.00000000 W

======== CHANNEL f2 ========
SFO2            500.1520006 MHz
NUC2                      1H
CPDPRG[2             waltz16
PCPD2                 80.00 usec
PLW2           15.30000019 W
PLW12           0.33006001 W
PLW13           0.21123999 W

F2 - Processing parameters
SI                        32768
SF              125.7628180 MHz
WDW                        EM
SSB          0
LB                     1.00 Hz
GB           0
PC                     1.40
```

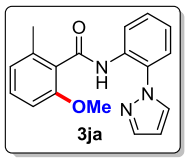




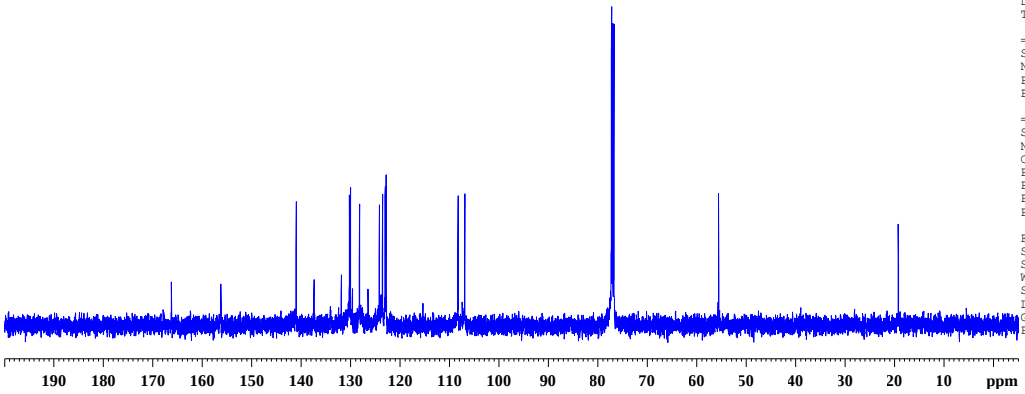


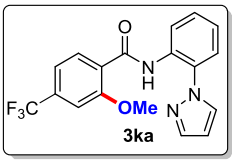

```
Current Data Parameters
NAME            2,3-diome
EXPNO                  25
PROCNO                  1

F2 - Acquisition Parameters
Date_           20160410
Time                3.12
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES          0.122266 Hz
AQ              4.0894465 sec
RG                200.34
DW                62.400 usec
DE                 6.50 usec
TE                299.1 K
D1             0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         400.1320007 MHz
NUC1                   1H
P1                 15.70 usec
PLW1          7.75000000 W

F2 - Processing parameters
SI                 65536
SF           400.1300098 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```



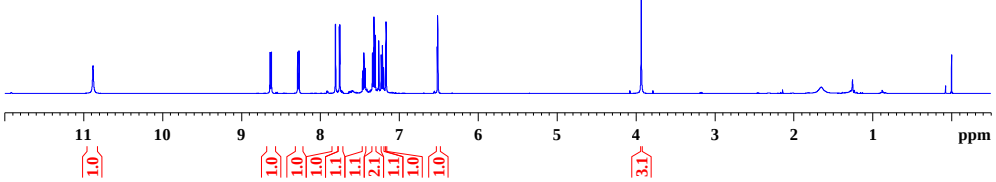


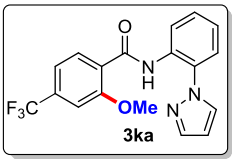

```
Lab mmb
JSK-292
itm_carbonshort CDCl3 /opt/topspin iitm 14
Current Data Parameters
NAME      JSK-292-2-m3 OMe 500
EXPNO                   6
PROCNO                  1

F2 - Acquisition Parameters
Date_           20150916
Time                8.50
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG          zgpg30
TD                 20480
SOLVENT            CDCl3
NS                   512
DS                     4
SWH            29761.904 Hz
FIDRES          1.453218 Hz
AQ              0.3440640 sec
RG                202.34
DW                16.800 usec
DE                 6.50 usec
TE                298.8 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         125.7753932 MHz
NUC1                  13C
P1                 9.63 usec
PLW1        103.00000000 W

======== CHANNEL f2 ========
SFO2         500.1520006 MHz
NUC2                   1H
CPDPRG[2         waltz16
PCPD2             80.00 usec
PLW2          15.30000019 W
PLW12          0.33006001 W
PLW13          0.21123999 W

F2 - Processing parameters
SI                 32768
SF           125.7628180 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```



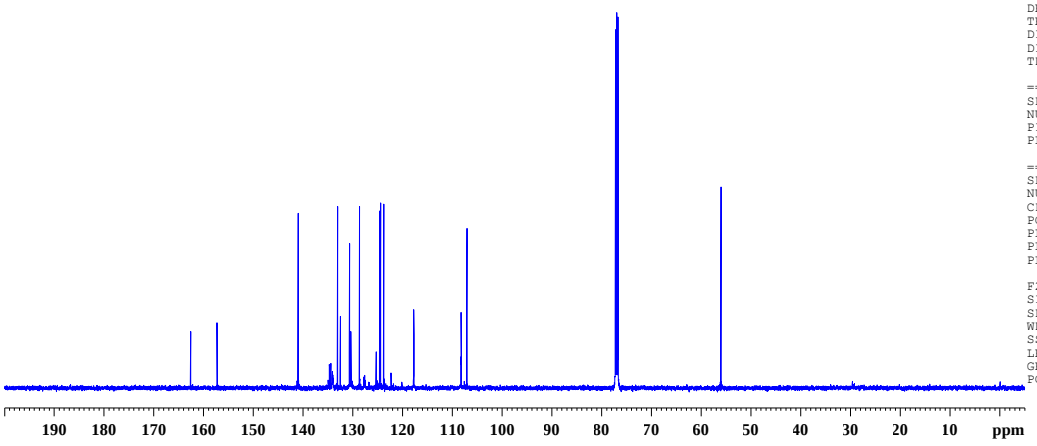


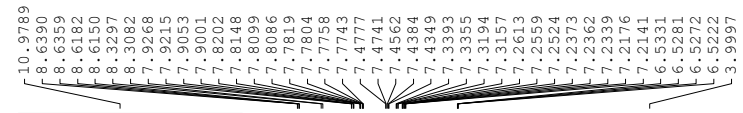

```
Current Data Parameters
NAME      4-CF3-methoxy
EXPNO                4
PROCNO               1

F2 - Acquisition Parameters
Date_           20151103
Time              12.38
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG           zg30
TD               32768
SOLVENT           CDCl3
NS                   16
DS                    2
SWH           10000.000 Hz
FIDRES        0.305176 Hz
AQ            1.6384000 sec
RG               114.76
DW               50.000 usec
DE                6.50 usec
TE               299.3 K
D1            0.50000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1        500.1525008 MHz
NUC1                1H
P1                11.75 usec
PLW1        15.30000019 W

F2 - Processing parameters
SI                65536
SF          500.1500229 MHz
WDW                  EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```

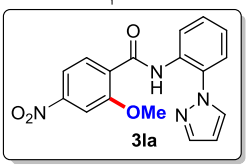




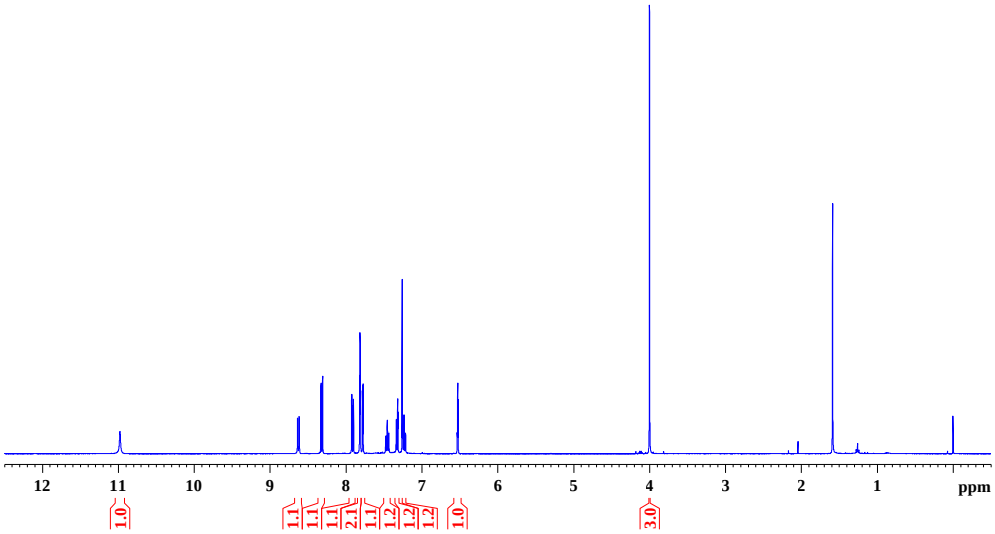

```
Lab mmb
jsk-342-4
.itm_carbonshort CDCl3 /opt/topspin iitm 11

Current Data Parameters
NAME      4-CF3-methoxy
EXPNO                18
PROCNO                1

F2 - Acquisition Parameters
Date_           20151104
Time              2.43
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG          zgpg30
TD               20480
SOLVENT           CDCl3
NS                2000
DS                   4
SWH           29761.904 Hz
FIDRES        1.453218 Hz
AQ            0.3440640 sec
RG               202.34
DW               16.800 usec
DE                6.50 usec
TE               296.5 K
D1            1.00000000 sec
D11           0.03000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1        125.7753932 MHz
NUC1                13C
P1                9.63 usec
PLW1       103.00000000 W

======== CHANNEL f2 ========
SFO2        500.1520006 MHz
NUC2                1H
CPDPRG[2         waltz16
PCPD2             80.00 usec
PLW2        15.30000019 W
PLW12        0.33006001 W
PLW13        0.21123999 W

F2 - Processing parameters
SI                32768
SF          125.7628180 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```

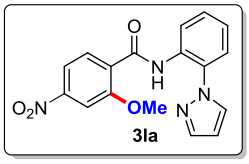




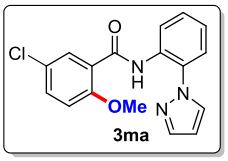



```
Current Data Parameters
NAME                  JSK-265
EXPNO                     192
PROCNO                      1

F2 - Acquisition Parameters
Date_               20150826
Time                   12.15
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     65536
SOLVENT                CDCl3
NS                        16
DS                         2
SWH                 8012.820 Hz
FIDRES              0.122266 Hz
AQ                  4.0894465 sec
RG                     200.34
DW                     62.400 usec
DE                      6.50 usec
TE                     299.0 K
D1                  0.50000000 sec
TD0                        1

======== CHANNEL f1 ========
NUC1                      1H
P1                     15.70 usec
PLW1             7.75000000 W
SFO1           400.1320007 MHz

F2 - Processing parameters
SI                     65536
SF               400.1300089 MHz
WDW                       EM
SSB          0
LB                      0.30 Hz
GB           0
PC                      1.00
```

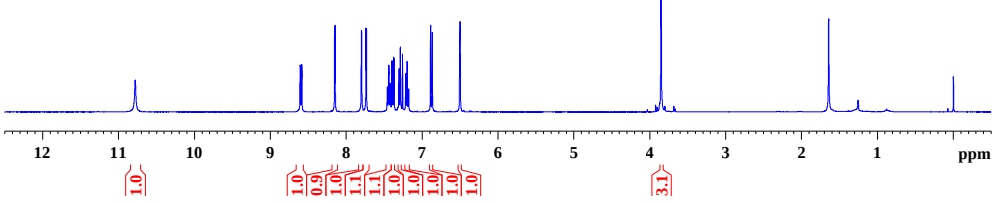




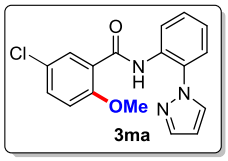

```
Lab mmb
jks-266
iitm_carbonshort CDCl3 /opt/topspin iitm 5
Current Data Parameters
NAME                  JSK-266
EXPNO                      13
PROCNO                      1

F2 - Acquisition Parameters
Date_               20150826
Time                   19.44
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG             zgpg30
TD                     20480
SOLVENT                CDCl3
NS                      2000
DS                         4
SWH                29761.904 Hz
FIDRES              1.453218 Hz
AQ                  0.3440640 sec
RG                     202.34
DW                     16.800 usec
DE                      6.50 usec
TE                     293.7 K
D1                  1.00000000 sec
D11                 0.03000000 sec
TD0                        1

======== CHANNEL f1 ========
SFO1           125.7753932 MHz
NUC1                      13C
P1                      9.63 usec
PLW1            103.00000000 W

======== CHANNEL f2 ========
SFO2           500.1520006 MHz
NUC2                      1H
CPDPRG[2             waltz16
PCPD2                  80.00 usec
PLW2            15.30000019 W
PLW12            0.33006001 W
PLW13            0.21123999 W

F2 - Processing parameters
SI                     32768
SF               125.7628180 MHz
WDW                       EM
SSB          0
LB                      1.00 Hz
GB           0
PC                      1.40
```



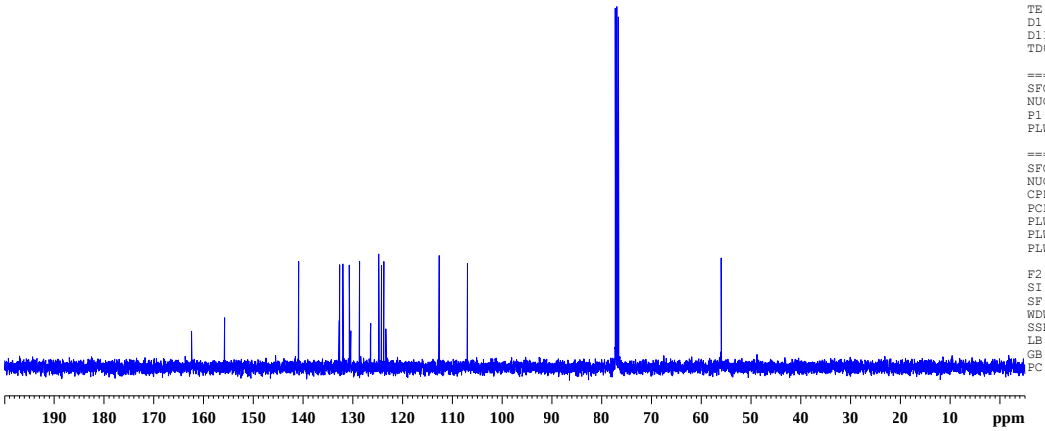

```
Current Data Parameters
NAME            mmb40416
EXPNO                124
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160416
Time               10.04
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES             0.122266 Hz
AQ              4.0894465 sec
RG                 200.34
DW                 62.400 usec
DE                  6.50 usec
TE                 299.9 K
D1              0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         400.1320007 MHz
NUC1                   1H
P1                  15.70 usec
PLW1          7.75000000 W

F2 - Processing parameters
SI                 65536
SF           400.1300093 MHz
WDW                   EM
SSB       0
LB                  0.30 Hz
GB        0
PC                  1.00
```

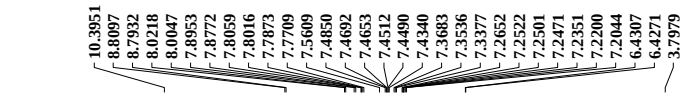


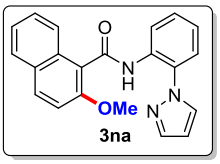

```
lab mmb-jsk-3cl-ome
iitm_carbonshort CDCl3 /opt/topspin nmr 15
```



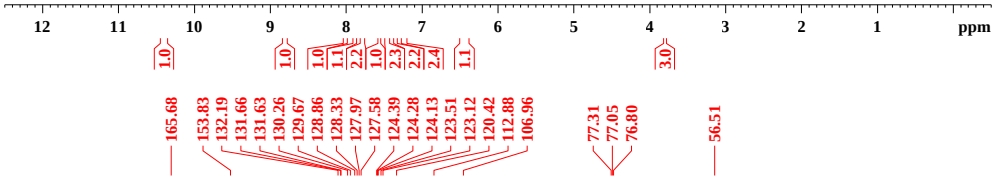

```
Current Data Parameters
NAME            mmb40416
EXPNO                125
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160416
Time               10.11
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                 16540
SOLVENT            CDCl3
NS                   256
DS                     4
SWH            24038.461 Hz
FIDRES             1.453353 Hz
AQ              0.3440320 sec
RG                 200.34
DW                 20.800 usec
DE                  6.50 usec
TE                 300.3 K
D1              1.00000000 sec
D11             0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         100.6228289 MHz
NUC1                  13C
P1                  9.25 usec
PLW1         47.00000000 W

======== CHANNEL f2 ========
SFO2         400.1316005 MHz
NUC2                   1H
CPDPRG[2         waltz16
PCPD2               90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.11863000 W

F2 - Processing parameters
SI                 32768
SF           100.6127690 MHz
WDW                   EM
SSB       0
LB                  1.00 Hz
GB        0
PC                  1.40
```



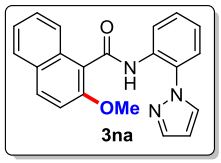


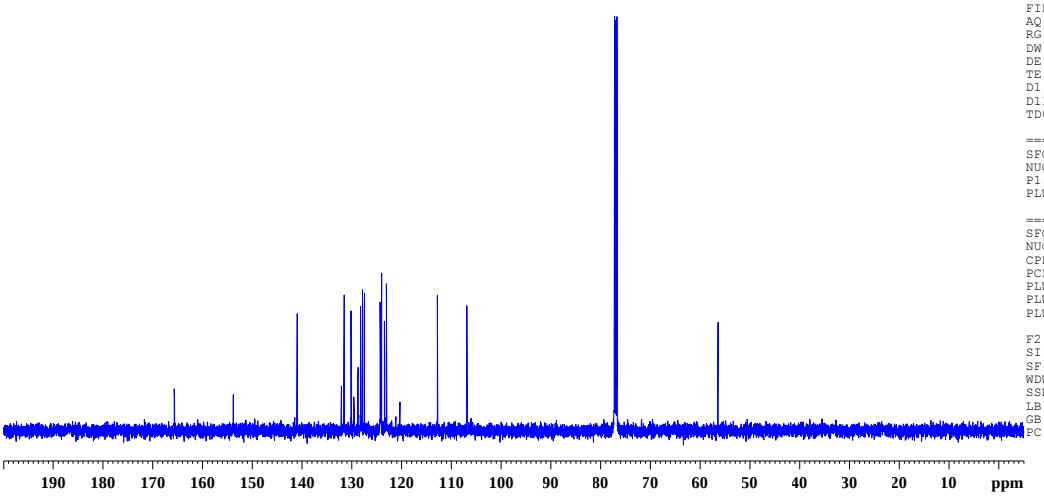


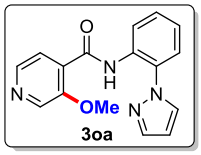

```
Current Data Parameters
NAME            1-Na-Ome
EXPNO                 90
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160122
Time               13.26
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG             zg30
TD                 32768
SOLVENT            CDCl3
NS                    32
DS                     2
SWH           10000.000 Hz
FIDRES            0.305176 Hz
AQ             1.6384000 sec
RG                124.08
DW                50.000 usec
DE                 6.50 usec
TE                301.7 K
D1             0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         500.1525008 MHz
NUC1                   1H
P1                 11.75 usec
PLW1         15.30000019 W

F2 - Processing parameters
SI                 65536
SF            500.1500259 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```



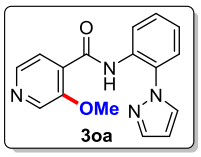

```
Lab mmb
jsk-na-ome
iitm_carbonshort CDCl3 /opt/topspin iitm 9

Current Data Parameters
NAME            1-Na-Ome
EXPNO                 91
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160122
Time               13.33
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG           zgpg30
TD                 20480
SOLVENT            CDCl3
NS                   256
DS                     4
SWH           29761.904 Hz
FIDRES            1.453218 Hz
AQ             0.3440640 sec
RG                202.34
DW                16.800 usec
DE                 6.50 usec
TE                302.3 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         125.7753932 MHz
NUC1                   13C
P1                 9.63 usec
PLW1         103.00000000 W

======== CHANNEL f2 ========
SFO2         500.1520006 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2              80.00 usec
PLW2         15.30000019 W
PLW12         0.33006001 W
PLW13         0.21123999 W

F2 - Processing parameters
SI                 32768
SF            125.7628180 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```



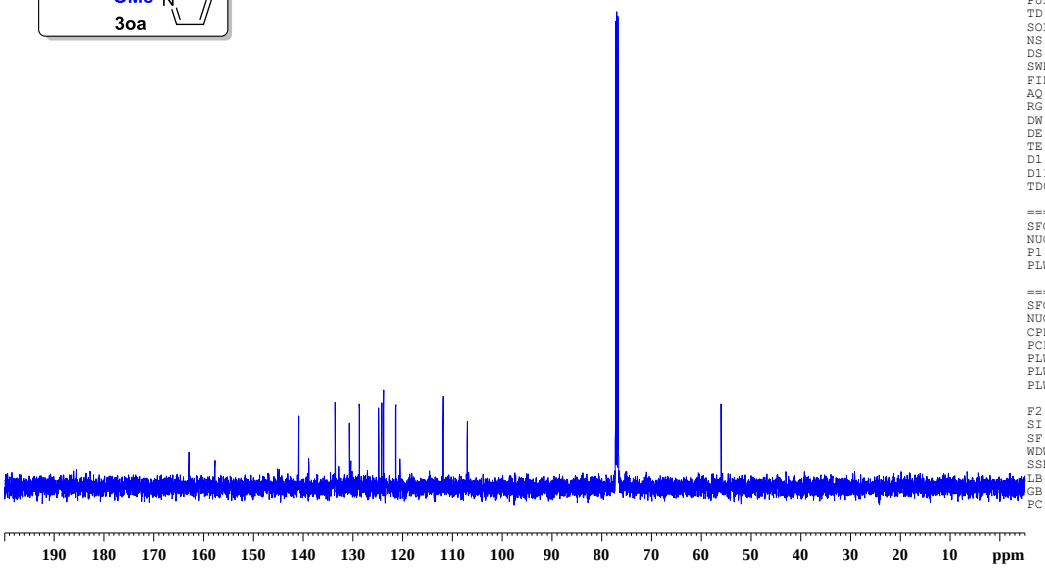


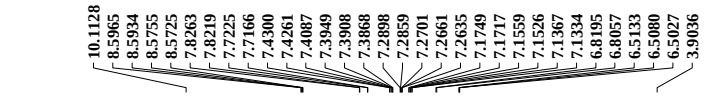


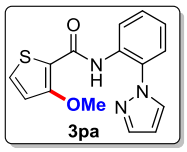

```
Current Data Parameters
NAME                  JSK-343
EXPNO                      73
PROCNO                      1

F2 - Acquisition Parameters
Date_               20151108
Time                   12.58
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                zg30
TD                    65536
SOLVENT               CDCl3
NS                       16
DS                        2
SWH                8012.820 Hz
FIDRES             0.122266 Hz
AQ                 4.0894465 sec
RG                    200.34
DW                    62.400 usec
DE                     6.50 usec
TE                    293.9 K
D1                 0.50000000 sec
TD0                         1

======== CHANNEL f1 ========
NUC1                       1H
P1                      15.70 usec
PLW1               7.75000000 W
SFO1             400.1320007 MHz

F2 - Processing parameters
SI                         65536
SF               400.1300084 MHz
WDW                           EM
SSB          0
LB                      0.30 Hz
GB           0
PC                      1.00
```

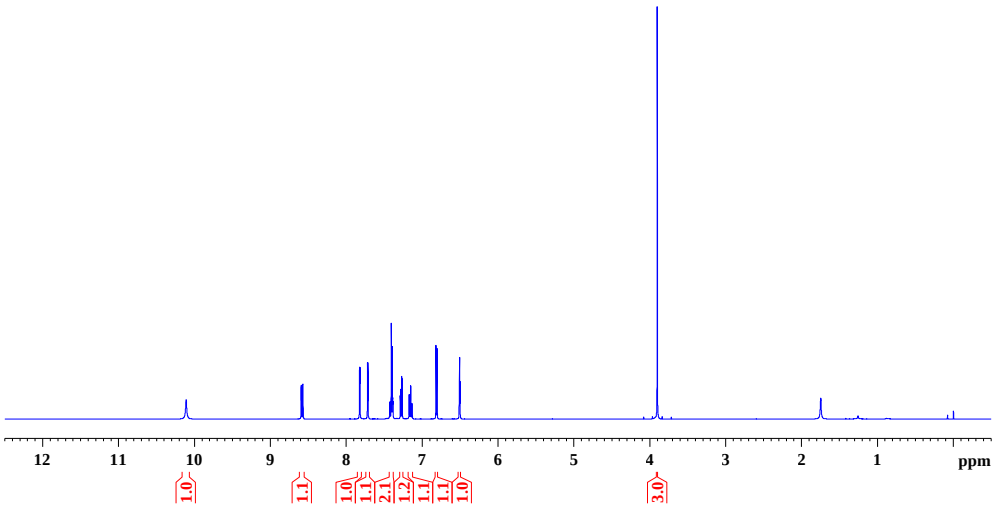

```
Lab mmb
jsk-343
iitm_carbonshort CDCl3 /opt/topspin iitm 7

Current Data Parameters
NAME                  JSK-343
EXPNO                      48
PROCNO                      1

F2 - Acquisition Parameters
Date_               20151106
Time                   15.30
INSTRUM                spect
PROBHD    5 mm PABBO BB/
PULPROG             zgpg30
TD                    20480
SOLVENT               CDCl3
NS                      256
DS                        4
SWH               29761.904 Hz
FIDRES             1.453218 Hz
AQ                 0.3440640 sec
RG                    202.34
DW                    16.800 usec
DE                     6.50 usec
TE                    298.6 K
D1                 1.00000000 sec
D11                0.03000000 sec
TD0                         1

======== CHANNEL f1 ========
SFO1             125.7753932 MHz
NUC1                      13C
P1                      9.63 usec
PLW1             103.00000000 W

======== CHANNEL f2 ========
SFO2             500.1520006 MHz
NUC2                       1H
CPDPRG[2              waltz16
PCPD2                  80.00 usec
PLW2             15.30000019 W
PLW12             0.33006001 W
PLW13             0.21123999 W

F2 - Processing parameters
SI                         32768
SF               125.7628180 MHz
WDW                           EM
SSB          0
LB                      1.00 Hz
GB           0
PC                      1.40
```



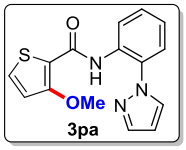




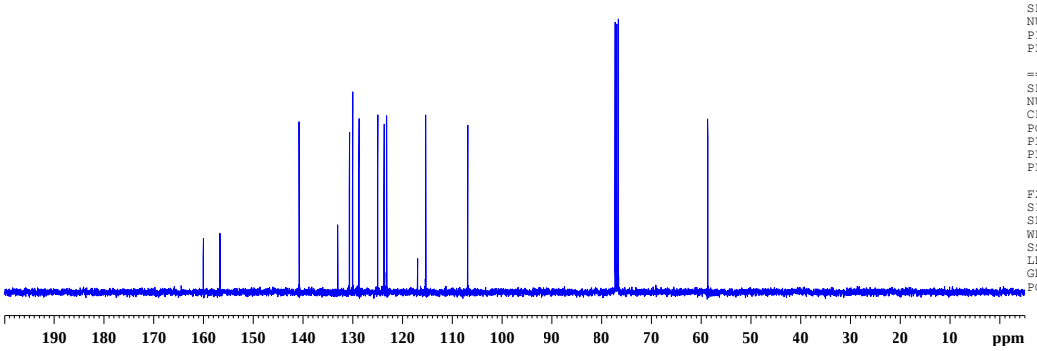

```
Current Data Parameters
NAME                  JSK
EXPNO                  71
PROCNO                  1

F2 - Acquisition Parameters
Date_           20160415
Time               7.59
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG            zg30
TD                65536
SOLVENT           CDCl3
NS                   16
DS                    2
SWH            8012.820 Hz
FIDRES            0.122266 Hz
AQ             4.0894465 sec
RG                138.85
DW                62.400 usec
DE                 6.50 usec
TE                299.8 K
D1             0.50000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         400.1320007 MHz
NUC1                 1H
P1                15.70 usec
PLW1          7.75000000 W

F2 - Processing parameters
SI                65536
SF           400.1300083 MHz
WDW                  EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```

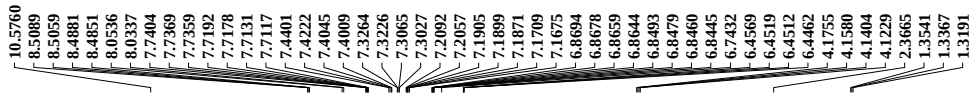


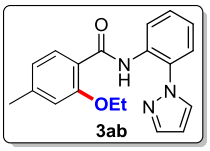

```
lab mmbjsk-2-thio-ome
iitm_carbonshort CDCl3 /opt/topspin nmr 3
```



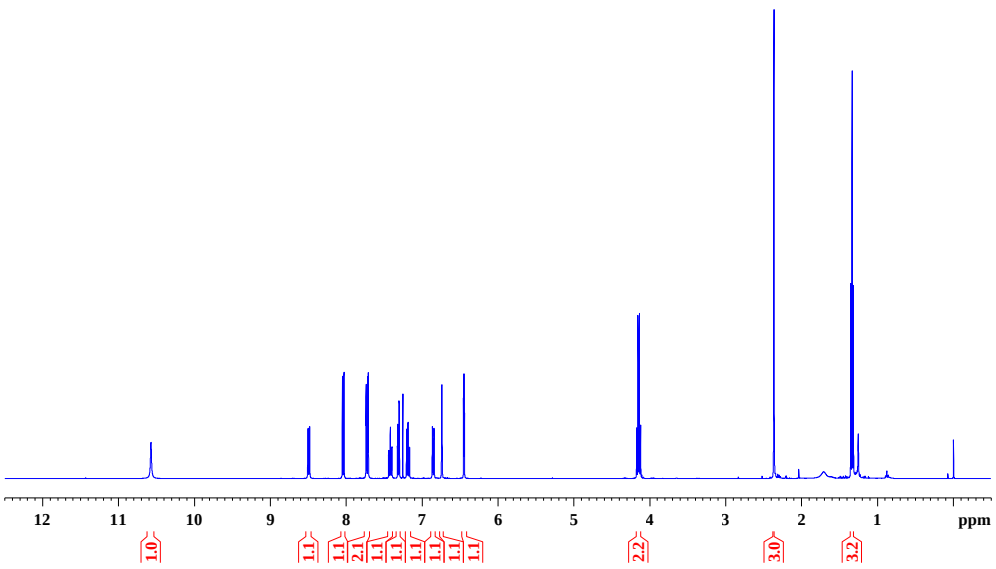

```
Current Data Parameters
NAME                  JSK
EXPNO                  72
PROCNO                  1

F2 - Acquisition Parameters
Date_           20160415
Time               8.12
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                16540
SOLVENT           CDCl3
NS                  512
DS                    4
SWH           24038.461 Hz
FIDRES            1.453353 Hz
AQ             0.3440320 sec
RG                200.34
DW                20.800 usec
DE                 6.50 usec
TE                300.2 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         100.6228289 MHz
NUC1                13C
P1                 9.25 usec
PLW1          47.00000000 W

======== CHANNEL f2 ========
SFO2         400.1316005 MHz
NUC2                 1H
CPDPRG[2          waltz16
PCPD2             90.00 usec
PLW2           7.75000000 W
PLW12          0.23583999 W
PLW13          0.11863000 W

F2 - Processing parameters
SI                32768
SF           100.6127690 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```



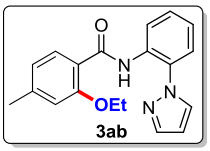


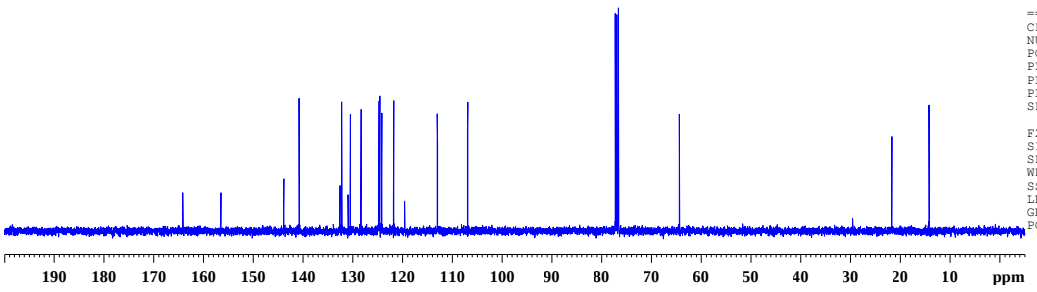


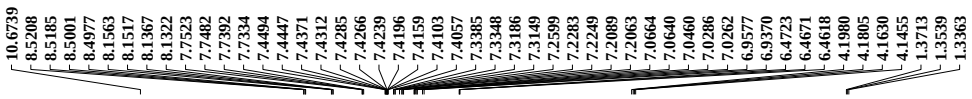

```
Current Data Parameters
NAME                  JSK-263
EXPNO                     155
PROCNO                      1

F2 - Acquisition Parameters
Date_              20150823
Time                  10.52
INSTRUM               spect
PROBHD    5 mm PABBO BB-
PULPROG                zg30
TD                    65536
SOLVENT               CDCl3
NS                       16
DS                        2
SWH                8012.820 Hz
FIDRES             0.122266 Hz
AQ                 4.0894465 sec
RG                    138.85
DW                    62.400 usec
DE                     6.50 usec
TE                    299.0 K
D1                 0.50000000 sec
TD0                         1

======== CHANNEL f1 ========
NUC1                       1H
P1                      15.70 usec
PLW1               7.75000000 W
SFO1             400.1320007 MHz

F2 - Processing parameters
SI                        65536
SF                400.1300103 MHz
WDW                          EM
SSB             0
LB                       0.30 Hz
GB              0
PC                       1.00
```

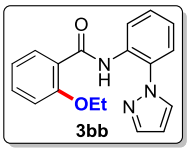



```
lab mmb-jsk-263
iitm_carbonshort CDCl3 /opt/topspin nmr 9

Current Data Parameters
NAME                  JSK-263
EXPNO                     156
PROCNO                      1

F2 - Acquisition Parameters
Date_              20150823
Time                  11.00
INSTRUM               spect
PROBHD    5 mm PABBO BB-
PULPROG               zgpg30
TD                    16540
SOLVENT               CDCl3
NS                      256
DS                        4
SWH               24038.461 Hz
FIDRES             1.453353 Hz
AQ                 0.3440320 sec
RG                    200.34
DW                    20.800 usec
DE                     6.50 usec
TE                    299.7 K
D1                 1.00000000 sec
D11                0.03000000 sec
TD0                         1

======== CHANNEL f1 ========
NUC1                      13C
P1                      9.25 usec
PLW1              47.00000000 W
SFO1             100.6228289 MHz

======== CHANNEL f2 ========
CPDPRG[2             waltz16
NUC2                       1H
PCPD2                  90.00 usec
PLW2               7.75000000 W
PLW12              0.23583999 W
PLW13              0.19103000 W
SFO2             400.1316005 MHz

F2 - Processing parameters
SI                        32768
SF                100.6127690 MHz
WDW                          EM
SSB             0
LB                       1.00 Hz
GB              0
PC                       1.40
```

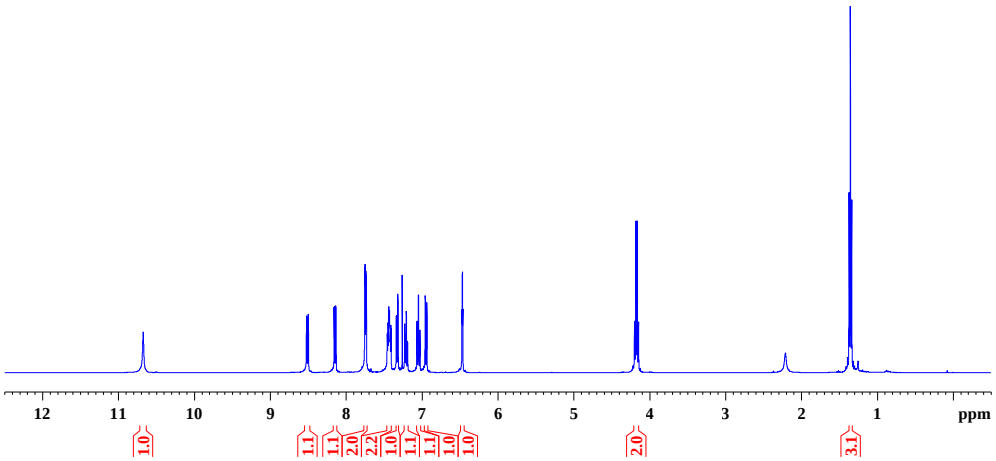




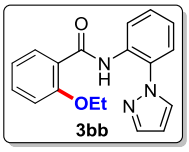




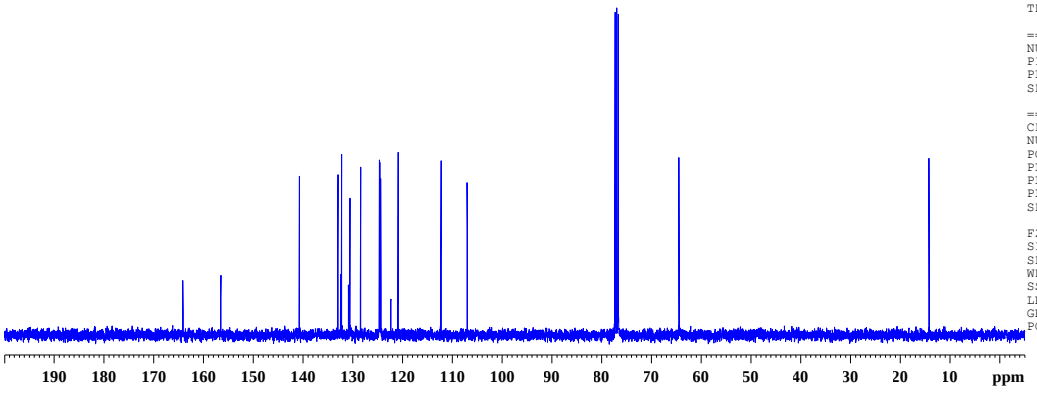

```
Current Data Parameters
NAME            ph-ethyl
EXPNO                 34
PROCNO                 1

F2 - Acquisition Parameters
Date_           20151009
Time                5.23
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES          0.122266 Hz
AQ              4.0894465 sec
RG                124.58
DW                62.400 usec
DE                 6.50 usec
TE                293.2 K
D1             0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                15.70 usec
PLW1          7.75000000 W
SFO1        400.1320007 MHz

F2 - Processing parameters
SI                 65536
SF           400.1300094 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```

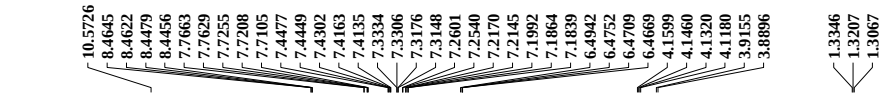


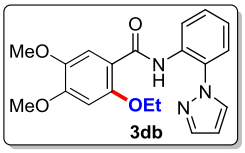

```
lab mmbjsk-311
iitm_carbonshort CDCl3 /opt/topspin nmr 12
```



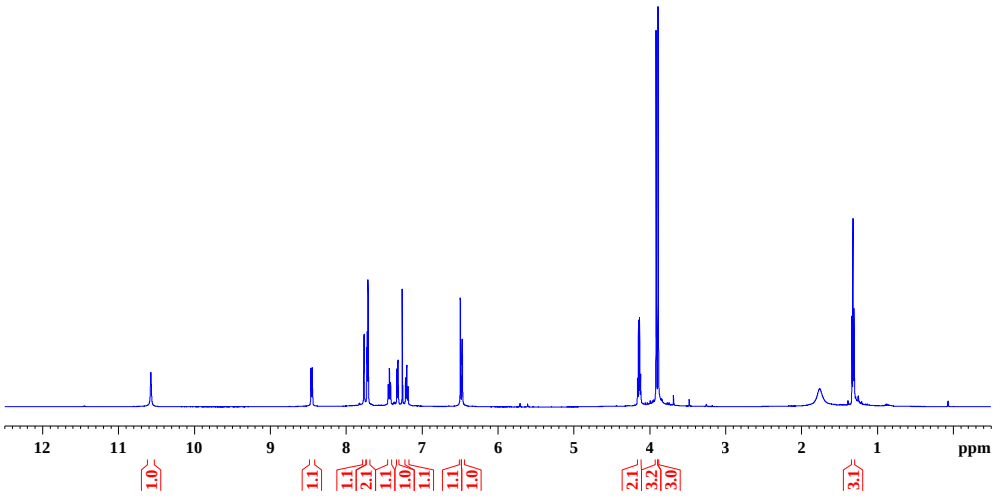

```
Current Data Parameters
NAME            ph-ethyl
EXPNO                 35
PROCNO                 1

F2 - Acquisition Parameters
Date_           20151009
Time                5.30
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                 16540
SOLVENT            CDCl3
NS                   256
DS                     4
SWH            24038.461 Hz
FIDRES          1.453353 Hz
AQ              0.3440320 sec
RG                200.34
DW                20.800 usec
DE                 6.50 usec
TE                294.0 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                 13C
P1                 9.25 usec
PLW1          47.00000000 W
SFO1         100.6228289 MHz

======== CHANNEL f2 ========
CPDPRG[2          waltz16
NUC2                  1H
PCPD2             90.00 usec
PLW2           7.75000000 W
PLW12          0.23583999 W
PLW13          0.19103000 W
SFO2         400.1316005 MHz

F2 - Processing parameters
SI                 32768
SF           100.6127690 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```



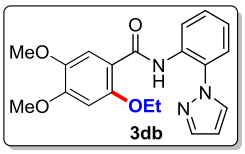


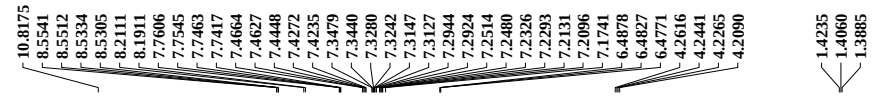


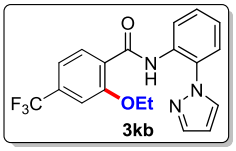

```
Current Data Parameters
NAME      3,4-dimethyl ethyl
EXPNO                   27
PROCNO                   1

F2 - Acquisition Parameters
Date_           20151021
Time              13.53
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG           zg30
TD                32768
SOLVENT           CDCl3
NS                   32
DS                    2
SWH           10000.000 Hz
FIDRES         0.305176 Hz
AQ            1.6384000 sec
RG               138.53
DW               50.000 usec
DE                6.50 usec
TE               298.5 K
D1            0.50000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         500.1525008 MHz
NUC1                1H
P1                11.75 usec
PLW1         15.30000019 W

F2 - Processing parameters
SI                65536
SF           500.1500223 MHz
WDW                EM
SSB       0
LB               0.30 Hz
GB        0
PC               1.00
```



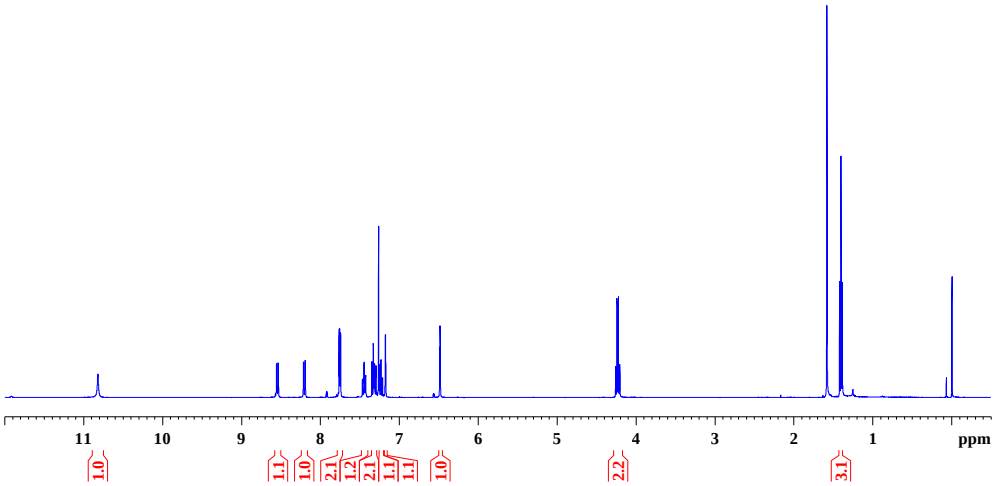

```
Lab mmb
jsk-333-1
iitm_carbonshort CDCl3 /opt/topspin iitm 6

Current Data Parameters
NAME      3,4-dimethyl ethyl
EXPNO                   28
PROCNO                   1

F2 - Acquisition Parameters
Date_           20151021
Time              14.06
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG           zgpg30
TD                20480
SOLVENT           CDCl3
NS                  512
DS                    4
SWH           29761.904 Hz
FIDRES         1.453218 Hz
AQ            0.3440640 sec
RG               202.34
DW               16.800 usec
DE                6.50 usec
TE               299.2 K
D1            1.00000000 sec
D11           0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         125.7753932 MHz
NUC1                13C
P1                9.63 usec
PLW1         103.00000000 W

======== CHANNEL f2 ========
SFO2         500.1520006 MHz
NUC2                1H
CPDPRG[2          waltz16
PCPD2             80.00 usec
PLW2         15.30000019 W
PLW12         0.33006001 W
PLW13         0.21123999 W

F2 - Processing parameters
SI                32768
SF           125.7628180 MHz
WDW                EM
SSB       0
LB               1.00 Hz
GB        0
PC               1.40
```

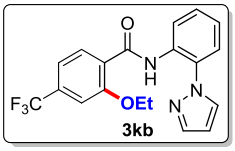




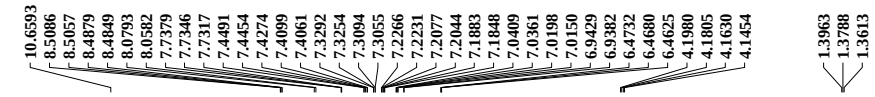


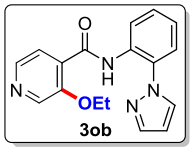

```
Current Data Parameters
NAME      JSK-378-1- 4cf3-oet
EXPNO                  202
PROCNO                   1

F2 - Acquisition Parameters
Date_           20160226
Time              23.22
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG           zg30
TD                65536
SOLVENT           CDCl3
NS                   16
DS                    2
SWH            8012.820 Hz
FIDRES         0.122266 Hz
AQ             4.0894465 sec
RG                200.34
DW                62.400 usec
DE                 6.50 usec
TE                298.4 K
D1             0.50000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         400.1320007 MHz
NUC1                 1H
P1                15.70 usec
PLW1          7.75000000 W

F2 - Processing parameters
SI                65536
SF           400.1300094 MHz
WDW                  EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```



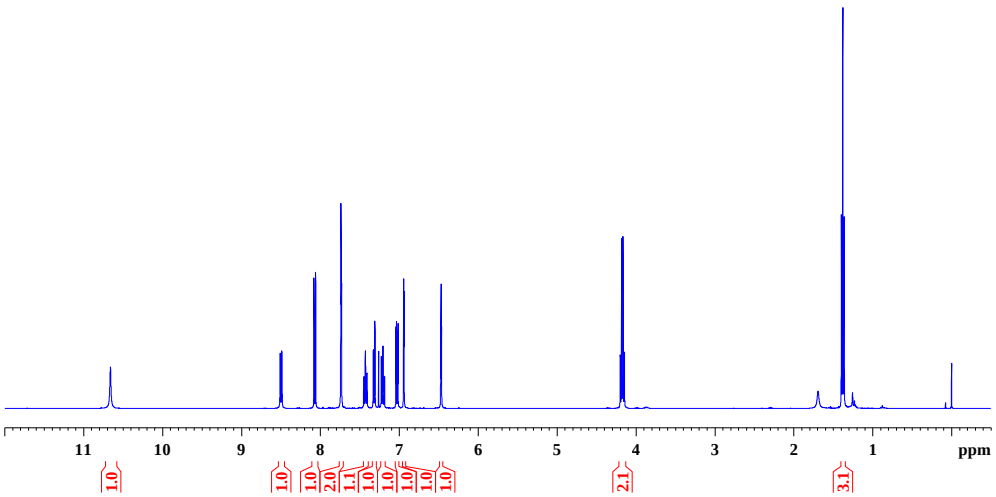



```
Lab mmb
jsk-378-1
iitm_carbonshort CDCl3 /opt/topspin iitm 6

Current Data Parameters
NAME      JSK-378-1- 4cf3-oet
EXPNO                   70
PROCNO                   1

F2 - Acquisition Parameters
Date_           20160225
Time              2.53
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG           zgpg30
TD                20480
SOLVENT           CDCl3
NS                 2000
DS                    4
SWH            29761.904 Hz
FIDRES         1.453218 Hz
AQ             0.3440640 sec
RG                202.34
DW                16.800 usec
DE                 6.50 usec
TE                294.4 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         125.7753932 MHz
NUC1                 13C
P1                 9.63 usec
PLW1        103.00000000 W

======== CHANNEL f2 ========
SFO2         500.1520006 MHz
NUC2                 1H
CPDPRG[2          waltz16
PCPD2             80.00 usec
PLW2         15.30000019 W
PLW12         0.33006001 W
PLW13         0.21123999 W

F2 - Processing parameters
SI                32768
SF           125.7628180 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```

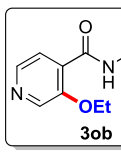


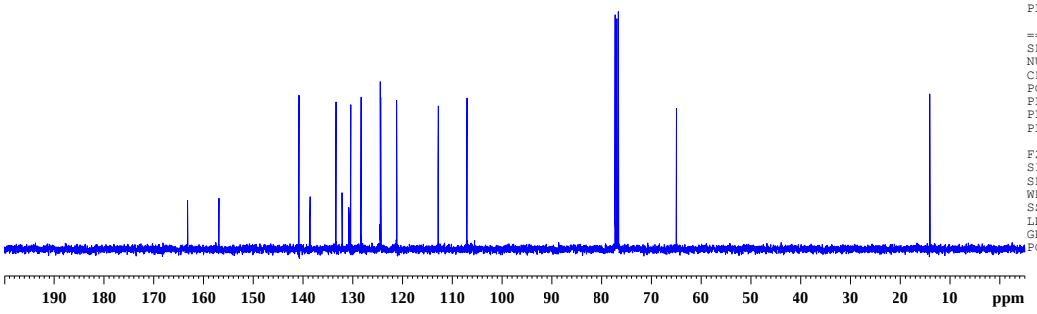


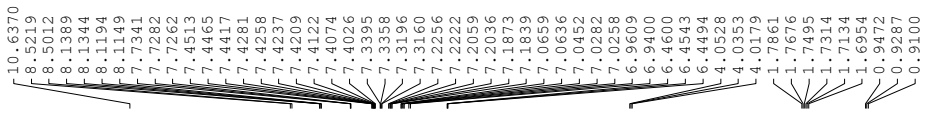

```
Current Data Parameters
NAME      JSK-363 4-py-oet
EXPNO                  80
PROCNO                  1

F2 - Acquisition Parameters
Date_           20160120
Time               6.21
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG            zg30
TD                65536
SOLVENT           CDCl3
NS                   16
DS                    2
SWH            8012.820 Hz
FIDRES            0.122266 Hz
AQ             4.0894465 sec
RG                138.85
DW                62.400 usec
DE                 6.50 usec
TE                297.8 K
D1             0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         400.1320007 MHz
NUC1                   1H
P1                 15.70 usec
PLW1          7.75000000 W

F2 - Processing parameters
SI                 65536
SF           400.1300097 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```

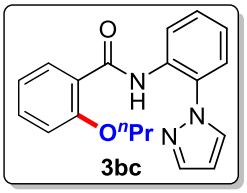



```
lab mmbjsk-363
iitm_carbonshort CDCl3 /opt/topspin nmr 4

Current Data Parameters
NAME      JSK-363 4-py-oet
EXPNO                 120
PROCNO                  1

F2 - Acquisition Parameters
Date_           20160121
Time               9.14
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                16540
SOLVENT           CDCl3
NS                  256
DS                    4
SWH           24038.461 Hz
FIDRES            1.453353 Hz
AQ             0.3440320 sec
RG                200.34
DW                20.800 usec
DE                 6.50 usec
TE                297.5 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         100.6228289 MHz
NUC1                  13C
P1                 9.25 usec
PLW1          47.00000000 W

======== CHANNEL f2 ========
SFO2         400.1316005 MHz
NUC2                   1H
CPDPRG[2           waltz16
PCPD2             90.00 usec
PLW2           7.75000000 W
PLW12          0.23583999 W
PLW13          0.11863000 W

F2 - Processing parameters
SI                 32768
SF           100.6127690 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```

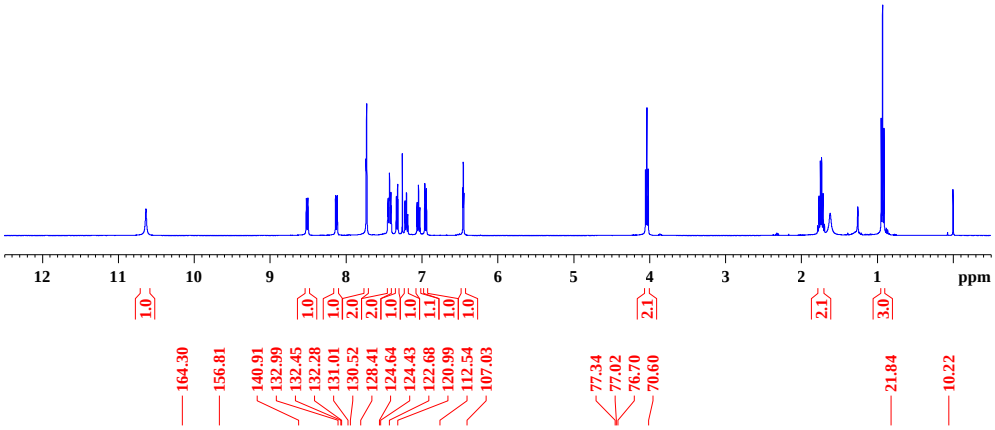




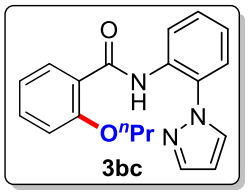




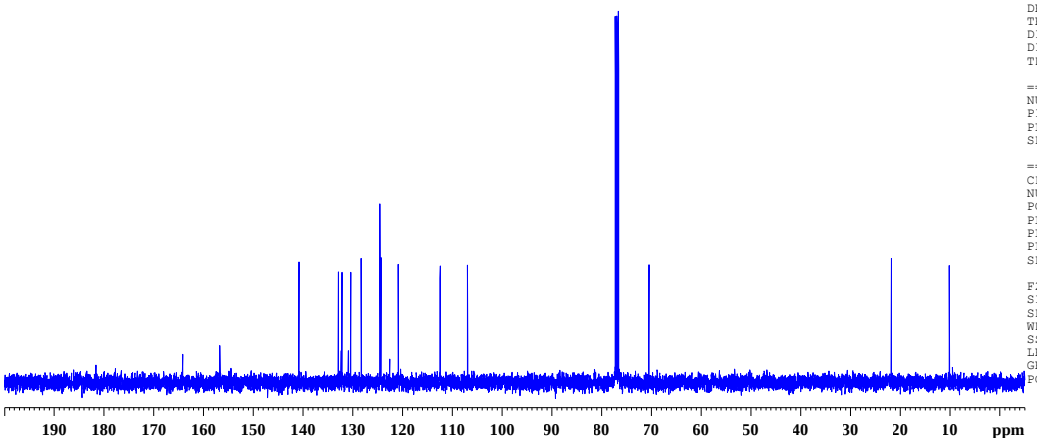

```
Current Data Parameters
NAME            ph-propyl
EXPNO                  73
PROCNO                  1

F2 - Acquisition Parameters
Date_            20150915
Time                7.45
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES          0.122266 Hz
AQ              4.0894465 sec
RG                 200.34
DW                 62.400 usec
DE                  6.50 usec
TE                 298.9 K
D1              0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                 15.70 usec
PLW1          7.75000000 W
SFO1        400.1320007 MHz

F2 - Processing parameters
SI                 65536
SF           400.1300102 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```

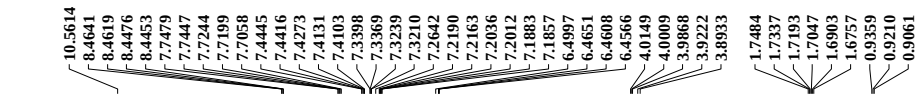


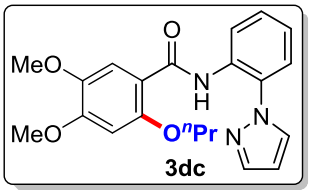

```
lab mmb-jsk-293B
iitm_carbonshort CDCl3 /opt/topspin nmr 13
```



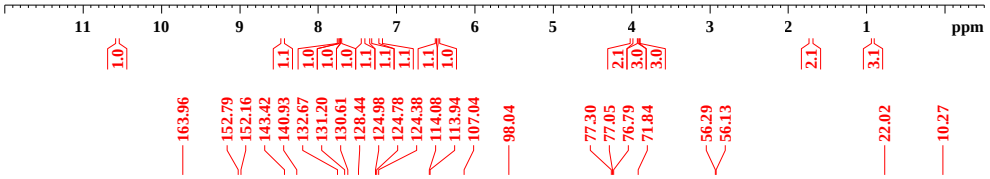

```
Current Data Parameters
NAME            ph-propyl
EXPNO                  74
PROCNO                  1

F2 - Acquisition Parameters
Date_            20150915
Time                7.53
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                 16540
SOLVENT            CDCl3
NS                   256
DS                     4
SWH            24038.461 Hz
FIDRES          1.453353 Hz
AQ              0.3440320 sec
RG                 200.34
DW                 20.800 usec
DE                  6.50 usec
TE                 299.7 K
D1              1.00000000 sec
D11             0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                 13C
P1                 9.25 usec
PLW1         47.00000000 W
SFO1        100.6228289 MHz

======== CHANNEL f2 ========
CPDPRG[2          waltz16
NUC2                  1H
PCPD2              90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.19103000 W
SFO2        400.1316005 MHz

F2 - Processing parameters
SI                 32768
SF           100.6127690 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```



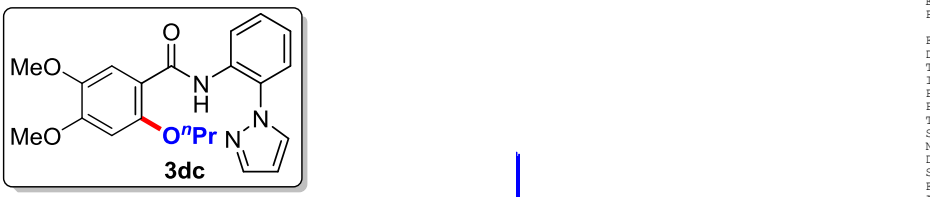


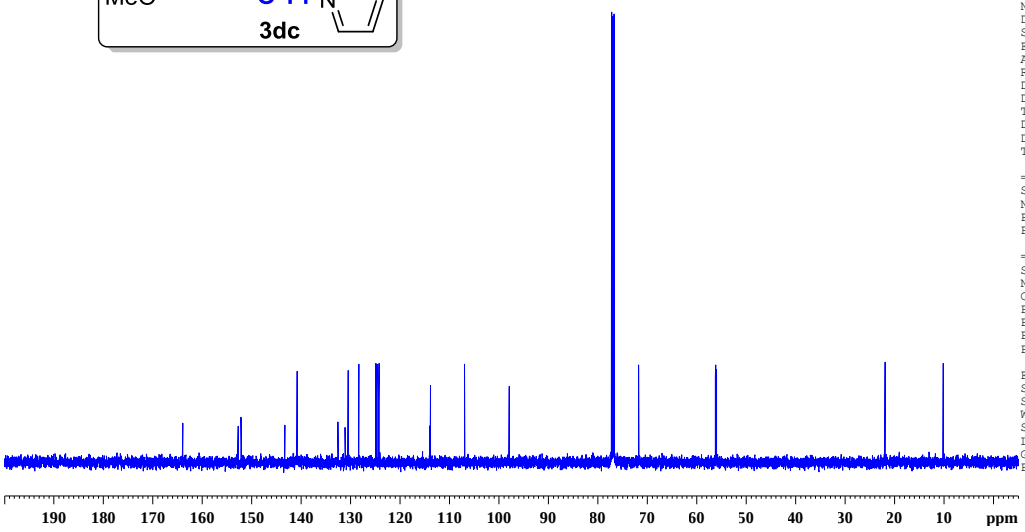


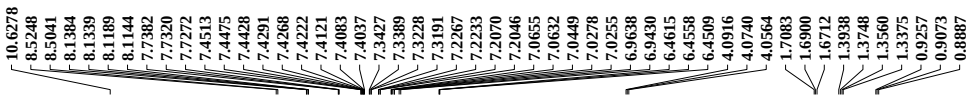

```
Current Data Parameters
NAME      3,4-dimethoxy propyl
EXPNO                  1
PROCNO                 1

F2 - Acquisition Parameters
Date_           20151103
Time              12.20
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG           zg30
TD               32768
SOLVENT          CDCl3
NS                  16
DS                   2
SWH           10000.000 Hz
FIDRES         0.305176 Hz
AQ            1.6384000 sec
RG               124.08
DW               50.000 usec
DE                6.50 usec
TE               299.2 K
D1            0.50000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1         500.1525008 MHz
NUC1                1H
P1                11.75 usec
PLW1         15.30000019 W

F2 - Processing parameters
SI                65536
SF           500.1500198 MHz
WDW                 EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```

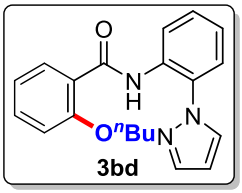



```
Lab mmb
jsk-332-3
iitm_carbonshort CDCl3 /opt/topspin iitm 6
Current Data Parameters
NAME      3,4-dimethoxy propyl
EXPNO                  2
PROCNO                 1

F2 - Acquisition Parameters
Date_           20151103
Time              12.28
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG         zgpg30
TD               20480
SOLVENT          CDCl3
NS                 256
DS                   4
SWH           29761.904 Hz
FIDRES         1.453218 Hz
AQ            0.3440640 sec
RG               202.34
DW               16.800 usec
DE                6.50 usec
TE               299.9 K
D1            1.00000000 sec
D11           0.03000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1         125.7753932 MHz
NUC1                13C
P1                 9.63 usec
PLW1       103.00000000 W

======== CHANNEL f2 ========
SFO2         500.1520006 MHz
NUC2                1H
CPDPRG[2         waltz16
PCPD2             80.00 usec
PLW2         15.30000019 W
PLW12         0.33006001 W
PLW13         0.21123999 W

F2 - Processing parameters
SI                32768
SF           125.7628180 MHz
WDW                 EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```

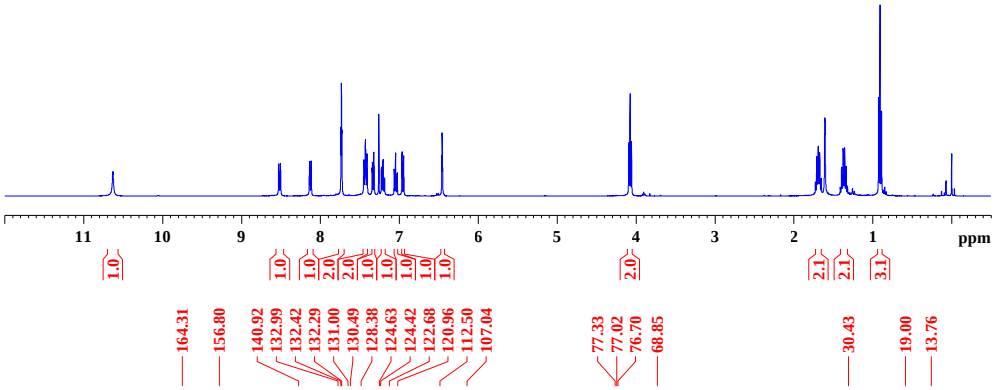




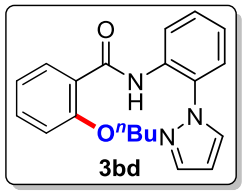




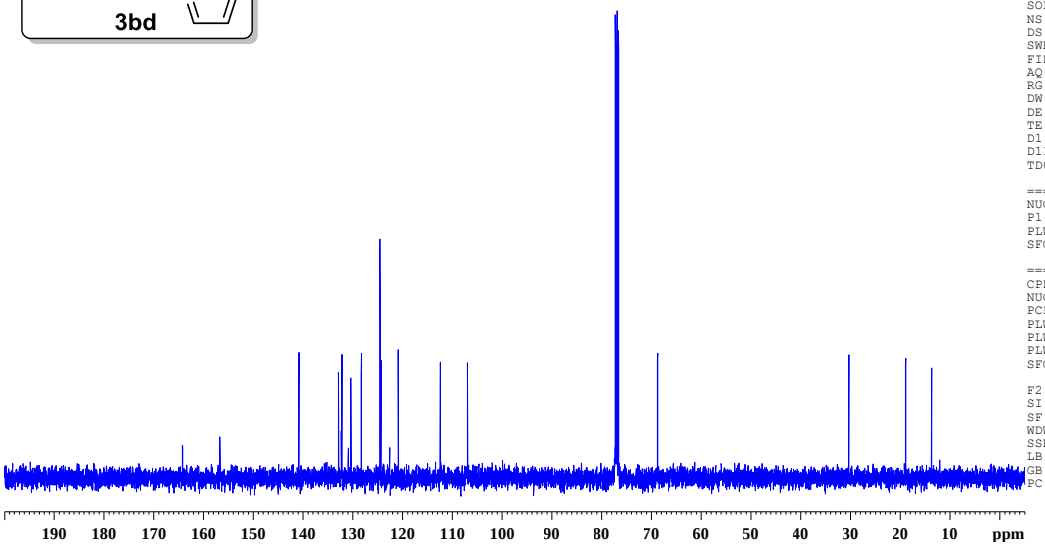

```
Current Data Parameters
NAME            ph-butyl
EXPNO                 76
PROCNO                 1

F2 - Acquisition Parameters
Date_           20150915
Time                8.02
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES             0.122266 Hz
AQ              4.0894465 sec
RG                200.34
DW                62.400 usec
DE                 6.50 usec
TE                298.9 K
D1             0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                15.70 usec
PLW1          7.75000000 W
SFO1        400.1320007 MHz

F2 - Processing parameters
SI                 65536
SF           400.1300101 MHz
WDW                   EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```

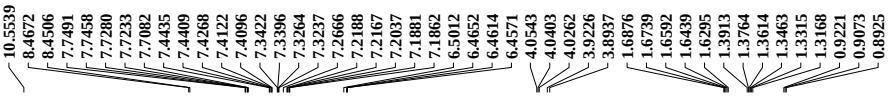


lab mmb-jsk-293C
iitm_carbonshort CDCl3 /opt/topspin nmr 14

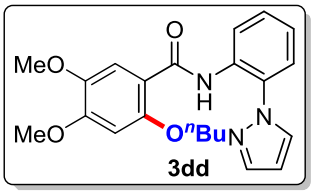


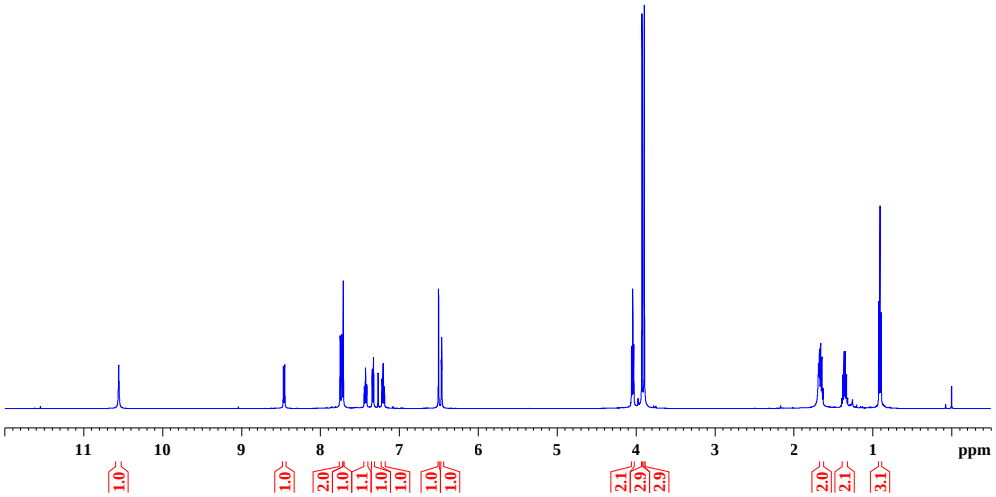

```
Current Data Parameters
NAME            ph-butyl
EXPNO                 77
PROCNO                 1

F2 - Acquisition Parameters
Date_           20150915
Time                8.09
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                 16540
SOLVENT            CDCl3
NS                   256
DS                     4
SWH            24038.461 Hz
FIDRES             1.453353 Hz
AQ              0.3440320 sec
RG                200.34
DW                20.800 usec
DE                 6.50 usec
TE                299.6 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                 13C
P1                 9.25 usec
PLW1          47.00000000 W
SFO1         100.6228289 MHz

======== CHANNEL f2 ========
CPDPRG[2          waltz16
NUC2                  1H
PCPD2              90.00 usec
PLW2           7.75000000 W
PLW12          0.23583999 W
PLW13          0.19103000 W
SFO2         400.1316005 MHz

F2 - Processing parameters
SI                 32768
SF           100.6127690 MHz
WDW                   EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```

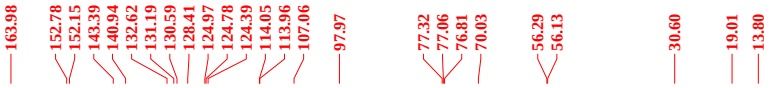




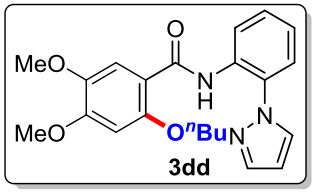

```
Current Data Parameters
NAME      3,4-dimethoxy butyl
EXPNO                   7
PROCNO                  1

F2 - Acquisition Parameters
Date_           20151103
Time              12.56
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG           zg30
TD               32768
SOLVENT           CDCl3
NS                  16
DS                   2
SWH           10000.000 Hz
FIDRES            0.305176 Hz
AQ            1.6384000 sec
RG                101.5
DW               50.000 usec
DE                6.50 usec
TE               299.0 K
D1            0.50000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1         500.1525008 MHz
NUC1               1H
P1                11.75 usec
PLW1         15.30000019 W

F2 - Processing parameters
SI                65536
SF           500.1500186 MHz
WDW                EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```

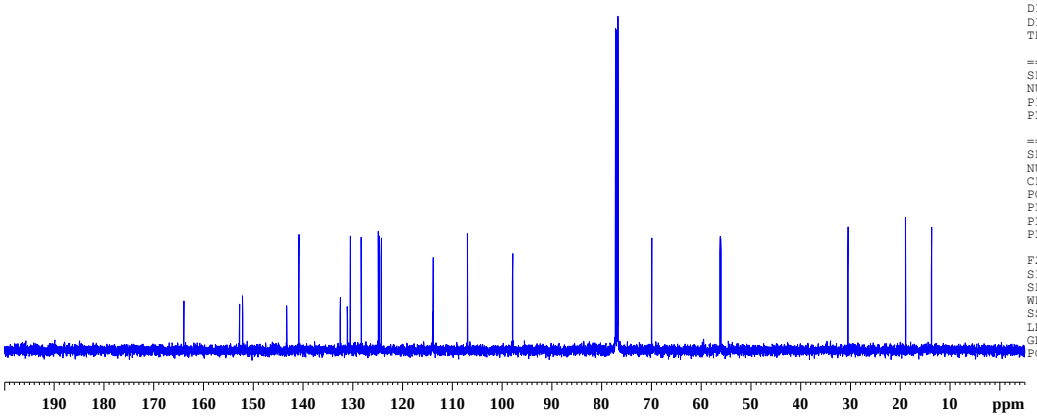


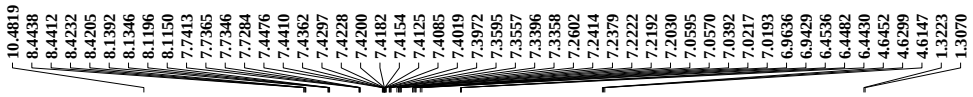


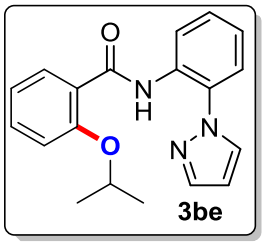


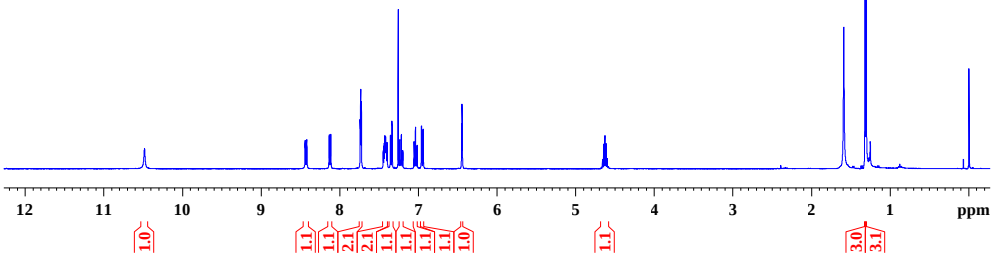

```
Lab mmb
jsk-333-2
iitm_carbonshort CDCl3 /opt/topspin iitm 7

Current Data Parameters
NAME      3,4-dimethoxy butyl
EXPNO                   8
PROCNO                  1

F2 - Acquisition Parameters
Date_           20151103
Time              13.03
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG           zgpg30
TD               20480
SOLVENT           CDCl3
NS                 256
DS                   4
SWH           29761.904 Hz
FIDRES            1.453218 Hz
AQ            0.3440640 sec
RG                202.34
DW               16.800 usec
DE                6.50 usec
TE               299.7 K
D1            1.00000000 sec
D11           0.03000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1         125.7753932 MHz
NUC1               13C
P1                9.63 usec
PLW1         103.00000000 W

======== CHANNEL f2 ========
SFO2         500.1520006 MHz
NUC2               1H
CPDPRG[2          waltz16
PCPD2             80.00 usec
PLW2         15.30000019 W
PLW12         0.33006001 W
PLW13         0.21123999 W

F2 - Processing parameters
SI                32768
SF           125.7628180 MHz
WDW                EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```



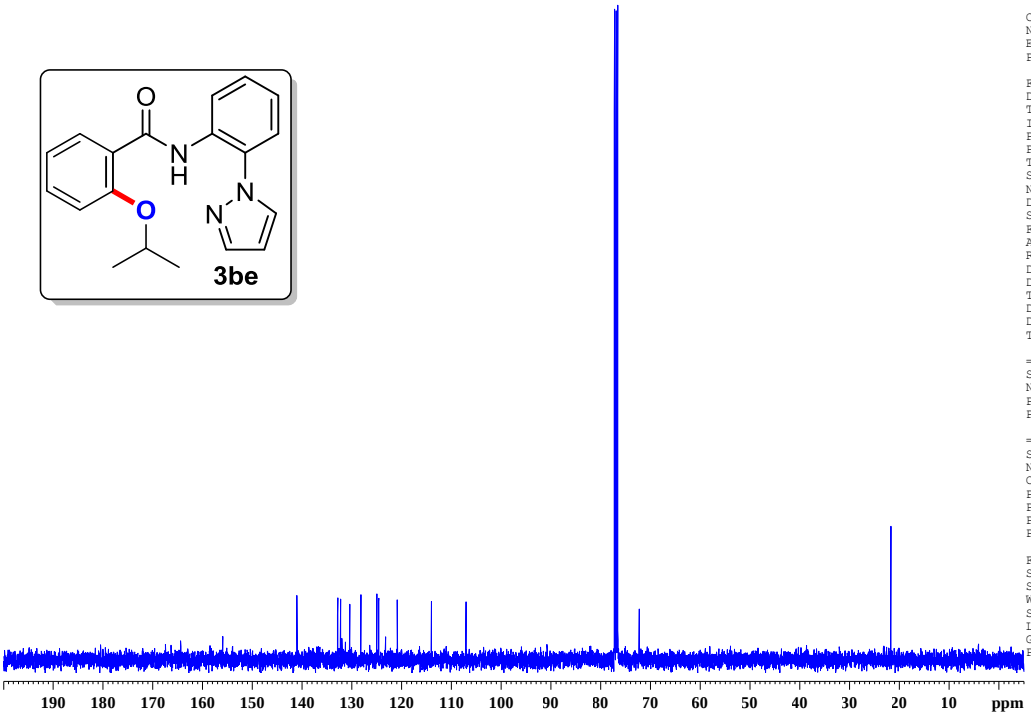




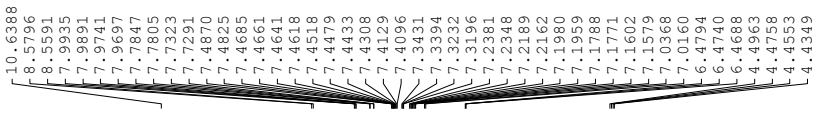


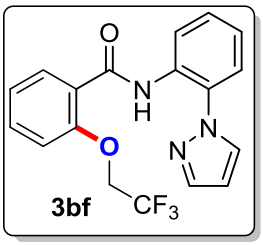



```
Current Data Parameters
NAME                  JSK
EXPNO                  97
PROCNO                  1

F2 - Acquisition Parameters
Date_           20160415
Time               10.15
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES          0.122266 Hz
AQ              4.0894465 sec
RG                200.34
DW                62.400 usec
DE                 6.50 usec
TE                299.8 K
D1             0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         400.1320007 MHz
NUC1                   1H
P1                 15.70 usec
PLW1          7.75000000 W

F2 - Processing parameters
SI                 65536
SF           400.1300095 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```

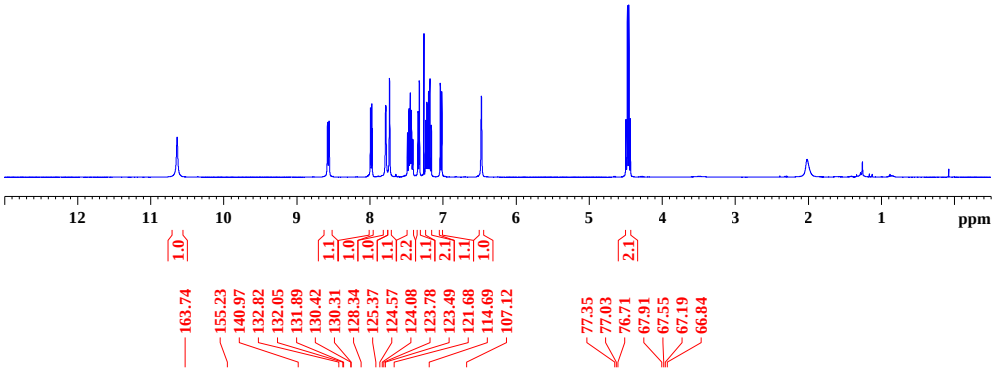


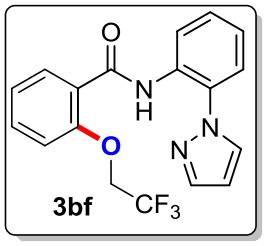

```
lab mmb-jsk-ph-ipr
iitm_carbonshort CDCl3 /opt/topspin nmr 8

Current Data Parameters
NAME              ph-iPr
EXPNO                117
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160415
Time               14.27
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                 16540
SOLVENT            CDCl3
NS                   512
DS                     4
SWH            24038.461 Hz
FIDRES          1.453353 Hz
AQ              0.3440320 sec
RG                200.34
DW                20.800 usec
DE                 6.50 usec
TE                300.1 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         100.6228289 MHz
NUC1                  13C
P1                 9.25 usec
PLW1         47.00000000 W

======== CHANNEL f2 ========
SFO2         400.1316005 MHz
NUC2                   1H
CPDPRG[2         waltz16
PCPD2             90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.11863000 W

F2 - Processing parameters
SI                 32768
SF           100.6127690 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```



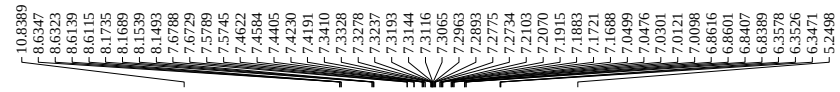


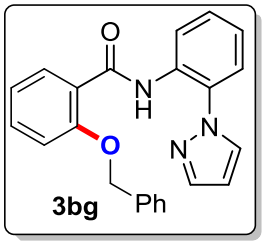

```
Current Data Parameters
NAME      ph-TF ethanol
EXPNO                 7
PROCNO                1

F2 - Acquisition Parameters
Date_           20151002
Time              18.11
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG           zg30
TD               65536
SOLVENT          CDCl3
NS                  16
DS                   2
SWH            8012.820 Hz
FIDRES         0.122266 Hz
AQ             4.0894465 sec
RG                169.77
DW                62.400 usec
DE                 6.50 usec
TE                298.7 K
D1             0.50000000 sec
TD0                   1

======== CHANNEL f1 ========
NUC1                  1H
P1                15.70 usec
PLW1          7.75000000 W
SFO1        400.1320007 MHz

F2 - Processing parameters
SI                65536
SF          400.1300094 MHz
WDW                  EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```



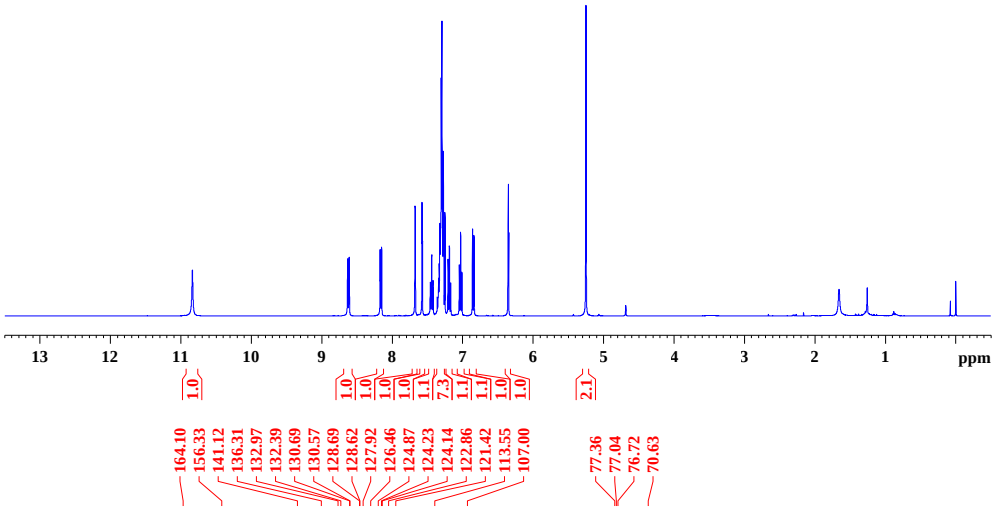



```
lab mmbjsk-306
iitm_carbonshort CDCl3 /opt/topspin nmr 16

Current Data Parameters
NAME      ph-TF ethanol
EXPNO                10
PROCNO                1

F2 - Acquisition Parameters
Date_           20151002
Time              18.26
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG          zgpg30
TD               16540
SOLVENT          CDCl3
NS                 256
DS                   4
SWH           24038.461 Hz
FIDRES         1.453353 Hz
AQ             0.3440320 sec
RG                200.34
DW                20.800 usec
DE                 6.50 usec
TE                299.6 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
NUC1                 13C
P1                9.25 usec
PLW1         47.00000000 W
SFO1        100.6228289 MHz

======== CHANNEL f2 ========
CPDPRG[2          waltz16
NUC2                  1H
PCPD2             90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.19103000 W
SFO2        400.1316005 MHz

F2 - Processing parameters
SI                32768
SF          100.6127690 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```

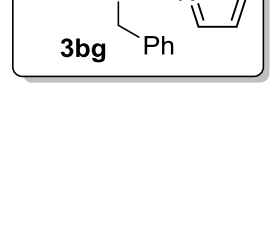


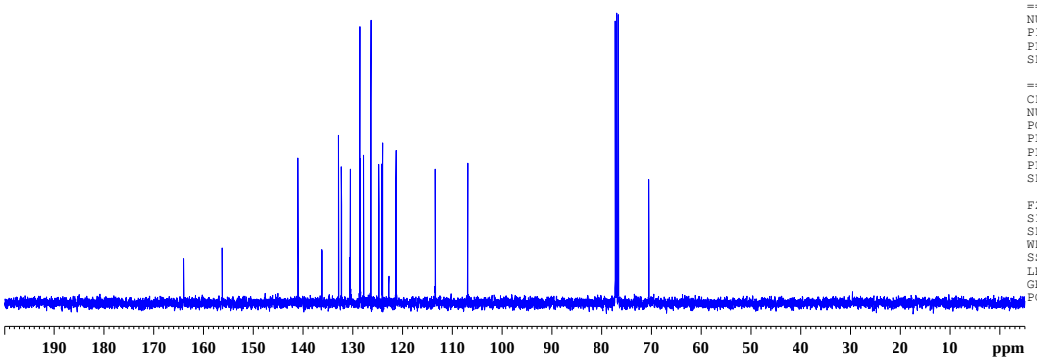


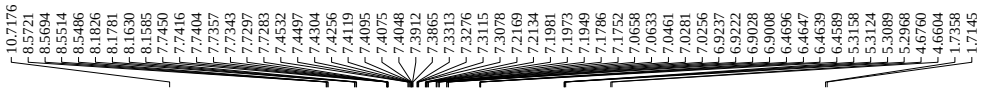

```
Current Data Parameters
NAME      JSK-307 benzyl
EXPNO                186
PROCNO                 1

F2 - Acquisition Parameters
Date_           20150929
Time              17.13
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG           zg30
TD                65536
SOLVENT           CDCl3
NS                   16
DS                    2
SWH            8012.820 Hz
FIDRES         0.122266 Hz
AQ             4.0894465 sec
RG                153.13
DW                62.400 usec
DE                 6.50 usec
TE                298.0 K
D1             0.50000000 sec
TD0                   1

======== CHANNEL f1 ========
NUC1                 1H
P1                15.70 usec
PLW1          7.75000000 W
SFO1        400.1320007 MHz

F2 - Processing parameters
SI                65536
SF          400.1300124 MHz
WDW                  EM
SSB       0
LB              0.30 Hz
GB        0
PC              1.00
```

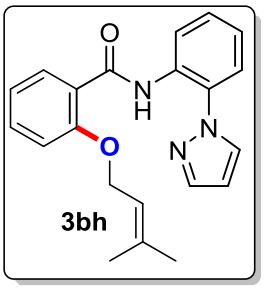



```
lab mmbjsk-307
iitm_carbonshort CDCl3 /opt/topspin nmr 1

Current Data Parameters
NAME      JSK-307 benzyl
EXPNO                187
PROCNO                 1

F2 - Acquisition Parameters
Date_           20150929
Time              17.15
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG         zgpg30
TD                16540
SOLVENT           CDCl3
NS                  256
DS                    4
SWH           24038.461 Hz
FIDRES         1.453353 Hz
AQ             0.3440320 sec
RG                200.34
DW                20.800 usec
DE                 6.50 usec
TE                298.1 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
NUC1                13C
P1                 9.25 usec
PLW1         47.00000000 W
SFO1        100.6228289 MHz

======== CHANNEL f2 ========
CPDPRG[2         waltz16
NUC2                 1H
PCPD2             90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.19103000 W
SFO2        400.1316005 MHz

F2 - Processing parameters
SI                32768
SF          100.6127690 MHz
WDW                  EM
SSB       0
LB              1.00 Hz
GB        0
PC              1.40
```

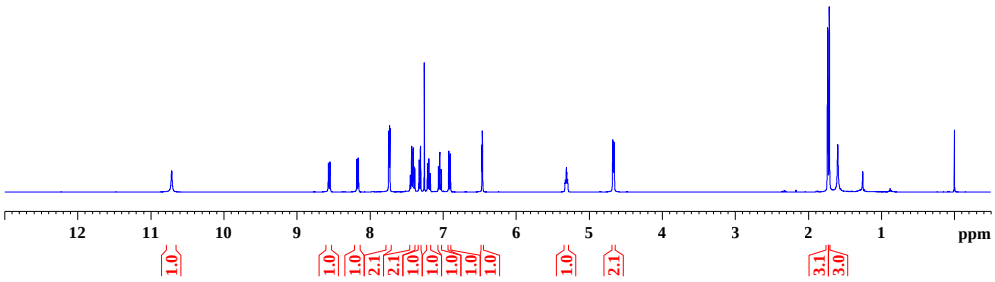




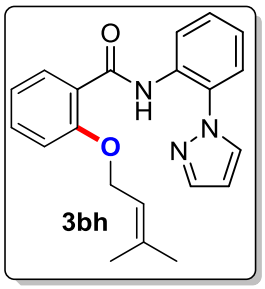




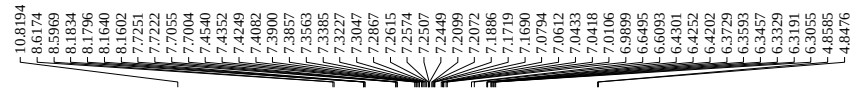

```
Current Data Parameters
NAME                  JSK-295
EXPNO                     158
PROCNO                      1

F2 - Acquisition Parameters
Date_              20150919
Time                   6.31
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                zg30
TD                    65536
SOLVENT               CDCl3
NS                       16
DS                        2
SWH                8012.820 Hz
FIDRES             0.122266 Hz
AQ                 4.0894465 sec
RG                    200.34
DW                    62.400 usec
DE                     6.50 usec
TE                    298.4 K
D1                 0.50000000 sec
TD0                         1

======== CHANNEL f1 ========
NUC1                       1H
P1                      15.70 usec
PLW1               7.75000000 W
SFO1             400.1320007 MHz

F2 - Processing parameters
SI                        65536
SF                400.1300098 MHz
WDW                          EM
SSB          0
LB                      0.30 Hz
GB           0
PC                      1.00
```

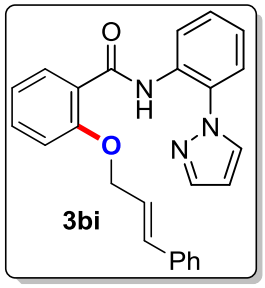



```
lab mmb-jsk-295
iitm_carbonshort CDCl3 /opt/topspin nmr 11
```

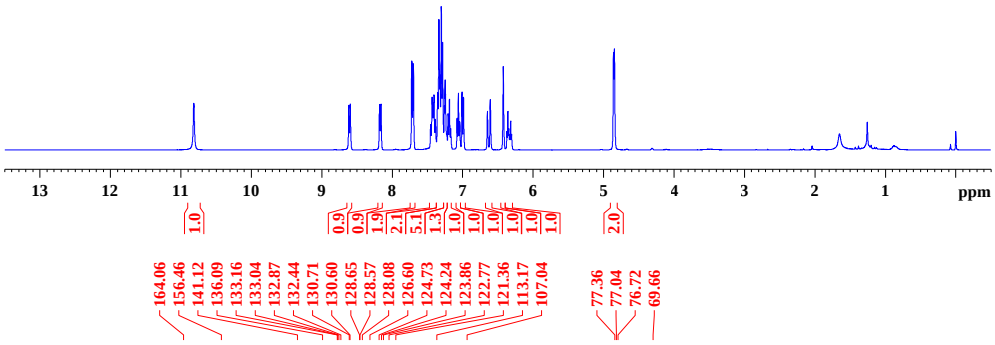



```
Current Data Parameters
NAME                  JSK-295
EXPNO                     160
PROCNO                      1

F2 - Acquisition Parameters
Date_              20150919
Time                   6.39
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG              zgpg30
TD                    16540
SOLVENT               CDCl3
NS                      608
DS                        4
SWH               24038.461 Hz
FIDRES             1.453353 Hz
AQ                 0.3440320 sec
RG                    200.34
DW                    20.800 usec
DE                     6.50 usec
TE                    299.2 K
D1                 1.00000000 sec
D11                0.03000000 sec
TD0                         1

======== CHANNEL f1 ========
NUC1                      13C
P1                      9.25 usec
PLW1              47.00000000 W
SFO1             100.6228289 MHz

======== CHANNEL f2 ========
CPDPRG[2               waltz16
NUC2                       1H
PCPD2                  90.00 usec
PLW2               7.75000000 W
PLW12              0.23583999 W
PLW13              0.19103000 W
SFO2             400.1316005 MHz

F2 - Processing parameters
SI                        32768
SF                100.6127690 MHz
WDW                          EM
SSB          0
LB                      1.00 Hz
GB           0
PC                      1.40
```

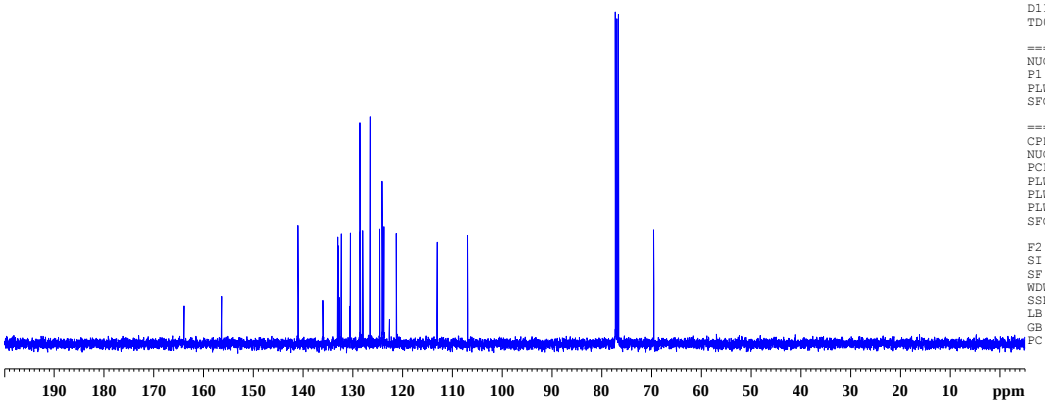


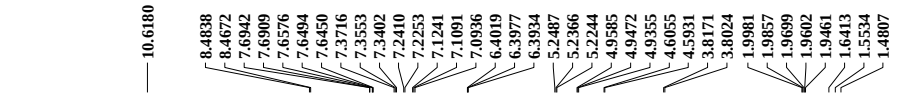


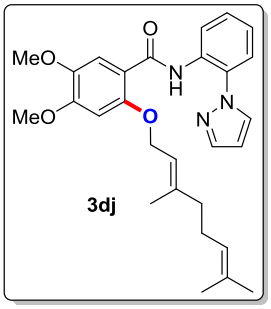

```
Current Data Parameters
NAME      JSK-308 cinnamyl
EXPNO                189
PROCNO                 1

F2 - Acquisition Parameters
Date_           20150929
Time              17.30
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG           zg30
TD               65536
SOLVENT           CDCl3
NS                   16
DS                    2
SWH            8012.820 Hz
FIDRES        0.122266 Hz
AQ            4.0894465 sec
RG               153.13
DW               62.400 usec
DE                6.50 usec
TE               298.0 K
D1            0.50000000 sec
TD0                   1

======== CHANNEL f1 ========
NUC1                 1H
P1                15.70 usec
PLW1         7.75000000 W
SFO1        400.1320007 MHz

F2 - Processing parameters
SI                65536
SF           400.1300131 MHz
WDW                  EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```



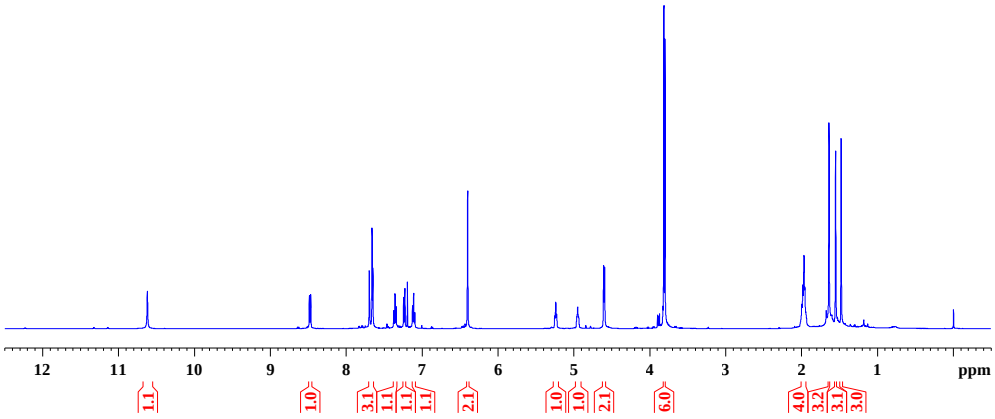

```
lab mmbjsk-308
iitm_carbonshort CDCl3 /opt/topspin nmr 2

Current Data Parameters
NAME      JSK-308 cinnamyl
EXPNO                190
PROCNO                 1

F2 - Acquisition Parameters
Date_           20150929
Time              17.37
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG         zgpg30
TD               16540
SOLVENT           CDCl3
NS                  256
DS                    4
SWH           24038.461 Hz
FIDRES         1.453353 Hz
AQ            0.3440320 sec
RG               200.34
DW               20.800 usec
DE                6.50 usec
TE               298.9 K
D1            1.00000000 sec
D11           0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
NUC1                13C
P1                 9.25 usec
PLW1        47.00000000 W
SFO1       100.6228289 MHz

======== CHANNEL f2 ========
CPDPRG[2         waltz16
NUC2                 1H
PCPD2             90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.19103000 W
SFO2        400.1316005 MHz

F2 - Processing parameters
SI                32768
SF           100.6127690 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```



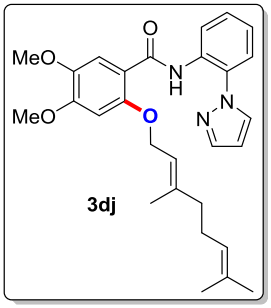




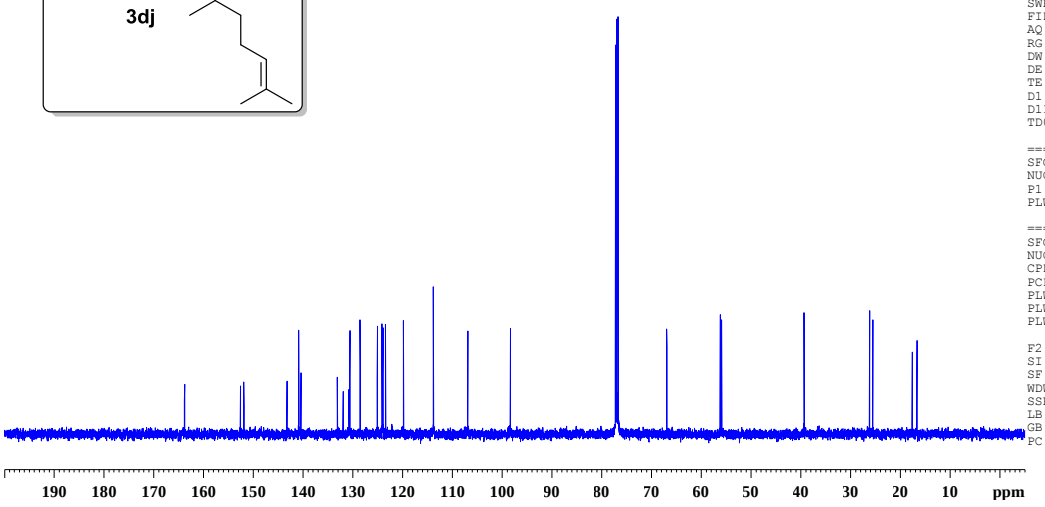

```
Current Data Parameters
NAME      JSK-331-3,4-geranyl
EXPNO                 33
PROCNO                 1

F2 - Acquisition Parameters
Date_           20151021
Time              14.48
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG           zg30
TD              32768
SOLVENT           CDCl3
NS                32
DS                 2
SWH          10000.000 Hz
FIDRES        0.305176 Hz
AQ           1.6384000 sec
RG               101.5
DW              50.000 usec
DE               6.50 usec
TE              298.9 K
D1           0.50000000 sec
TD0                1

======== CHANNEL f1 ========
SFO1        500.1525008 MHz
NUC1               1H
P1              11.75 usec
PLW1        15.30000019 W

F2 - Processing parameters
SI              65536
SF         500.1500561 MHz
WDW                EM
SSB       0
LB              0.30 Hz
GB        0
PC              1.00
```

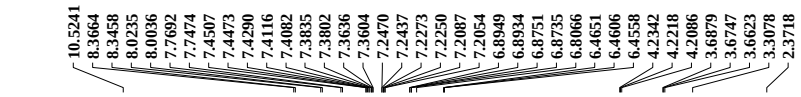


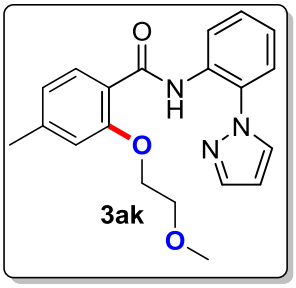

```
Lab mmb
jsk-333
iitm_carbonshort CDCl3 /opt/topspin iitm 8
```



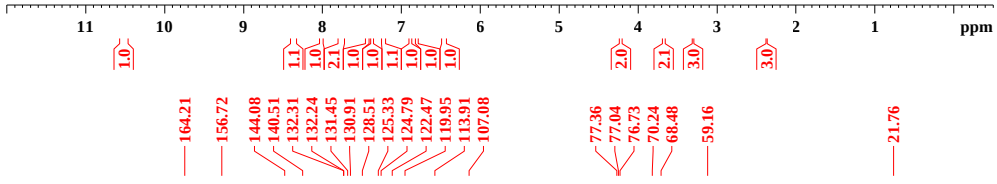

```
Current Data Parameters
NAME      JSK-331-3,4-geranyl
EXPNO                 34
PROCNO                 1

F2 - Acquisition Parameters
Date_           20151021
Time              15.02
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG          zgpg30
TD              20480
SOLVENT           CDCl3
NS                512
DS                 4
SWH          29761.904 Hz
FIDRES        1.453218 Hz
AQ           0.3440640 sec
RG              202.34
DW              16.800 usec
DE               6.50 usec
TE              299.7 K
D1           1.00000000 sec
D11          0.03000000 sec
TD0                1

======== CHANNEL f1 ========
SFO1        125.7753932 MHz
NUC1               13C
P1               9.63 usec
PLW1        103.00000000 W

======== CHANNEL f2 ========
SFO2        500.1520006 MHz
NUC2               1H
CPDPRG[2         waltz16
PCPD2           80.00 usec
PLW2        15.30000019 W
PLW12        0.33006001 W
PLW13        0.21123999 W

F2 - Processing parameters
SI              32768
SF         125.7628180 MHz
WDW                EM
SSB       0
LB              1.00 Hz
GB        0
PC              1.40
```



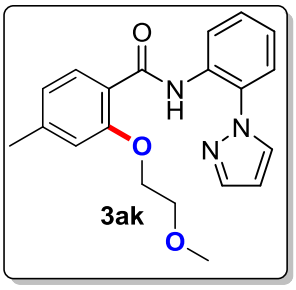




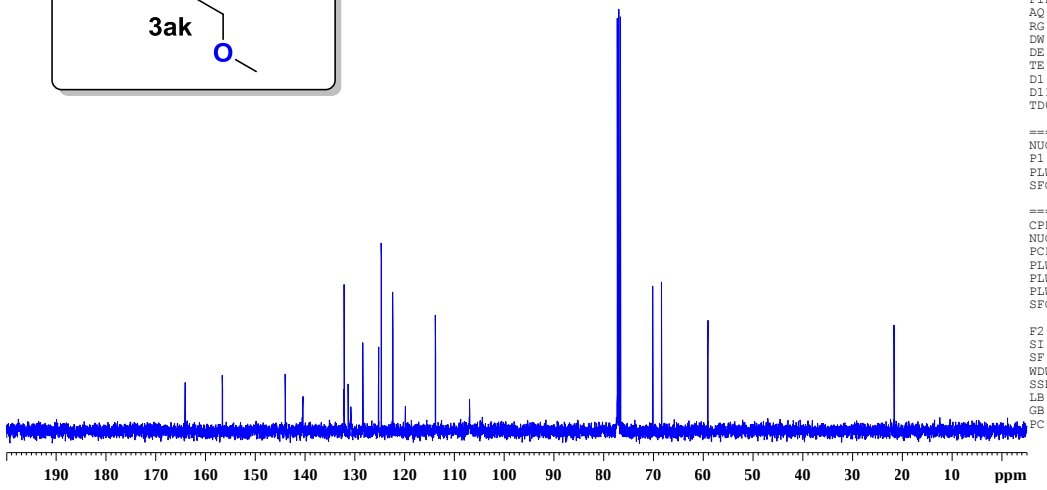

```
Current Data Parameters
NAME           JSK-320-3
EXPNO                 87
PROCNO                 1

F2 - Acquisition Parameters
Date_           20151016
Time               10.47
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES          0.122266 Hz
AQ              4.0894465 sec
RG                153.13
DW                62.400 usec
DE                 6.50 usec
TE                295.2 K
D1             0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                15.70 usec
PLW1          7.75000000 W
SFO1        400.1320007 MHz

F2 - Processing parameters
SI                 65536
SF           400.1300094 MHz
WDW                   EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```

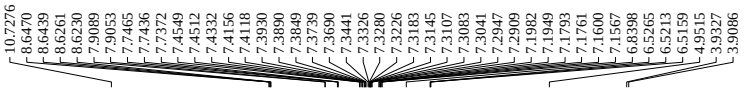


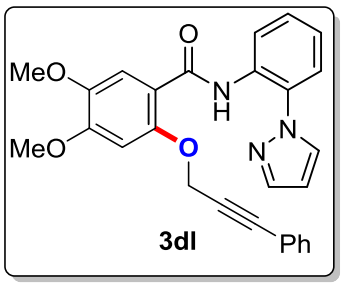

```
lab mmb-jsk-320-3
iitm_carbonshort CDCl3 /opt/topspin nmr 11
```



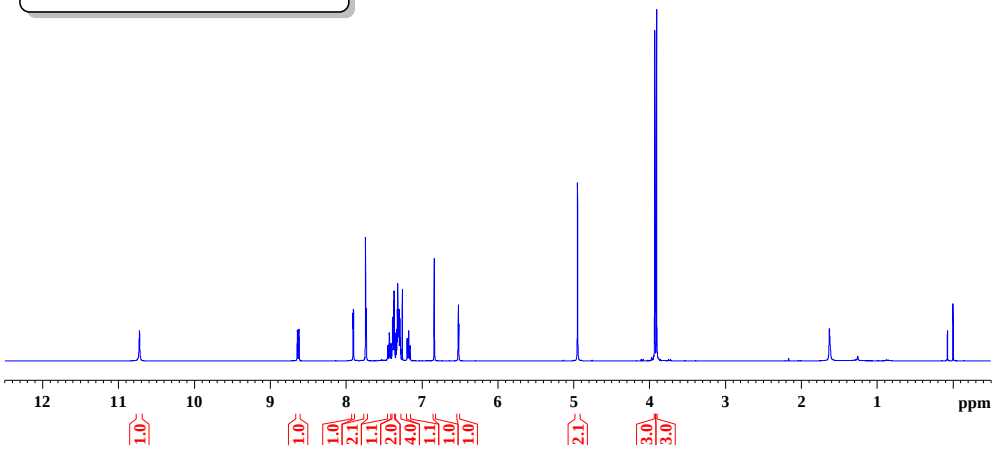

```
Current Data Parameters
NAME           JSK-320-3
EXPNO                 88
PROCNO                 1

F2 - Acquisition Parameters
Date_           20151016
Time               10.55
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                 16540
SOLVENT            CDCl3
NS                   256
DS                     4
SWH            24038.461 Hz
FIDRES          1.453353 Hz
AQ              0.3440320 sec
RG                200.34
DW                20.800 usec
DE                 6.50 usec
TE                296.0 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                 13C
P1                 9.25 usec
PLW1          47.00000000 W
SFO1         100.6228289 MHz

======== CHANNEL f2 ========
CPDPRG[2          waltz16
NUC2                  1H
PCPD2             90.00 usec
PLW2           7.75000000 W
PLW12          0.23583999 W
PLW13          0.19103000 W
SFO2         400.1316005 MHz

F2 - Processing parameters
SI                 32768
SF           100.6127690 MHz
WDW                   EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```



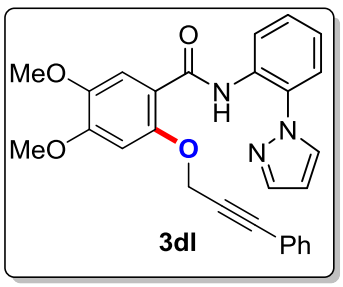


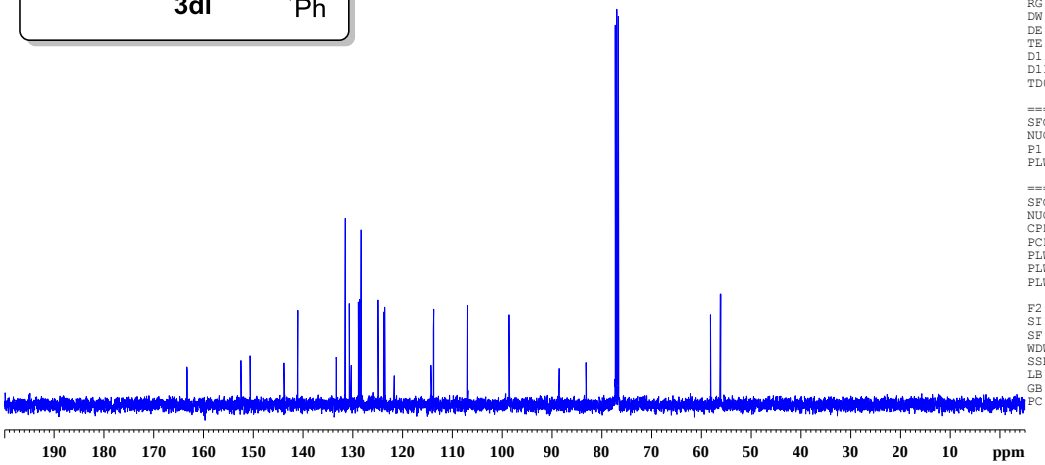


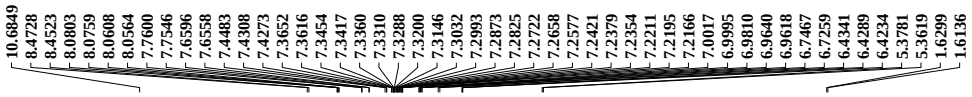

```
Current Data Parameters
NAME      JSk-34-alkynol
EXPNO                 51
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160210
Time              18.11
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG           zg30
TD               65536
SOLVENT          CDCl3
NS                  16
DS                   2
SWH            8012.820 Hz
FIDRES         0.122266 Hz
AQ             4.0894465 sec
RG               200.34
DW               62.400 usec
DE                6.50 usec
TE               297.2 K
D1            0.50000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1         400.1320007 MHz
NUC1               1H
P1               15.70 usec
PLW1          7.75000000 W

F2 - Processing parameters
SI                65536
SF           400.1300092 MHz
WDW                  EM
SSB       0
LB              0.30 Hz
GB        0
PC              1.00
```

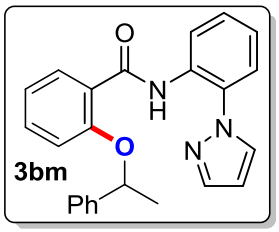



```
lab mmb-jsl-372
iitm_carbonshort CDCl3 /opt/topspin nmr 10

Current Data Parameters
NAME      JSk-34-alkynol
EXPNO                 52
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160210
Time              18.17
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG         zgpg30
TD               16540
SOLVENT          CDCl3
NS                 256
DS                   4
SWH           24038.461 Hz
FIDRES         1.453353 Hz
AQ             0.3440320 sec
RG               200.34
DW               20.800 usec
DE                6.50 usec
TE               297.6 K
D1            1.00000000 sec
D11           0.03000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1         100.6228289 MHz
NUC1               13C
P1                9.25 usec
PLW1         47.00000000 W

======== CHANNEL f2 ========
SFO2         400.1316005 MHz
NUC2               1H
CPDPRG[2         waltz16
PCPD2             90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.11863000 W

F2 - Processing parameters
SI                32768
SF           100.6127690 MHz
WDW                  EM
SSB       0
LB              1.00 Hz
GB        0
PC              1.40
```

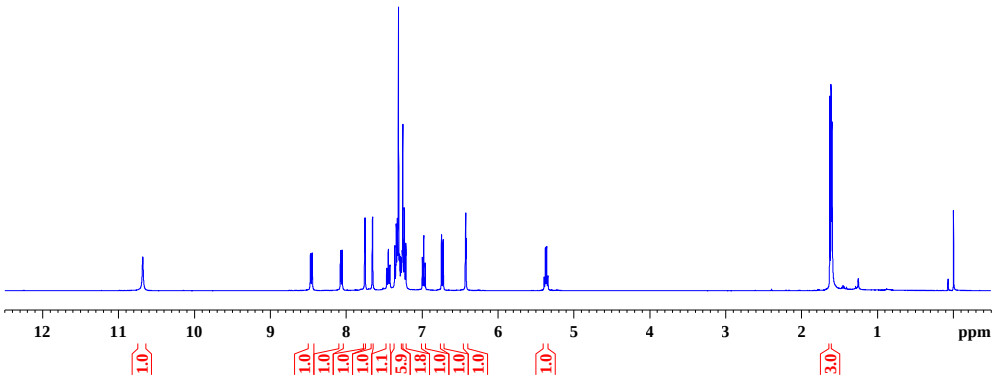




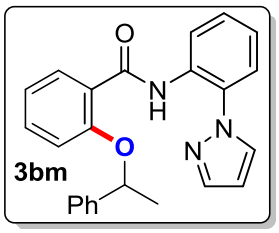




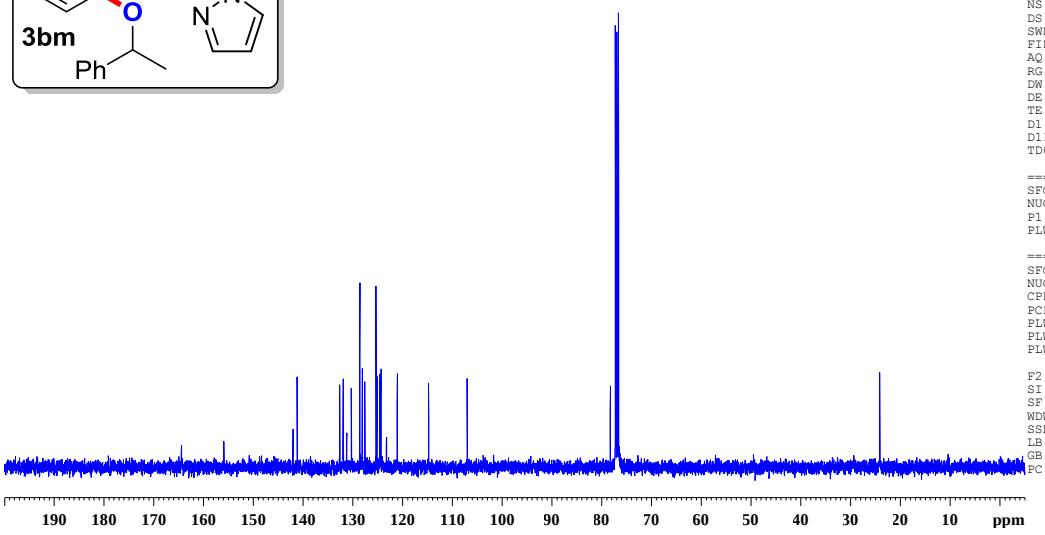

```
Current Data Parameters
NAME           JSK-377-3
EXPNO                 90
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160213
Time               22.57
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG            zg30
TD                65536
SOLVENT           CDCl3
NS                   16
DS                    2
SWH            8012.820 Hz
FIDRES        0.122266 Hz
AQ            4.0894465 sec
RG               200.34
DW               62.400 usec
DE                6.50 usec
TE               297.1 K
D1            0.50000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         400.1320007 MHz
NUC1                 1H
P1                15.70 usec
PLW1          7.75000000 W

F2 - Processing parameters
SI                65536
SF           400.1300110 MHz
WDW                  EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```

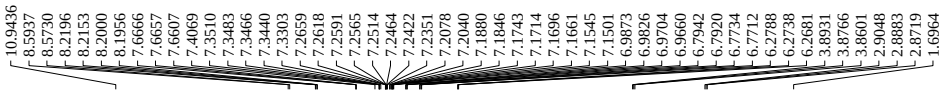


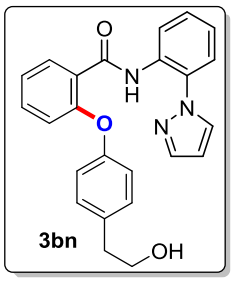

```
lab mmbjsk-377-d
iitm_carbonshort CDCl3 /opt/topspin nmr 5
```



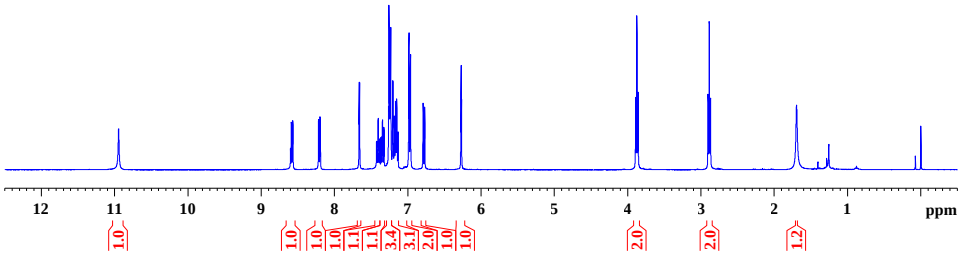

```
Current Data Parameters
NAME           JSK-377-3
EXPNO                 91
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160213
Time               23.10
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                16540
SOLVENT           CDCl3
NS                  512
DS                    4
SWH           24038.461 Hz
FIDRES         1.453353 Hz
AQ            0.3440320 sec
RG               200.34
DW               20.800 usec
DE                6.50 usec
TE               298.0 K
D1            1.00000000 sec
D11           0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         100.6228289 MHz
NUC1                 13C
P1                9.25 usec
PLW1         47.00000000 W

======== CHANNEL f2 ========
SFO2         400.1316005 MHz
NUC2                 1H
CPDPRG[2          waltz16
PCPD2            90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.11863000 W

F2 - Processing parameters
SI                32768
SF           100.6127690 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```



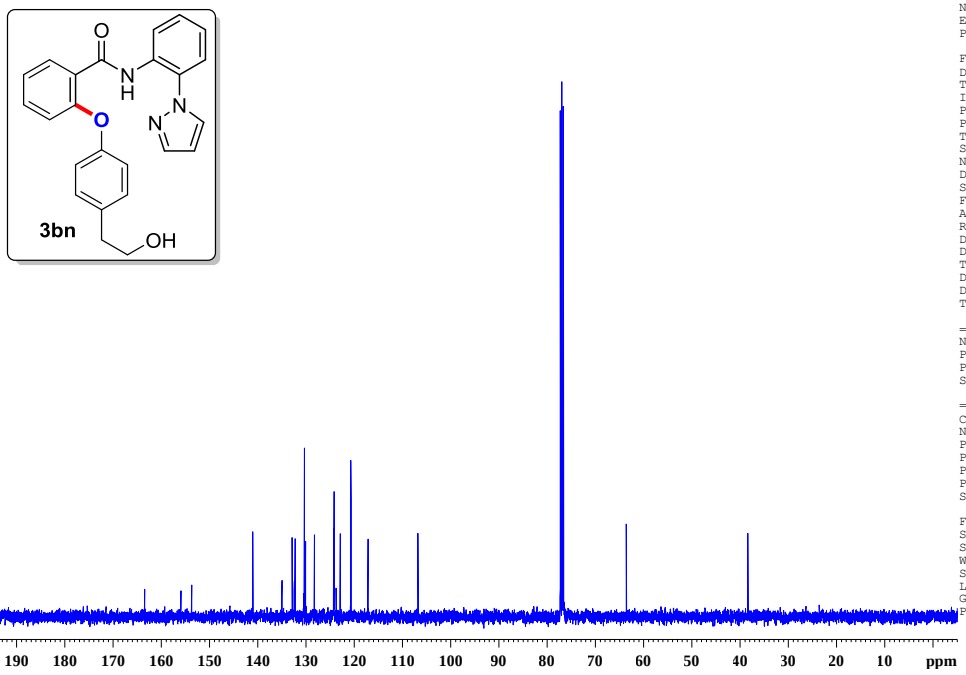


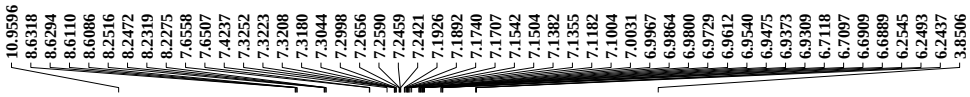


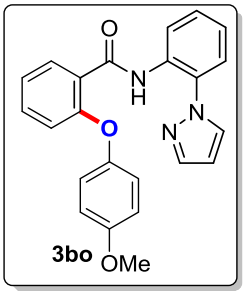

```
Current Data Parameters
NAME      JSK-335-ph-phenylethanol
EXPNO                  70
PROCNO                  1

F2 - Acquisition Parameters
Date_           20160120
Time                4.59
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH              8012.820 Hz
FIDRES           0.122266 Hz
AQ               4.0894465 sec
RG                  153.13
DW                  62.400 usec
DE                   6.50 usec
TE                  299.1 K
D1               0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1          400.1320007 MHz
NUC1                   1H
P1                  15.70 usec
PLW1          7.75000000 W

F2 - Processing parameters
SI                 65536
SF            400.1300101 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```



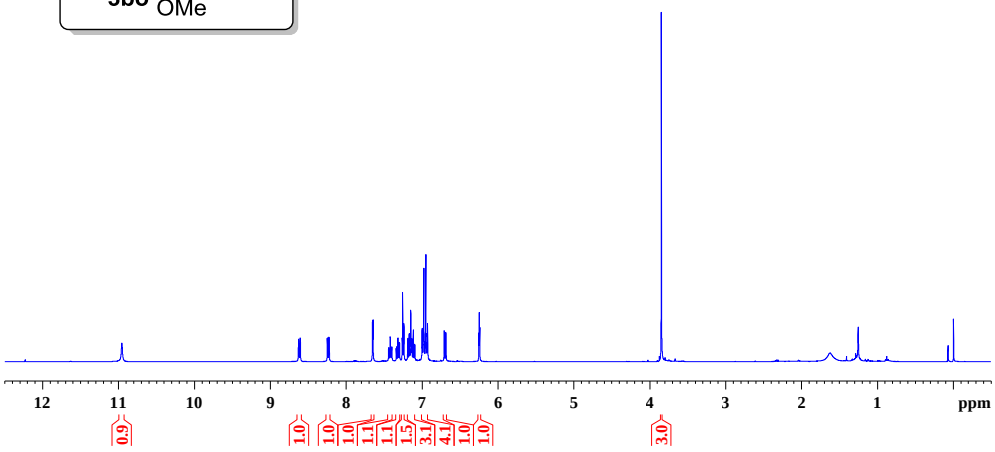

```
lab mmb-jsk-353
iitm_carbonshort CDCl3 /opt/topspin nmr 12

Current Data Parameters
NAME      JSK-335-ph-phenylethanol
EXPNO                 190
PROCNO                  1

F2 - Acquisition Parameters
Date_           20151117
Time                22.33
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                 16540
SOLVENT            CDCl3
NS                   512
DS                     4
SWH             24038.461 Hz
FIDRES           1.453353 Hz
AQ               0.3440320 sec
RG                  200.34
DW                  20.800 usec
DE                   6.50 usec
TE                  291.9 K
D1               1.00000000 sec
D11              0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  13C
P1                   9.25 usec
PLW1         47.00000000 W
SFO1         100.6228289 MHz

======== CHANNEL f2 ========
CPDPRG[2          waltz16
NUC2                   1H
PCPD2               90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.19103000 W
SFO2          400.1316005 MHz

F2 - Processing parameters
SI                 32768
SF            100.6127690 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```



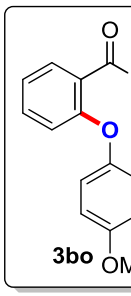


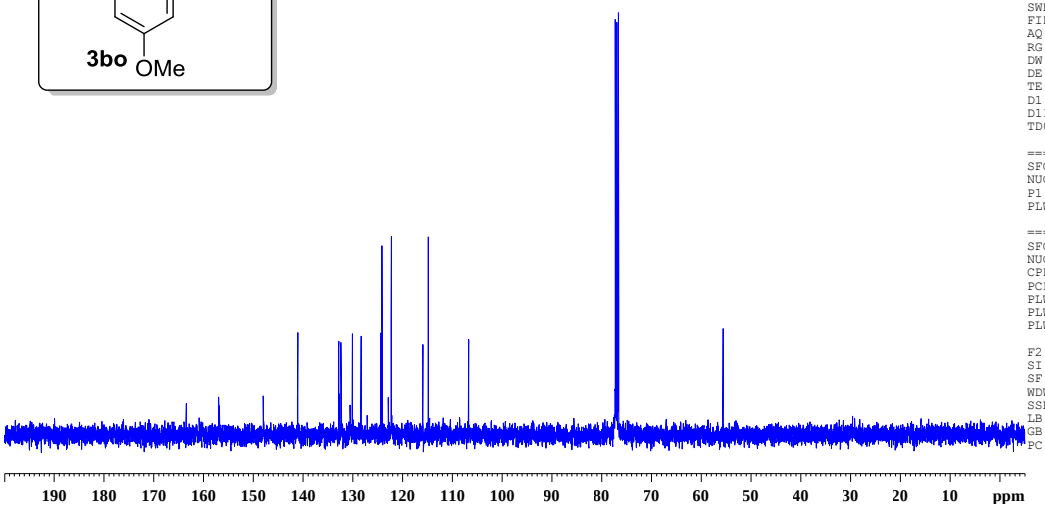


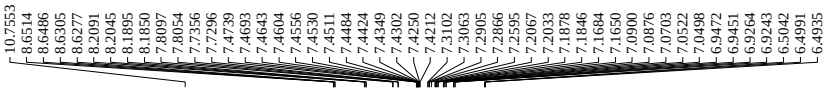

```
Current Data Parameters
NAME      JSK-ph-4OmePhenol
EXPNO                   73
PROCNO                   1

F2 - Acquisition Parameters
Date_           20160120
Time                5.18
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES             0.122266 Hz
AQ              4.0894465 sec
RG                  31.9
DW                 62.400 usec
DE                  6.50 usec
TE                299.3 K
D1             0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         400.1320007 MHz
NUC1                   1H
P1                  15.70 usec
PLW1          7.75000000 W

F2 - Processing parameters
SI                 65536
SF           400.1300103 MHz
WDW                   EM
SSB       0
LB                  0.30 Hz
GB        0
PC                  1.00
```

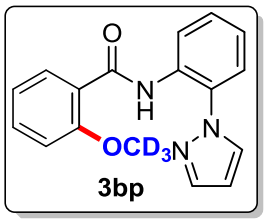



```
lab mmbjsk-363
iitm_carbonshort CDCl3 /opt/topspin nmr 6

Current Data Parameters
NAME      JSK-ph-4OmePhenol
EXPNO                  126
PROCNO                   1

F2 - Acquisition Parameters
Date_           20160121
Time               10.05
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                 16540
SOLVENT            CDCl3
NS                   256
DS                     4
SWH            24038.461 Hz
FIDRES             1.453353 Hz
AQ              0.3440320 sec
RG                 200.34
DW                 20.800 usec
DE                  6.50 usec
TE                297.7 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         100.6228289 MHz
NUC1                   13C
P1                  9.25 usec
PLW1         47.00000000 W

======== CHANNEL f2 ========
SFO2         400.1316005 MHz
NUC2                   1H
CPDPRG[2           waltz16
PCPD2               90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.11863000 W

F2 - Processing parameters
SI                 32768
SF           100.6127690 MHz
WDW                   EM
SSB       0
LB                  1.00 Hz
GB        0
PC                  1.40
```

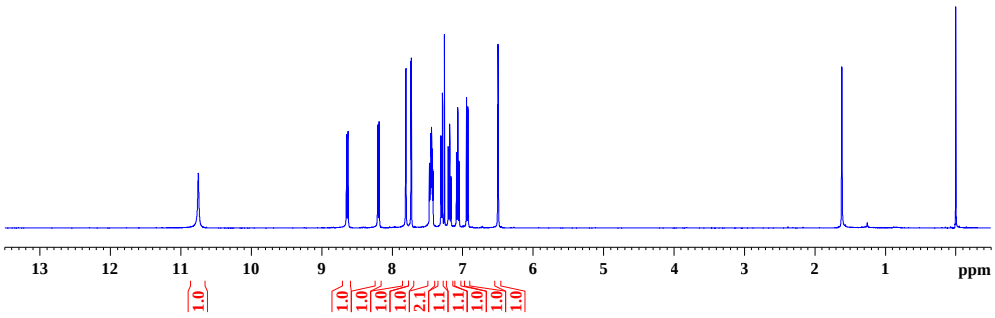


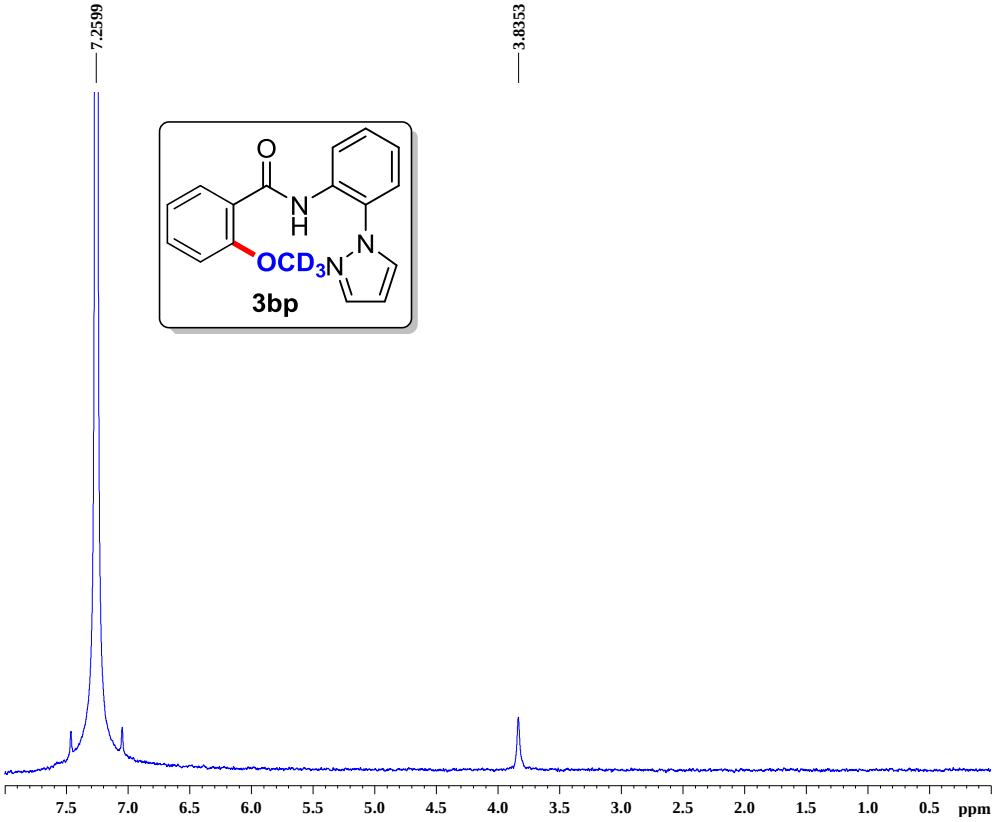




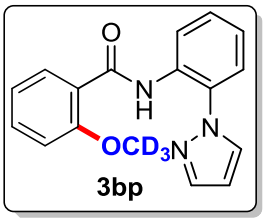



```
Current Data Parameters
NAME         JSK-Ph-OCD3
EXPNO                 82
PROCNO                 1

F2 - Acquisition Parameters
Date_           20151108
Time              23.52
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG            zg30
TD                65536
SOLVENT           CDCl3
NS                   16
DS                    2
SWH            8012.820 Hz
FIDRES         0.122266 Hz
AQ             4.0894465 sec
RG                200.34
DW                62.400 usec
DE                 6.50 usec
TE                297.6 K
D1             0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
NUC1                  1H
P1                15.70 usec
PLW1          7.75000000 W
SFO1        400.1320007 MHz

F2 - Processing parameters
SI                 65536
SF           400.1300095 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```

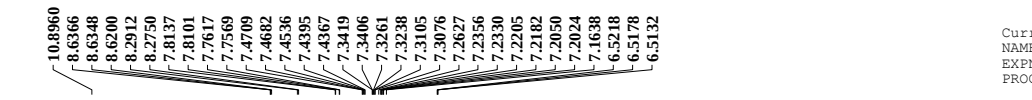


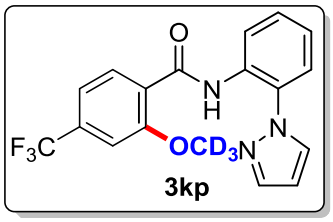



```
Current Data Parameters
NAME         JSK-Ph-OCD3
EXPNO                 77
PROCNO                 1

F2 - Acquisition Parameters
Date_           20151116
Time              16.55
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG            zg2h
TD                65536
SOLVENT           CDCl3
NS                    2
DS                    2
SWH             921.376 Hz
FIDRES         0.014059 Hz
AQ            35.5642014 sec
RG                  3.16
DW                542.667 usec
DE                 6.50 usec
TE                300.0 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1          76.7764539 MHz
NUC1                  2H
P1                530.00 usec
PLW1          1.79999995 W

F2 - Processing parameters
SI                 65536
SF           76.7760820 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```

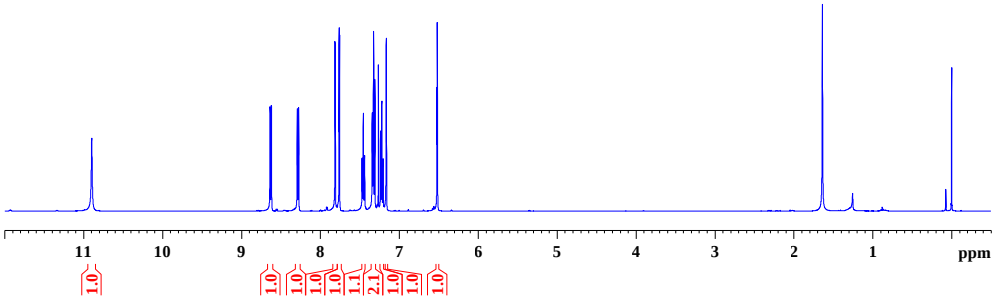


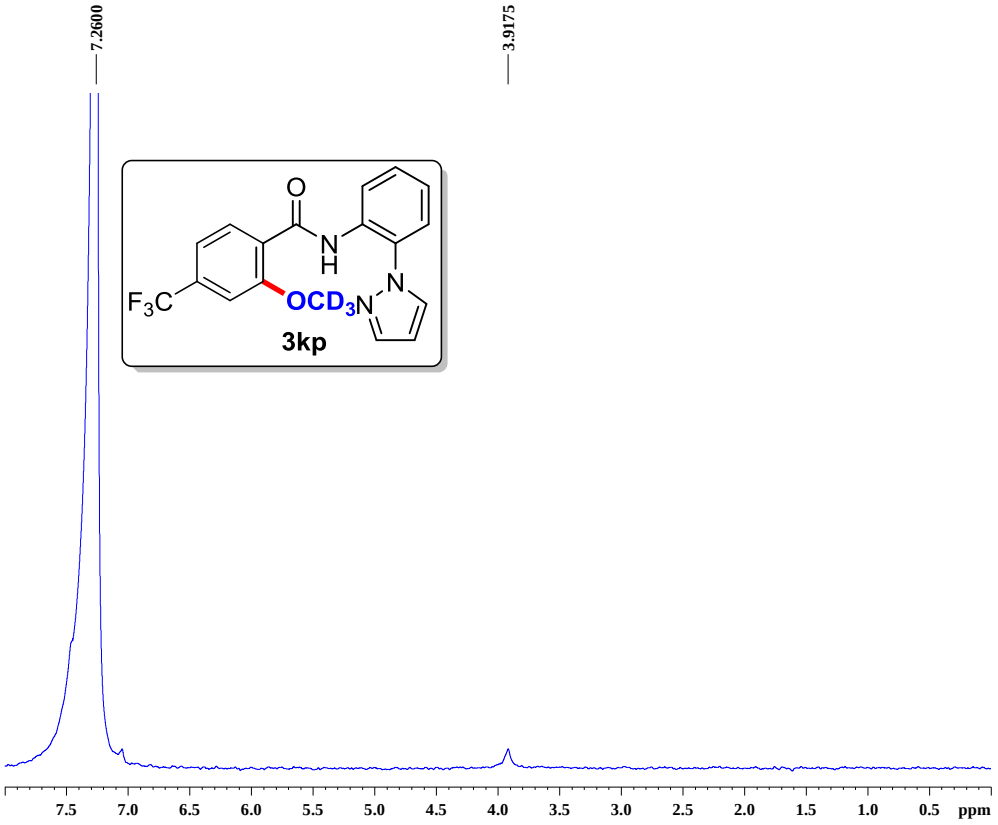

```
lab mmbjsk-346-1b
iitm_carbonshort CDCl3 /opt/topspin nmr 10

Current Data Parameters
NAME         JSK-Ph-OCD3
EXPNO                 83
PROCNO                 1

F2 - Acquisition Parameters
Date_           20151108
Time              23.59
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG          zgpg30
TD                16540
SOLVENT           CDCl3
NS                  256
DS                    4
SWH           24038.461 Hz
FIDRES         1.453353 Hz
AQ            0.3440320 sec
RG               200.34
DW               20.800 usec
DE                6.50 usec
TE                297.2 K
D1           1.00000000 sec
D11          0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
NUC1                 13C
P1                  9.25 usec
PLW1        47.00000000 W
SFO1       100.6228289 MHz

======== CHANNEL f2 ========
CPDPRG[2         waltz16
NUC2                 1H
PCPD2             90.00 usec
PLW2         7.75000000 W
PLW12        0.23583999 W
PLW13        0.19103000 W
SFO2       400.1316005 MHz

F2 - Processing parameters
SI                32768
SF          100.6127690 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```



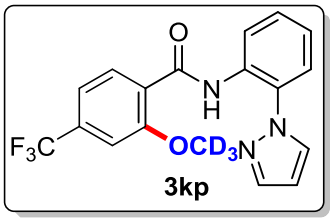


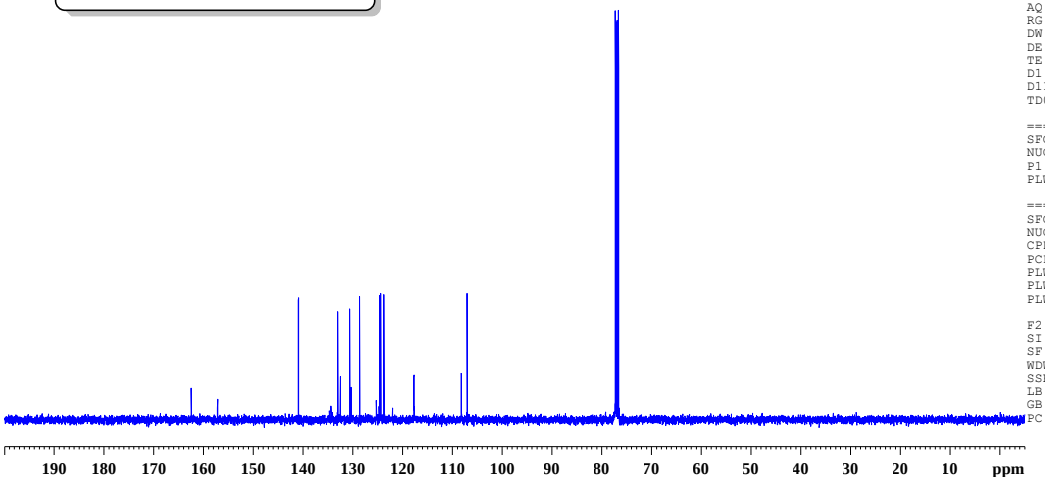

```
Current Data Parameters
NAME      JSk-378-2 4CF3 CD3
EXPNO                  86
PROCNO                  1

F2 - Acquisition Parameters
Date_            20160225
Time               20.49
INSTRUM            spect
PROBHD    5 mm PABBO BB/
PULPROG             zg30
TD                 32768
SOLVENT            CDCl3
NS                    32
DS                     2
SWH            10000.000 Hz
FIDRES          0.305176 Hz
AQ             1.6384000 sec
RG                138.53
DW                50.000 usec
DE                 6.50 usec
TE                293.1 K
D1            0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1        500.1525008 MHz
NUC1                   1H
P1                 11.75 usec
PLW1        15.30000019 W

F2 - Processing parameters
SI                 65536
SF          500.1500207 MHz
WDW                   EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```



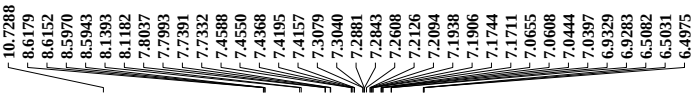


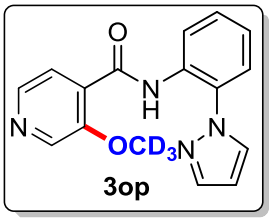

```
Current Data Parameters
NAME          Cd3 2D NMR
EXPNO                 92
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160226
Time                9.42
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG             zg2h
TD                 65536
SOLVENT             None
NS                     1
DS                     1
SWH              921.376 Hz
FIDRES         0.014059 Hz
AQ            35.5642014 sec
RG                  3.88
DW                542.667 usec
DE                  6.50 usec
TE                300.0 K
D1            1.00000000 sec
D11           0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1          76.7764539 MHz
NUC1                  2H
P1                530.00 usec
PLW1          1.79999995 W

F2 - Processing parameters
SI                 65536
SF            76.7760296 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.00
```



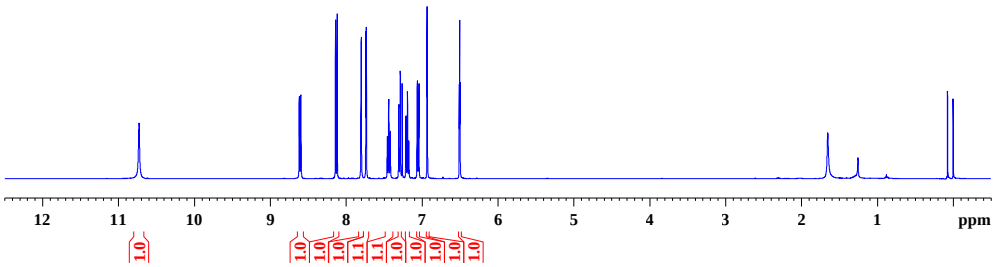


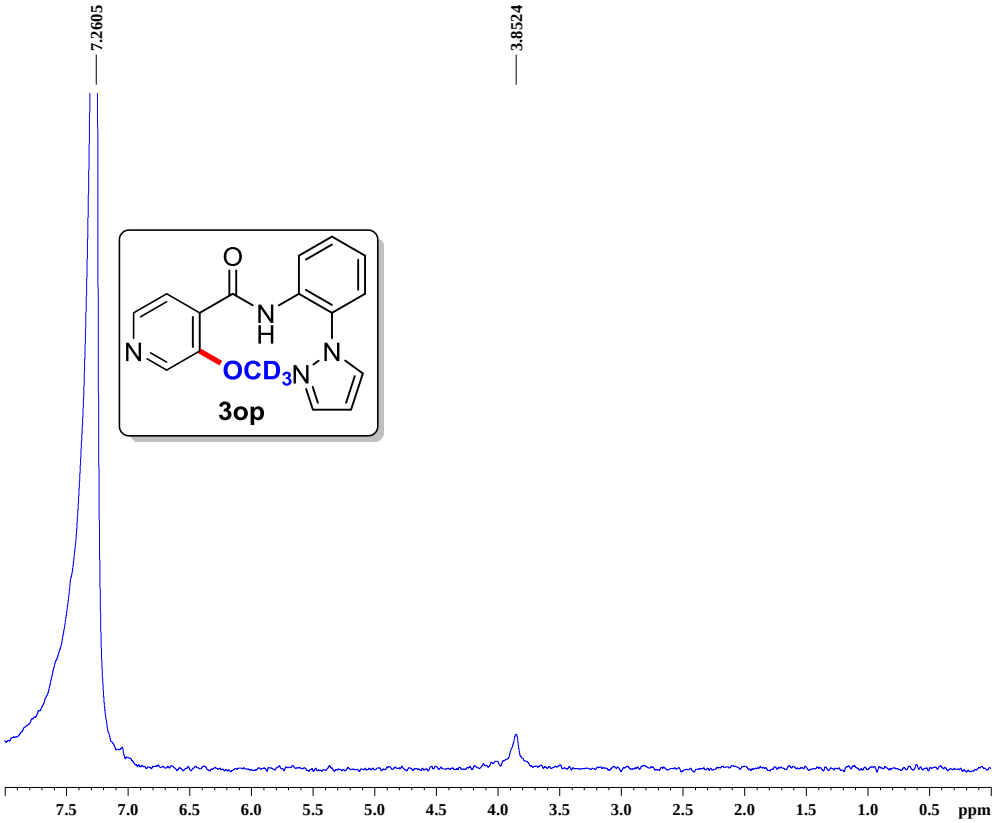

```
lab mmbjsk-378-2-f
iitm_carbonshort CDCl3 /opt/topspin nmr 4

Current Data Parameters
NAME     JSk-378-2 4CF3 CD3
EXPNO                  145
PROCNO                   1

F2 - Acquisition Parameters
Date_           20160222
Time                1.28
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                 16540
SOLVENT            CDCl3
NS                  1000
DS                     4
SWH            24038.461 Hz
FIDRES          1.453353 Hz
AQ             0.3440320 sec
RG                200.34
DW                20.800 usec
DE                 6.50 usec
TE                298.3 K
D1            1.00000000 sec
D11           0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         100.6228289 MHz
NUC1                  13C
P1                 9.25 usec
PLW1         47.00000000 W

======== CHANNEL f2 ========
SFO2         400.1316005 MHz
NUC2                  1H
CPDPRG[2          waltz16
PCPD2              90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.11863000 W

F2 - Processing parameters
SI                 32768
SF           100.6127690 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```



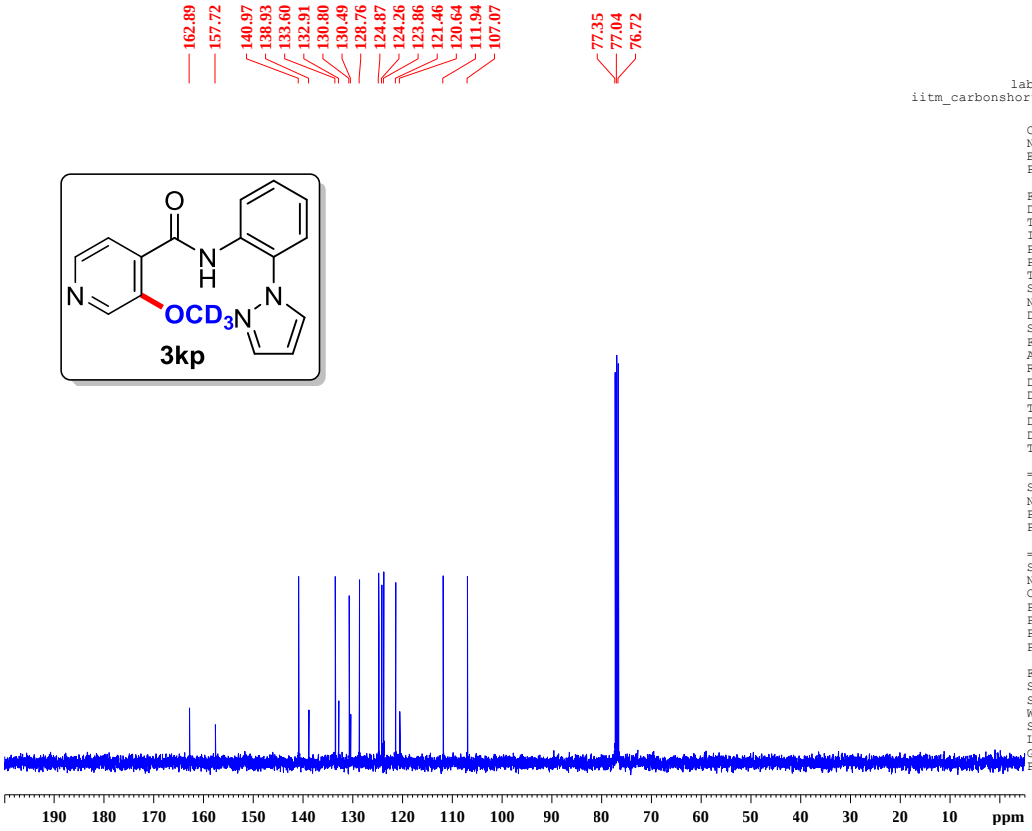



```
Current Data Parameters
NAME      JSK-378-3-py-cd3
EXPNO                  139
PROCNO                   1

F2 - Acquisition Parameters
Date_           20160221
Time              23.39
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG           zg30
TD               65536
SOLVENT          CDCl3
NS                  16
DS                   2
SWH           8012.820 Hz
FIDRES        0.122266 Hz
AQ            4.0894465 sec
RG               200.34
DW               62.400 usec
DE                6.50 usec
TE               297.8 K
D1           0.50000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1        400.1320007 MHz
NUC1                1H
P1                15.70 usec
PLW1         7.75000000 W

F2 - Processing parameters
SI               65536
SF          400.1300094 MHz
WDW                 EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```

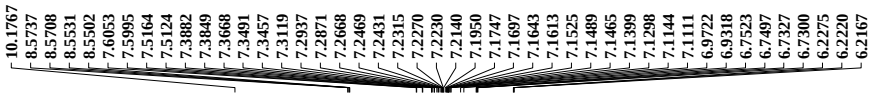


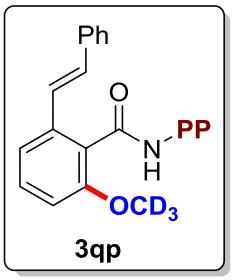



```
Current Data Parameters
NAME          Cd3 2D NMR
EXPNO                 87
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160229
Time              11.33
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG           zg2h
TD               65536
SOLVENT           None
NS                   1
DS                   1
SWH            921.376 Hz
FIDRES        0.014059 Hz
AQ            35.5642014 sec
RG                3.88
DW               542.667 usec
DE                6.50 usec
TE               300.0 K
D1           1.00000000 sec
D11          0.03000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1          76.7764539 MHz
NUC1                2H
P1                530.00 usec
PLW1          1.79999995 W

F2 - Processing parameters
SI               65536
SF          76.7760748 MHz
WDW                 EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.00
```

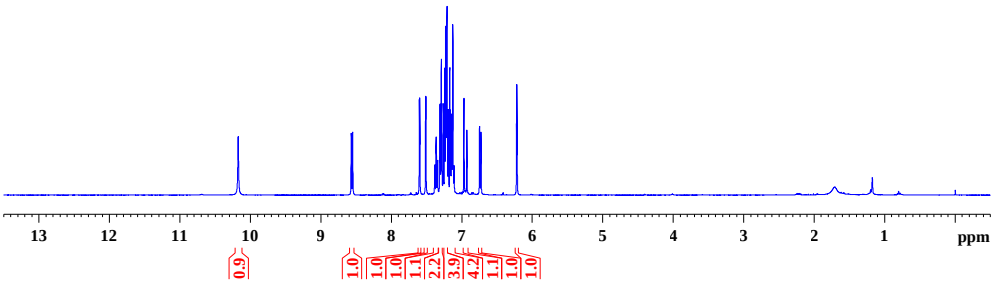


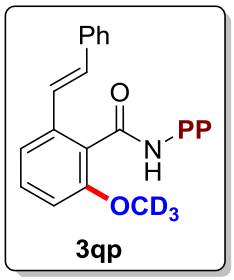

```
lab mmb-jsk-378-3
iitm_carbonshort CDCl3 /opt/topspin nmr 15

Current Data Parameters
NAME      JSK-378-3-py-cd3
EXPNO                  140
PROCNO                   1

F2 - Acquisition Parameters
Date_           20160221
Time              23.46
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG         zgpg30
TD               16540
SOLVENT          CDCl3
NS                 256
DS                   4
SWH          24038.461 Hz
FIDRES        1.453353 Hz
AQ            0.3440320 sec
RG              200.34
DW               20.800 usec
DE                6.50 usec
TE              298.3 K
D1           1.00000000 sec
D11          0.03000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1        100.6228289 MHz
NUC1               13C
P1                9.25 usec
PLW1        47.00000000 W

======== CHANNEL f2 ========
SFO2        400.1316005 MHz
NUC2               1H
CPDPRG[2         waltz16
PCPD2             90.00 usec
PLW2         7.75000000 W
PLW12        0.23583999 W
PLW13        0.11863000 W

F2 - Processing parameters
SI                32768
SF          100.6127690 MHz
WDW                EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```



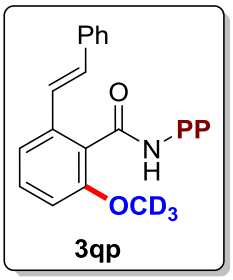


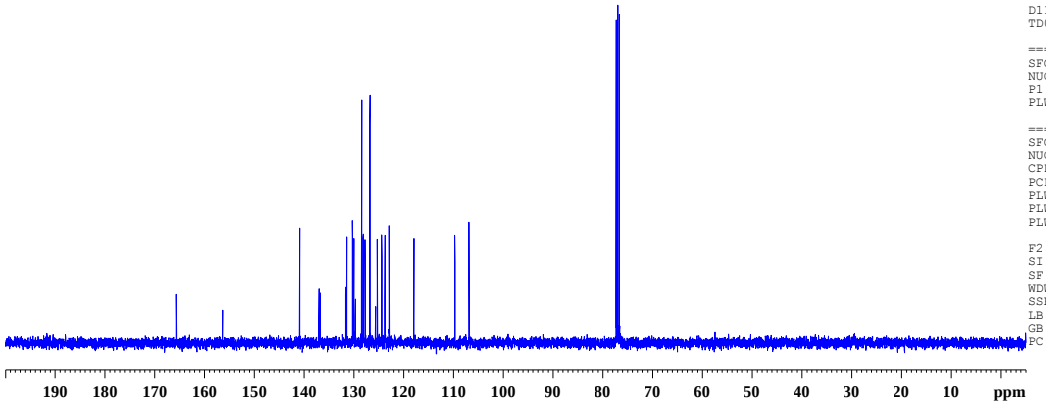

```
Current Data Parameters
NAME            mmb40616
EXPNO                259
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160623
Time                9.32
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES             0.122266 Hz
AQ              4.0894465 sec
RG                 138.85
DW                 62.400 usec
DE                  6.50 usec
TE                294.0 K
D1             0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1          400.1320007 MHz
NUC1                   1H
P1                  15.70 usec
PLW1           7.75000000 W

F2 - Processing parameters
SI                 65536
SF            400.1300439 MHz
WDW                   EM
SSB       0
LB                  0.30 Hz
GB        0
PC                  1.00
```



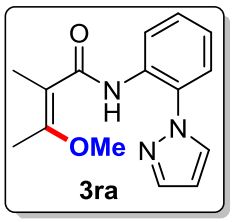



```
Current Data Parameters
NAME            mmb50616
EXPNO                 65
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160623
Time               13.37
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG             zg2h
TD                 65536
SOLVENT             None
NS                     1
DS                     1
SWH              921.376 Hz
FIDRES             0.014059 Hz
AQ              35.5642014 sec
RG                  2.47
DW                 542.667 usec
DE                  6.50 usec
TE                300.0 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1          76.7764539 MHz
NUC1                   2H
P1                530.00 usec
PLW1           1.79999995 W

F2 - Processing parameters
SI                 65536
SF            76.7760692 MHz
WDW                   EM
SSB       0
LB                  1.00 Hz
GB        0
PC                  1.00
```

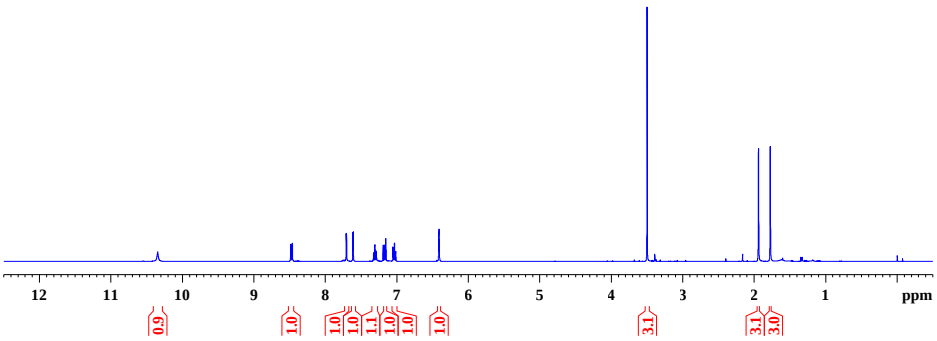




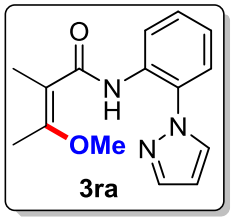

```
lab mmbjsk-414
iitm_carbonshort CDCl3 /opt/topspin nmr 4

Current Data Parameters
NAME            mmb40616
EXPNO                260
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160623
Time                9.38
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG          zgpg30
TD                16540
SOLVENT           CDCl3
NS                  256
DS                    4
SWH           24038.461 Hz
FIDRES         1.453353 Hz
AQ            0.3440320 sec
RG               200.34
DW               20.800 usec
DE                6.50 usec
TE               294.5 K
D1           1.00000000 sec
D11          0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1        100.6228289 MHz
NUC1                13C
P1                 9.25 usec
PLW1        47.00000000 W

======== CHANNEL f2 ========
SFO2        400.1316005 MHz
NUC2                1H
CPDPRG[2         waltz16
PCPD2             90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.11863000 W

F2 - Processing parameters
SI                 32768
SF          100.6127690 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```



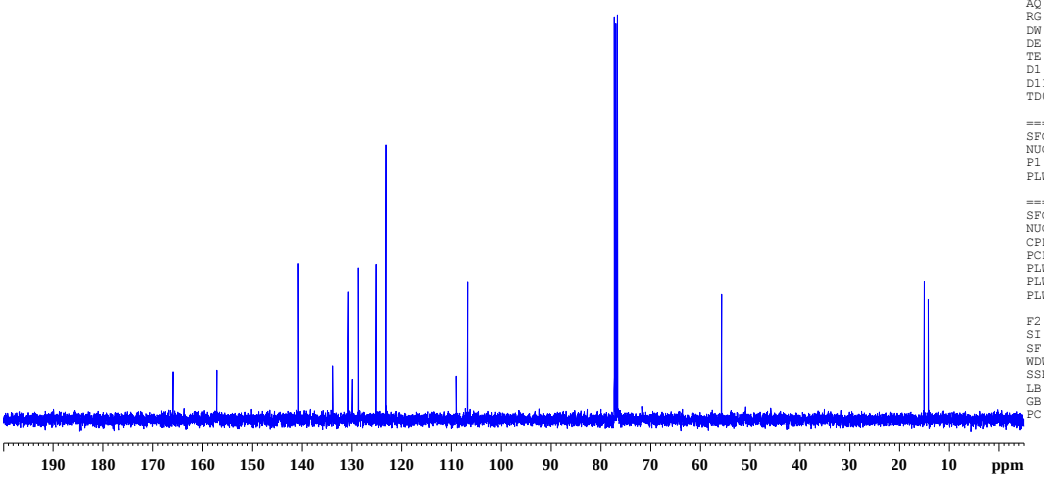

```
Current Data Parameters
NAME            mmb40616
EXPNO                256
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160623
Time                9.19
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES          0.122266 Hz
AQ              4.0894465 sec
RG                153.13
DW                62.400 usec
DE                 6.50 usec
TE                293.9 K
D1             0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         400.1320007 MHz
NUC1                   1H
P1                 15.70 usec
PLW1          7.75000000 W

F2 - Processing parameters
SI                 65536
SF          400.1300362 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```

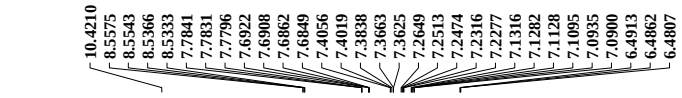


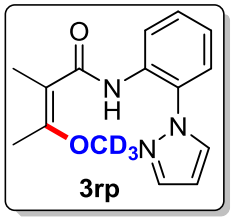

```
lab mmbjsk-415
iitm_carbonshort CDCl3 /opt/topspin nmr 3
```



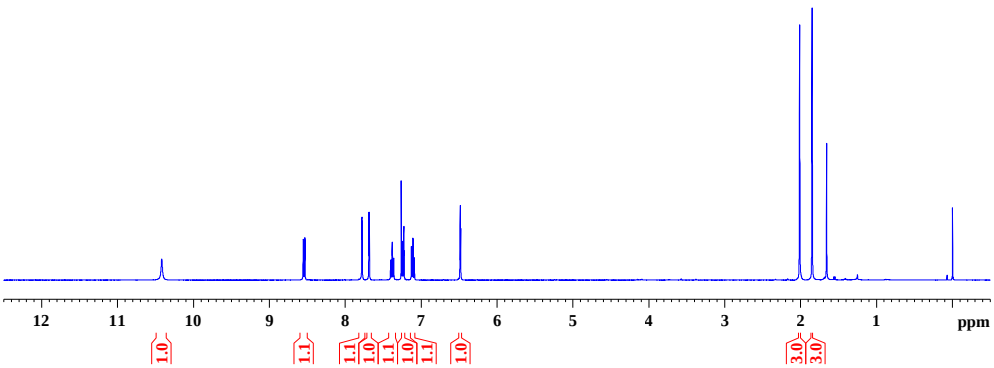

```
Current Data Parameters
NAME            mmb40616
EXPNO                257
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160623
Time                9.21
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG           zgpg30
TD                 16540
SOLVENT            CDCl3
NS                   256
DS                     4
SWH            24038.461 Hz
FIDRES          1.453353 Hz
AQ              0.3440320 sec
RG                200.34
DW                20.800 usec
DE                 6.50 usec
TE                294.3 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         100.6228289 MHz
NUC1                  13C
P1                 9.25 usec
PLW1         47.00000000 W

======== CHANNEL f2 ========
SFO2         400.1316005 MHz
NUC2                   1H
CPDPRG[2          waltz16
PCPD2             90.00 usec
PLW2           7.75000000 W
PLW12          0.23583999 W
PLW13          0.11863000 W

F2 - Processing parameters
SI                 32768
SF          100.6127690 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```

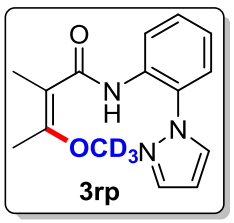




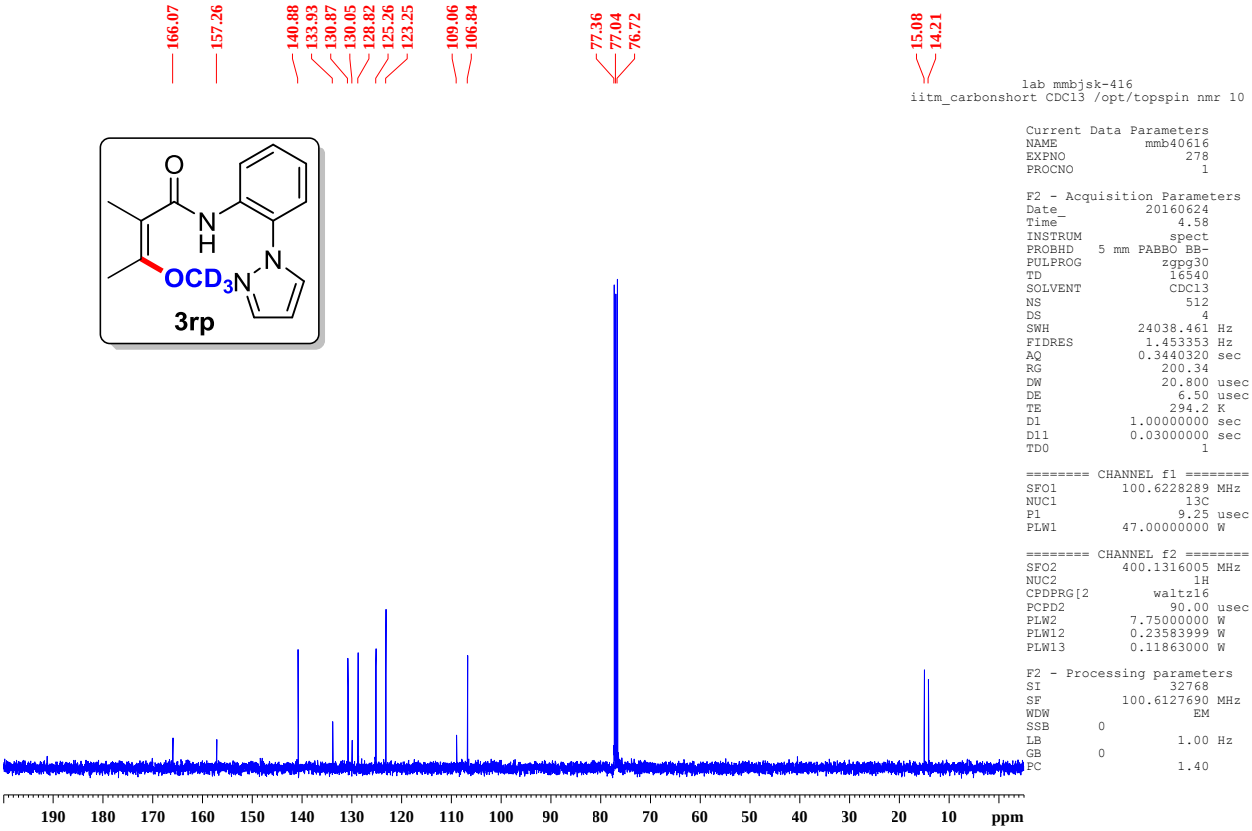



```
Current Data Parameters
NAME            mmb40616
EXPNO                277
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160624
Time                4.45
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES             0.122266 Hz
AQ              4.0894465 sec
RG                200.34
DW                62.400 usec
DE                 6.50 usec
TE                293.9 K
D1             0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1          400.1320007 MHz
NUC1                  1H
P1                 15.70 usec
PLW1           7.75000000 W

F2 - Processing parameters
SI                 65536
SF            400.1300077 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```

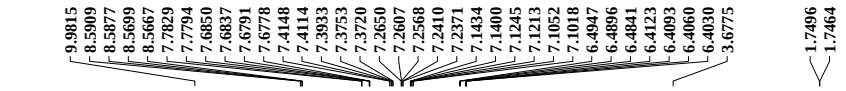


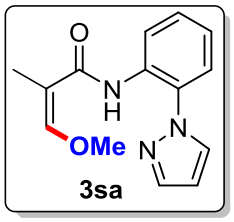



```
Current Data Parameters
NAME            mmb50616
EXPNO                 69
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160624
Time               11.51
INSTRUM            spect
PROBHD   5 mm PABBO BB/
PULPROG             zg2h
TD                 65536
SOLVENT             None
NS                     1
DS                     1
SWH              921.376 Hz
FIDRES             0.014059 Hz
AQ              35.5642014 sec
RG                  2.18
DW                542.667 usec
DE                 6.50 usec
TE                300.0 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1          76.7764539 MHz
NUC1                  2H
P1                530.00 usec
PLW1           1.79999995 W

F2 - Processing parameters
SI                 65536
SF            76.7760710 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.00
```

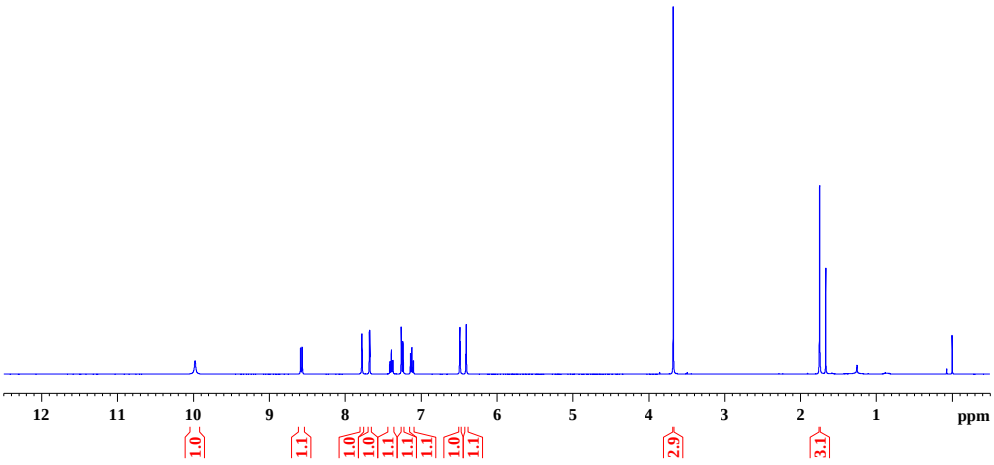



```
lab mmbjsk-416
iitm_carbonshort CDCl3 /opt/topspin nmr 10

Current Data Parameters
NAME            mmb40616
EXPNO                278
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160624
Time                4.58
INSTRUM            spect
PROBHD   5 mm PABBO BB-
PULPROG          zgpg30
TD                 16540
SOLVENT            CDCl3
NS                   512
DS                     4
SWH            24038.461 Hz
FIDRES          1.453353 Hz
AQ             0.3440320 sec
RG                200.34
DW                20.800 usec
DE                 6.50 usec
TE                294.2 K
D1           1.00000000 sec
D11          0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1         100.6228289 MHz
NUC1                 13C
P1                  9.25 usec
PLW1         47.00000000 W

======== CHANNEL f2 ========
SFO2         400.1316005 MHz
NUC2                 1H
CPDPRG[2          waltz16
PCPD2              90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.11863000 W

F2 - Processing parameters
SI                  32768
SF           100.6127690 MHz
WDW                  EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```

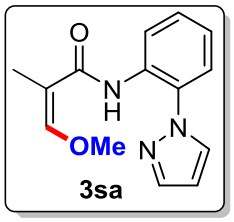




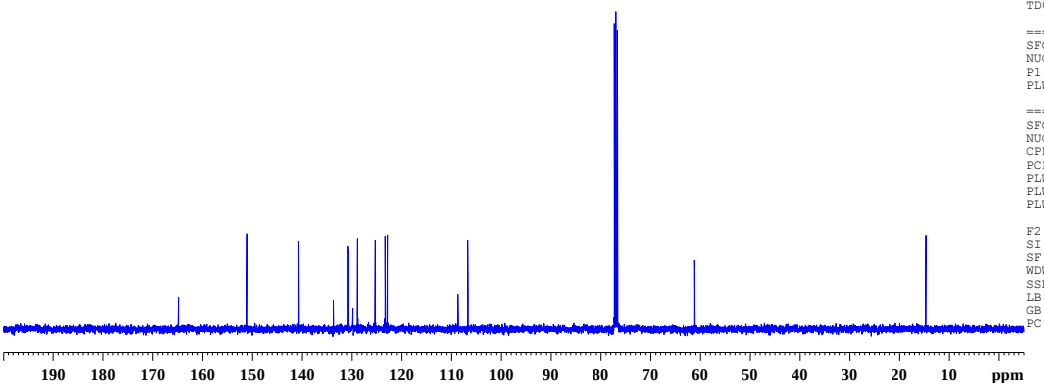

```
Current Data Parameters
NAME                 mmb40616
EXPNO                     332
PROCNO                      1

F2 - Acquisition Parameters
Date_               20160628
Time                    4.13
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     65536
SOLVENT                CDCl3
NS                        16
DS                         2
SWH                 8012.820 Hz
FIDRES              0.122266 Hz
AQ                  4.0894465 sec
RG                     200.34
DW                     62.400 usec
DE                      6.50 usec
TE                     295.6 K
D1                  0.50000000 sec
TD0                         1

======== CHANNEL f1 ========
SFO1           400.1320007 MHz
NUC1                     1H
P1                    15.70 usec
PLW1           7.75000000 W

F2 - Processing parameters
SI                     65536
SF               400.1300076 MHz
WDW                       EM
SSB          0
LB                     0.30 Hz
GB           0
PC                     1.00
```

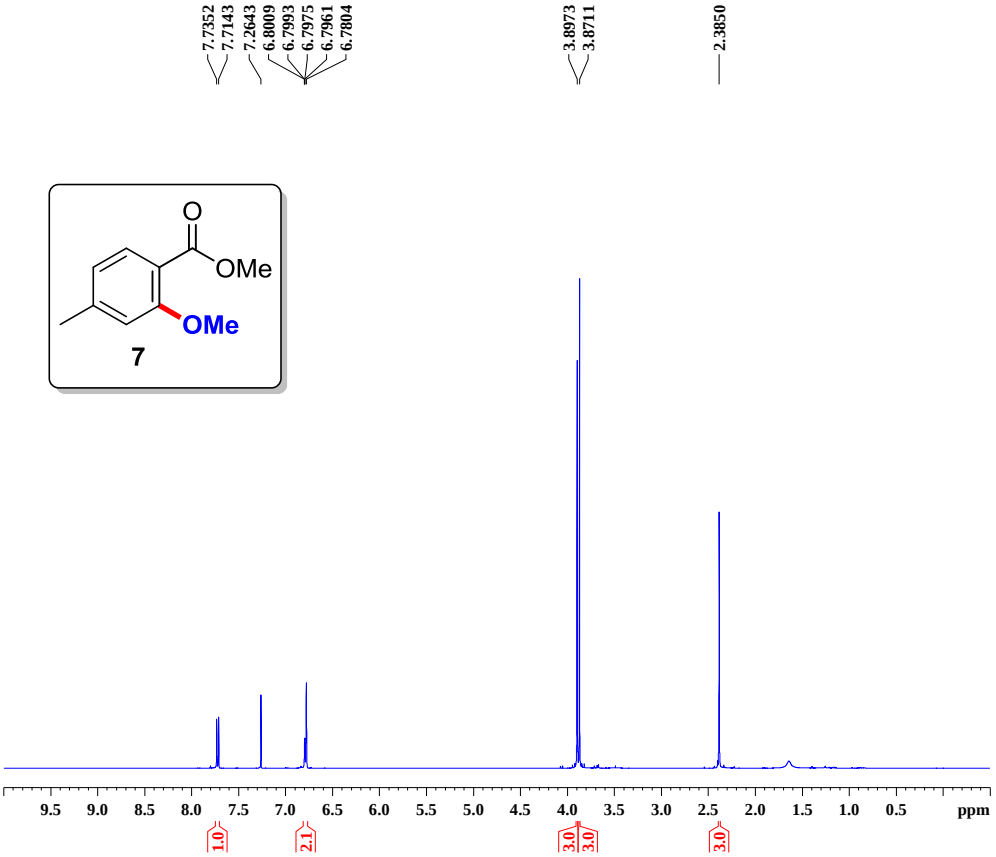



```
lab mmbjsk-417
iitm_carbonshort CDCl3 /opt/topspin nmr 10
```

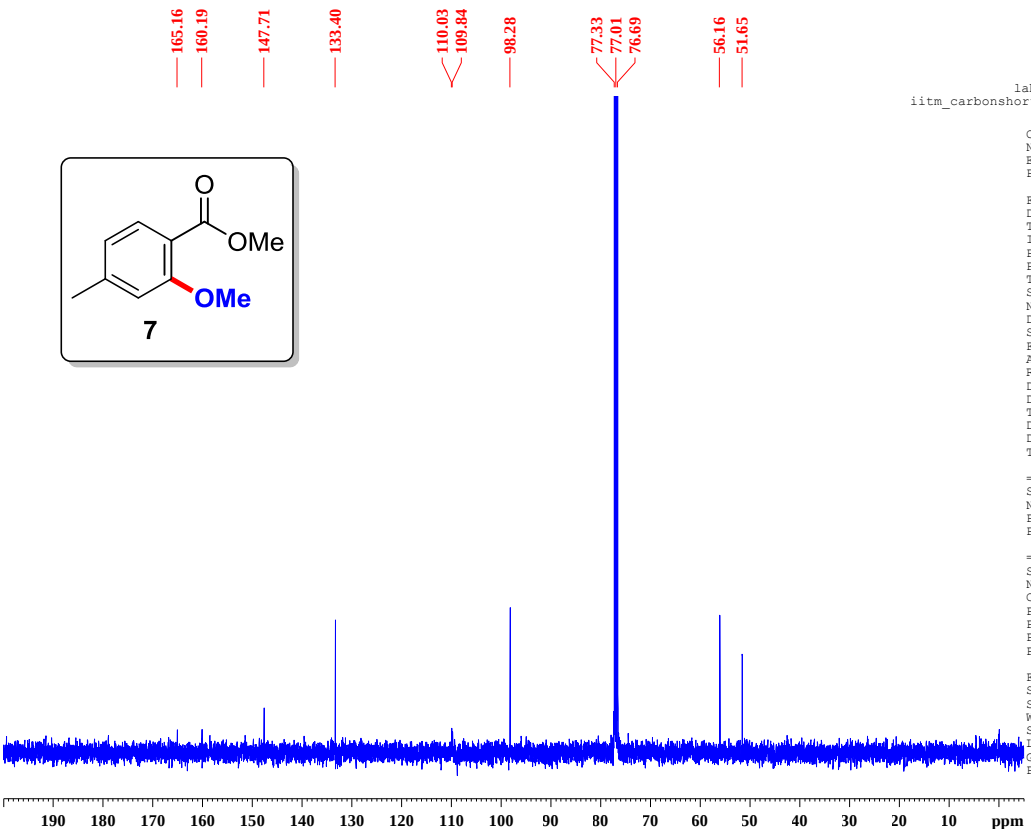



```
Current Data Parameters
NAME                 mmb40616
EXPNO                     333
PROCNO                      1

F2 - Acquisition Parameters
Date_               20160628
Time                    4.26
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG              zgpg30
TD                     16540
SOLVENT                CDCl3
NS                        512
DS                         4
SWH                24038.461 Hz
FIDRES              1.453353 Hz
AQ                  0.3440320 sec
RG                     200.34
DW                     20.800 usec
DE                      6.50 usec
TE                     296.0 K
D1                  1.00000000 sec
D11                 0.03000000 sec
TD0                         1

======== CHANNEL f1 ========
SFO1           100.6228289 MHz
NUC1                     13C
P1                     9.25 usec
PLW1           47.00000000 W

======== CHANNEL f2 ========
SFO2           400.1316005 MHz
NUC2                     1H
CPDPRG[2           waltz16
PCPD2                 90.00 usec
PLW2           7.75000000 W
PLW12          0.23583999 W
PLW13          0.11863000 W

F2 - Processing parameters
SI                     32768
SF              100.6127690 MHz
WDW                       EM
SSB          0
LB                     1.00 Hz
GB           0
PC                     1.40
```

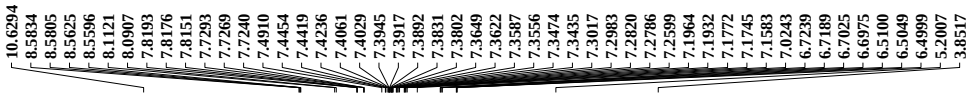


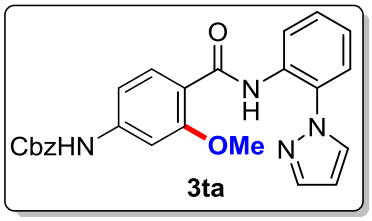



```
Current Data Parameters
NAME                  mmb41015
EXPNO                       48
PROCNO                       1

F2 - Acquisition Parameters
Date_               20151010
Time                   13.10
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG                 zg30
TD                     65536
SOLVENT                CDCl3
NS                        16
DS                         2
SWH                 8012.820 Hz
FIDRES                0.122266 Hz
AQ                  4.0894966 sec
RG                     200.34
DW                     62.400 usec
DE                      6.50 usec
TE                     295.0 K
D1                  0.50000000 sec
TD0                          1

======== CHANNEL f1 ========
NUC1                        1H
P1                       15.70 usec
PLW1                7.75000000 W
SFO1              400.1320007 MHz

F2 - Processing parameters
SI                         65536
SF                400.1300076 MHz
WDW                           EM
SSB             0
LB                        0.30 Hz
GB              0
PC                        1.00
```

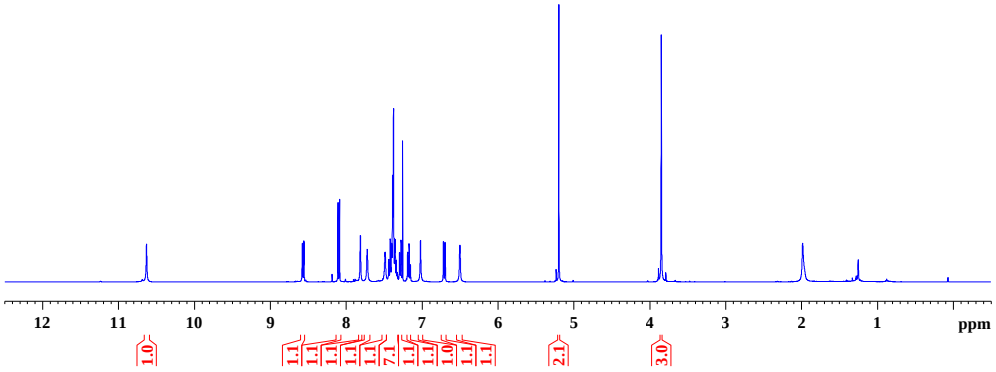



```
lab mmb-jsk-mcpa
iitm_carbonshort CDCl3 /opt/topspin nmr 11

Current Data Parameters
NAME                  MCpramide
EXPNO                       239
PROCNO                       1

F2 - Acquisition Parameters
Date_               20160229
Time                    2.00
INSTRUM                spect
PROBHD    5 mm PABBO BB-
PULPROG              zgpg30
TD                     16540
SOLVENT                CDCl3
NS                      2000
DS                         4
SWH                24038.461 Hz
FIDRES                1.453353 Hz
AQ                  0.3440320 sec
RG                     200.34
DW                     20.800 usec
DE                      6.50 usec
TE                     298.9 K
D1                  1.00000000 sec
D11                 0.03000000 sec
TD0                          1

======== CHANNEL f1 ========
SFO1              100.6228289 MHz
NUC1                       13C
P1                        9.25 usec
PLW1               47.00000000 W

======== CHANNEL f2 ========
SFO2              400.1316005 MHz
NUC2                        1H
CPDPRG[2               waltz16
PCPD2                    90.00 usec
PLW2                7.75000000 W
PLW12               0.23583999 W
PLW13               0.11863000 W

F2 - Processing parameters
SI                         32768
SF                100.6127690 MHz
WDW                           EM
SSB             0
LB                        1.00 Hz
GB              0
PC                        1.40
```

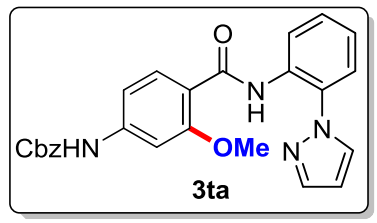


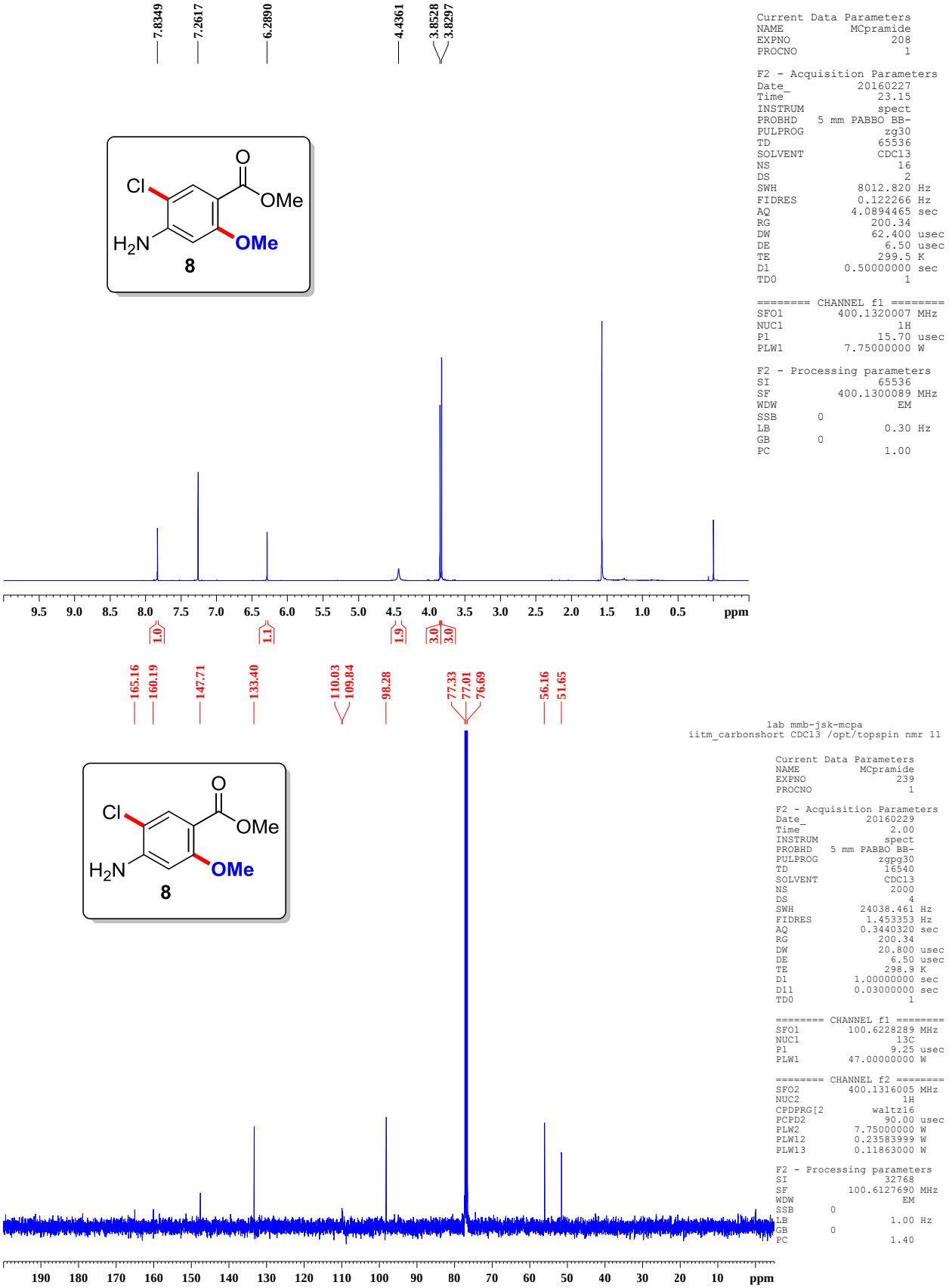



```
Current Data Parameters
NAME      JSK-370- 4cbz-ome
EXPNO                  219
PROCNO                   1

F2 - Acquisition Parameters
Date_           20160131
Time              11.31
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG           zg30
TD                65536
SOLVENT           CDCl3
NS                   16
DS                    2
SWH            8012.820 Hz
FIDRES         0.122266 Hz
AQ             4.0894465 sec
RG                200.34
DW                62.400 usec
DE                 6.50 usec
TE                297.3 K
D1             0.50000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         400.1320007 MHz
NUC1                 1H
P1                15.70 usec
PLW1          7.75000000 W

F2 - Processing parameters
SI                65536
SF           400.1300099 MHz
WDW                  EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```




```
lab mmbjsk-370
iitm_carbonshort CDCl3 /opt/topspin nmr 1

Current Data Parameters
NAME      JSK-370- 4cbz-ome
EXPNO                  220
PROCNO                   1

F2 - Acquisition Parameters
Date_           20160131
Time              11.37
INSTRUM           spect
PROBHD   5 mm PABBO BB-
PULPROG         zgpg30
TD                16540
SOLVENT           CDCl3
NS                  256
DS                    4
SWH           24038.461 Hz
FIDRES         1.453353 Hz
AQ             0.3440320 sec
RG                200.34
DW                20.800 usec
DE                 6.50 usec
TE                297.7 K
D1             1.00000000 sec
D11            0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1         100.6228289 MHz
NUC1                 13C
P1                9.25 usec
PLW1         47.00000000 W

======== CHANNEL f2 ========
SFO2         400.1316005 MHz
NUC2                 1H
CPDPRG[2          waltz16
PCPD2              90.00 usec
PLW2          7.75000000 W
PLW12         0.23583999 W
PLW13         0.11863000 W

F2 - Processing parameters
SI                32768
SF           100.6127690 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```






```
Current Data Parameters
NAME           MCpramide
EXPNO                208
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160227
Time               23.15
INSTRUM            spect
PROBHD    5 mm PABBO BB-
PULPROG             zg30
TD                 65536
SOLVENT            CDCl3
NS                    16
DS                     2
SWH             8012.820 Hz
FIDRES             0.122266 Hz
AQ              4.0894465 sec
RG                 200.34
DW                 62.400 usec
DE                  6.50 usec
TE                 299.5 K
D1              0.50000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1          400.1320007 MHz
NUC1                  1H
P1                 15.70 usec
PLW1           7.75000000 W

F2 - Processing parameters
SI                 65536
SF            400.1300089 MHz
WDW                   EM
SSB       0
LB                 0.30 Hz
GB        0
PC                 1.00
```

```
lab mmb-jsk-mcpa
iitm_carbonshort CDCl3 /opt/topspin nmr 11

Current Data Parameters
NAME           MCpramide
EXPNO                239
PROCNO                 1

F2 - Acquisition Parameters
Date_           20160229
Time               2.00
INSTRUM            spect
PROBHD    5 mm PABBO BB-
PULPROG           zgpg30
TD                 16540
SOLVENT            CDCl3
NS                  2000
DS                     4
SWH            24038.461 Hz
FIDRES             1.453353 Hz
AQ              0.3440320 sec
RG                 200.34
DW                 20.800 usec
DE                  6.50 usec
TE                 298.9 K
D1              1.00000000 sec
D11             0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1          100.6228289 MHz
NUC1                  13C
P1                  9.25 usec
PLW1          47.00000000 W

======== CHANNEL f2 ========
SFO2          400.1316005 MHz
NUC2                  1H
CPDPRG[2          waltz16
PCPD2              90.00 usec
PLW2           7.75000000 W
PLW12          0.23583999 W
PLW13          0.11863000 W

F2 - Processing parameters
SI                 32768
SF            100.6127690 MHz
WDW                   EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
```