

A Tf₂O-promoted Intramolecular Schmidt Reaction of the ω -Azido Carboxylic Acids

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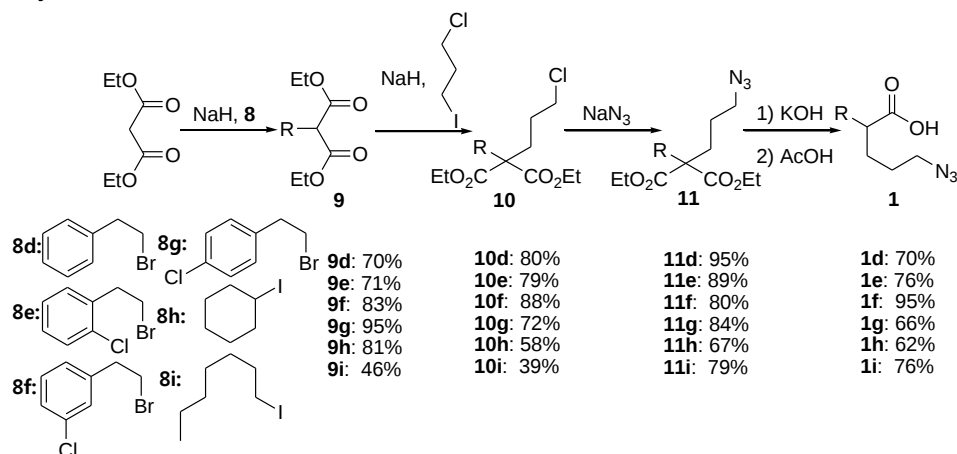
Supporting Information

Part 1 (NMR spectra for the new compounds)

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General synthetic method for **1**



Scheme SI-1. Preparation of the ω -azido carboxylic acids

Crystallographic Data of 4a

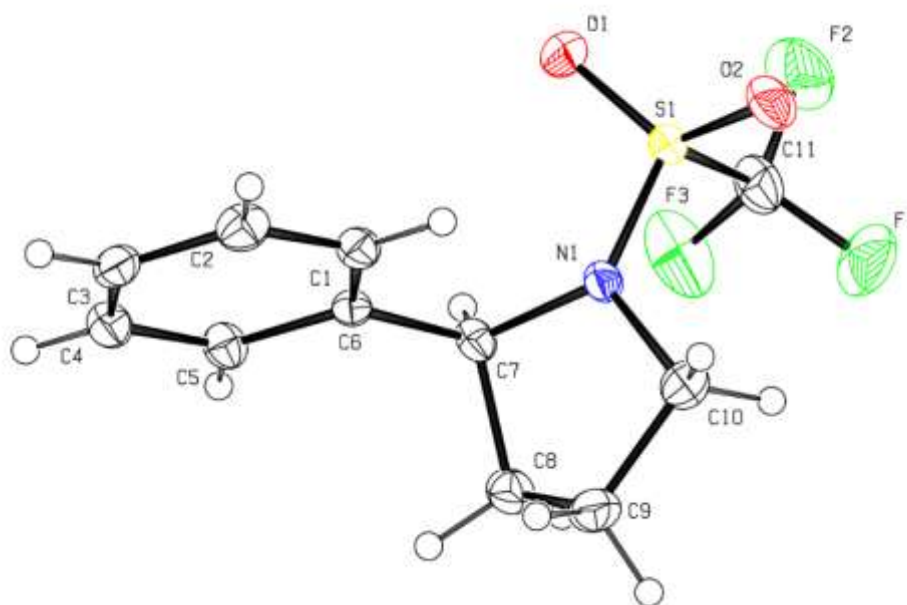


Figure S1. The ORTEP diagram of **4a** with 50% thermal ellipsoid probability levels.

The single crystals of $C_{11}H_{12}F_3NO_2S$ were obtained from recrystallization of **4a** in methylene chloride. A suitable crystal was selected and intensity data were collected on a SuperNova (Dual, Cu at zero, Eos) diffractometer. The crystal was kept at 298.84(10) K during data collection. Using Olex2, the structure was solved with the Superflip structure solution program using Charge Flipping and refined with the ShelXL refinement package using Least Squares minimisation.

Crystal structure determination of **4a**

Crystal Data for $C_{11}H_{12}F_3NO_2S$ ($M = 279.28$ g/mol): orthorhombic, space group Pbca (no. 61), $a = 10.8054(8)$ Å, $b = 7.8126(6)$ Å, $c = 28.528(3)$ Å, $V = 2408.3(4)$ Å³, $Z = 8$, $T = 298.84(10)$ K, μ (MoK α) = 0.301 mm⁻¹, $D_{calc} = 1.541$ g/cm³, 8664 reflections measured ($6.592^\circ \leq 2\theta \leq 52.042^\circ$), 2359 unique ($R_{int} = 0.0453$, $R_{sigma} = 0.0416$) which were used in all calculations. The final R_1 was 0.0447 ($I > 2\sigma(I)$) and wR_2 was 0.1499 (all data).

Table S1 Crystal data and structure refinement for 4a.

Identification code	wxj_02016
Empirical formula	$C_{11}H_{12}F_3NO_2S$
Formula weight	279.28
Temperature/K	298.84(10)
Crystal system	orthorhombic
Space group	Pbca
$a/\text{\AA}$	10.8054(8)
$b/\text{\AA}$	7.8126(6)
$c/\text{\AA}$	28.528(3)
$\alpha/^\circ$	90
$\beta/^\circ$	90
$\gamma/^\circ$	90
Volume/Å ³	2408.3(4)
Z	8
$\rho_{calc}/\text{g/cm}^3$	1.541
μ/mm^{-1}	0.301
$F(000)$	1152.0
Crystal size/mm ³	$0.24 \times 0.21 \times 0.08$
Radiation	MoK α ($\lambda = 0.71073$)
2θ range for data collection/ $^\circ$	6.592 to 52.042
Index ranges	$-12 \leq h \leq 13$, $-6 \leq k \leq 9$, $-35 \leq l \leq 34$
Reflections collected	8664
Independent reflections	2359 [$R_{int} = 0.0453$, $R_{sigma} = 0.0416$]
Data/restraints/parameters	2359/0/163
Goodness-of-fit on F^2	0.966
Final R indexes [$I \geq 2\sigma(I)$]	$R_1 = 0.0447$, $wR_2 = 0.1321$
Final R indexes [all data]	$R_1 = 0.0626$, $wR_2 = 0.1499$
Largest diff. peak/hole / e Å ⁻³	0.26/-0.42

Table S2 Fractional Atomic Coordinates ($\times 10^4$) and Equivalent Isotropic Displacement Parameters ($\text{\AA}^2 \times 10^3$) for wxj_02016. U_{eq} is defined as 1/3 of of the trace of the orthogonalised U_{ij} tensor.

Atom	x	y	z	U(eq)
S1	5151.1(5)	2047.5(8)	5921.0(2)	23.5(2)
F1	4938.0(16)	2982(3)	5044.2(7)	60.2(6)
F2	6148.2(16)	862(3)	5152.1(7)	60.5(6)
F3	6739.3(17)	3390(3)	5335.2(6)	65.6(6)
O1	6134.0(15)	1207(2)	6161.6(7)	36.8(5)
O2	3978.9(15)	1261(2)	5850.3(7)	36.0(5)
N1	4961.6(15)	3904(3)	6126.4(7)	23.5(5)
C1	5156.2(19)	4105(3)	7129.1(9)	25.3(6)
C2	5233(2)	4135(4)	7611.6(9)	30.9(6)
C3	6219(2)	4943(3)	7831.1(9)	29.0(6)
C4	7128(2)	5691(3)	7558.7(9)	30.3(6)
C5	7044(2)	5661(3)	7077.8(8)	25.5(6)
C6	6054.9(18)	4868(3)	6854.6(8)	20.0(5)
C7	5990.8(19)	4953(3)	6324.0(8)	22.8(5)
C8	5645(2)	6732(3)	6144.4(9)	31.3(6)
C9	4242(2)	6744(3)	6165.5(10)	34.5(6)
C10	3859(2)	4965(4)	6002.1(10)	32.3(6)
C11	5782(3)	2327(4)	5329.9(9)	38.4(7)

Table S3 Anisotropic Displacement Parameters ($\text{\AA}^2 \times 10^3$) for wxj_02016. The Anisotropic displacement factor exponent takes the form: $-2 \pi^2 [h^2 a^{*2} U_{11} + 2 h k a^* b^* U_{12} + \dots]$.

Atom	U_{11}	U_{22}	U_{33}	U_{23}	U_{13}	U_{12}
S1	27.7(4)	19.8(4)	23.0(4)	-1.4(2)	-4.8(2)	-0.7(2)
F1	81.7(13)	72.6(16)	26.5(10)	6.8(9)	-7.8(8)	12.2(10)
F2	70.1(12)	59.0(13)	52.6(12)	-27.1(9)	8.2(9)	10.5(10)
F3	67.2(12)	84.0(15)	45.6(11)	-15(1)	23.4(9)	-39.0(11)
O1	42.0(11)	29.0(11)	39.3(11)	-1.4(8)	-14.7(8)	9.4(9)
O2	33.9(10)	31.1(11)	43.0(11)	-4.4(8)	-4.1(8)	-11.0(8)
N1	21.3(10)	20.5(12)	28.7(12)	-4.4(9)	-6.0(8)	1.3(8)
C1	24.0(12)	22.1(14)	29.6(14)	2.2(11)	-2.6(9)	-3.5(10)
C2	31.5(12)	31.0(16)	30.3(15)	7.8(11)	4.9(10)	-3.5(12)
C3	37.3(13)	25.6(14)	24.0(12)	0.8(11)	-2.7(10)	8.4(12)
C4	29.2(12)	25.9(15)	35.9(14)	-3.1(11)	-6(1)	-0.6(11)
C5	22.6(11)	26.6(14)	27.4(13)	-0.5(10)	0.8(9)	-4.3(10)
C6	20.3(10)	17.2(12)	22.3(11)	-1.9(9)	-1.5(8)	3.5(9)

C7	23.7(11)	22.0(13)	22.6(12)	-2.5(10)	0.5(9)	-5.1(10)
C8	42.2(15)	25.4(15)	26.3(14)	1.2(10)	-1.4(11)	-5.0(12)
C9	45.8(16)	25.7(15)	32.1(15)	0.4(11)	-3.1(12)	8.1(12)
C10	24.6(12)	31.3(16)	41.0(15)	-2.6(12)	-6.1(10)	8.3(11)
C11	47.0(16)	40.8(18)	27.6(14)	-11.1(12)	0.5(12)	-1.4(14)

Table S4 Bond Lengths for 4a.

Atom	Atom	Length/Å	Atom	Atom	Length/Å
S1	O1	1.4249(17)	C1	C6	1.383(3)
S1	O2	1.4222(17)	C2	C3	1.388(3)
S1	N1	1.578(2)	C3	C4	1.382(3)
S1	C11	1.832(3)	C4	C5	1.375(3)
F1	C11	1.326(3)	C5	C6	1.389(3)
F2	C11	1.312(3)	C6	C7	1.517(3)
F3	C11	1.327(3)	C7	C8	1.527(4)
N1	C7	1.492(3)	C8	C9	1.518(4)
N1	C10	1.494(3)	C9	C10	1.523(4)
C1	C2	1.379(4)			

Table S5 Bond Angles for 4a.

Atom	Atom	Atom	Angle/°	Atom	Atom	Atom	Angle/°
O1	S1	N1	109.98(10)	C1	C6	C7	123.5(2)
O1	S1	C11	102.76(12)	C5	C6	C7	118.2(2)
O2	S1	O1	122.21(12)	N1	C7	C6	112.77(18)
O2	S1	N1	109.54(10)	N1	C7	C8	101.00(18)
O2	S1	C11	104.61(12)	C6	C7	C8	112.7(2)
N1	S1	C11	106.30(13)	C9	C8	C7	103.69(19)
C7	N1	S1	123.26(14)	C8	C9	C10	104.7(2)
C7	N1	C10	112.3(2)	N1	C10	C9	102.52(19)
C10	N1	S1	121.68(16)	F1	C11	S1	110.84(19)
C2	C1	C6	121.0(2)	F1	C11	F3	107.5(3)
C1	C2	C3	120.3(2)	F2	C11	S1	111.4(2)
C4	C3	C2	119.0(2)	F2	C11	F1	107.8(2)
C5	C4	C3	120.5(2)	F2	C11	F3	108.4(2)
C4	C5	C6	121.0(2)	F3	C11	S1	110.74(18)
C1	C6	C5	118.2(2)				

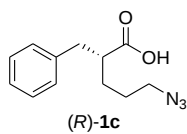
Table S6 Torsion Angles for 4a.

A	B	C	D	Angle/°	A	B	C	D	Angle/°
S1	N1	C7	C6	-98.4(2)	C1	C6	C7	C8	104.9(3)
S1	N1	C7	C8	141.13(19)	C2	C1	C6	C5	0.4(4)
S1	N1	C10	C9	-165.28(18)	C2	C1	C6	C7	-176.9(2)
O1	S1	N1	C7	31.3(2)	C2	C3	C4	C5	1.1(4)
O1	S1	N1	C10	-168.96(19)	C3	C4	C5	C6	-0.6(4)
O1	S1	C11	F1	175.1(2)	C4	C5	C6	C1	-0.1(4)
O1	S1	C11	F2	55.0(2)	C4	C5	C6	C7	177.3(2)
O1	S1	C11	F3	-65.7(2)	C5	C6	C7	N1	174.1(2)
O2	S1	N1	C7	168.20(18)	C5	C6	C7	C8	-72.4(3)
O2	S1	N1	C10	-32.0(2)	C6	C1	C2	C3	0.2(4)
O2	S1	C11	F1	46.5(2)	C6	C7	C8	C9	-84.6(2)
O2	S1	C11	F2	-73.6(2)	C7	N1	C10	C9	-3.5(3)
O2	S1	C11	F3	165.8(2)	C7	C8	C9	C10	-39.9(2)
N1	S1	C11	F1	-69.4(2)	C8	C9	C10	N1	26.4(3)
N1	S1	C11	F2	170.56(18)	C10	N1	C7	C6	100.2(2)
N1	S1	C11	F3	49.9(2)	C10	N1	C7	C8	-20.3(2)
N1	C7	C8	C9	36.0(2)	C11	S1	N1	C7	-79.3(2)
C1	C2	C3	C4	-0.9(4)	C11	S1	N1	C10	80.5(2)
C1	C6	C7	N1	-8.7(3)					

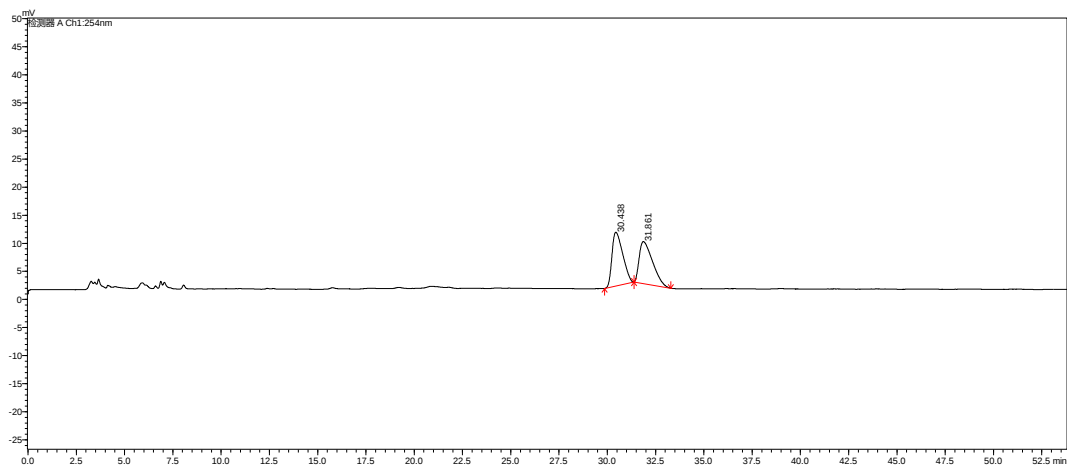
Table S7 Hydrogen Atom Coordinates ($\text{\AA} \times 10^4$) and Isotropic Displacement Parameters ($\text{\AA}^2 \times 10^3$) for 4a.

Atom	x	y	z	U(eq)
H1	4490	3562	6986	30
H2	4620	3613	7791	37
H3	6268	4979	8156	35
H4	7801	6219	7702	36
H5	7659	6179	6899	31
H7	6782	4592	6188	27
H8A	5993	7617	6343	38
H8B	5935	6900	5826	38
H9A	3905	7617	5960	41
H9B	3957	6956	6483	41
H10A	3125	4573	6166	39
H10B	3704	4945	5667	39

HPLC of 2-benzyl ω -azido carboxylic acid **1c**

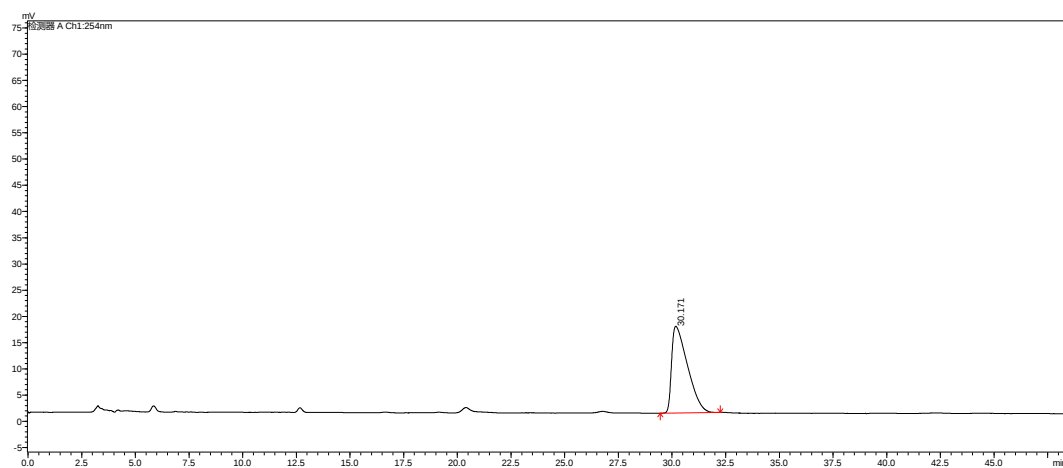


Racemic sample:



peak	Retentiontime (min)	Concertration	Area	Height
1	30.438	50.55454	369737	9579
2	31.861	49.44546	361625	7471

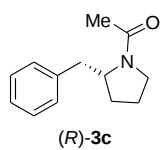
Enantio-enriched sample:



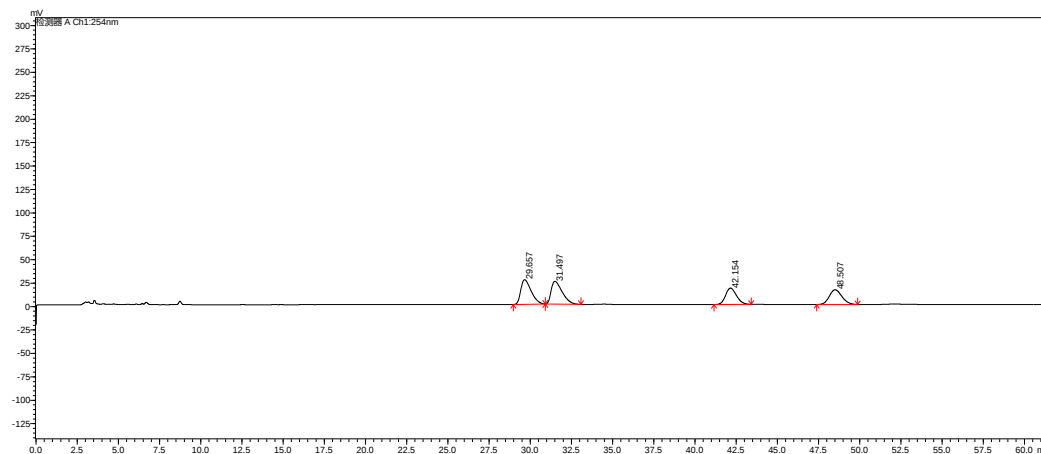
peak	Retentiontime (min)	Concertration	Area	Height
1	30.171	100.00000	849720	16548

>99% ee, Daicel Shimadzu HPLC (Model: LC20AT) for ee determination [>99% ee, Daicel OJ-H 0.46*25 cm, n-Hexane:i-PrOH 98:2, 1mL/min, 35°C, 4.4 Mpa, 254 nm, t_r (major) 30.2 min, t_r (minor) 31.8 min.

HPLC of amide 3c

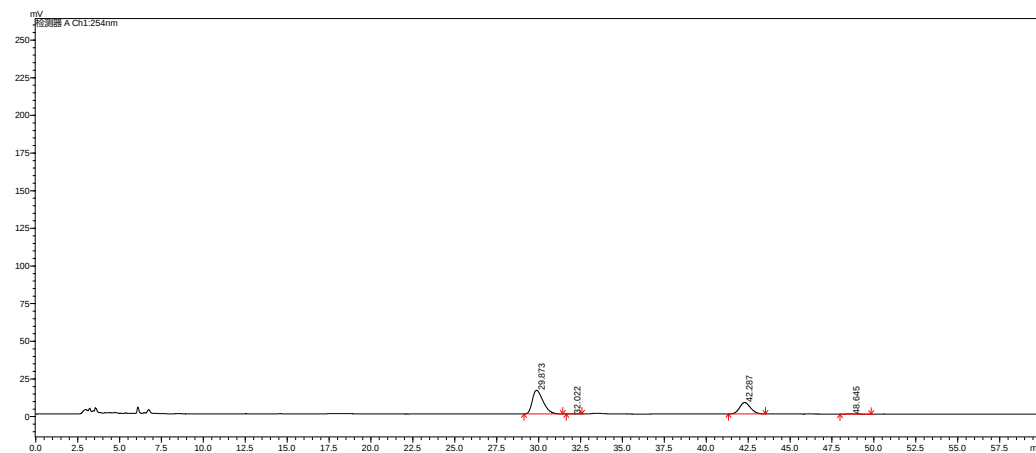


Racemic sample:



peak	Retentiontime (min)	Concertration	Area	Height
1	29.657	29.25557	1149477	26254
2	31.497	28.94113	1137123	24309
3	42.154	20.49596	805304	17494
4	48.507	21.30734	837184	15717

Enantio-enriched sample:

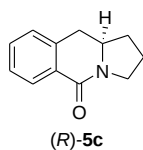


peak	Retentiontime (min)	Concertration	Area	Height
1	29.873	66.47092	702370	15688
2	32.022	0.28090	2968	101
3	42.287	32.83403	346943	7566
4	48.645	0.41415	4376	78

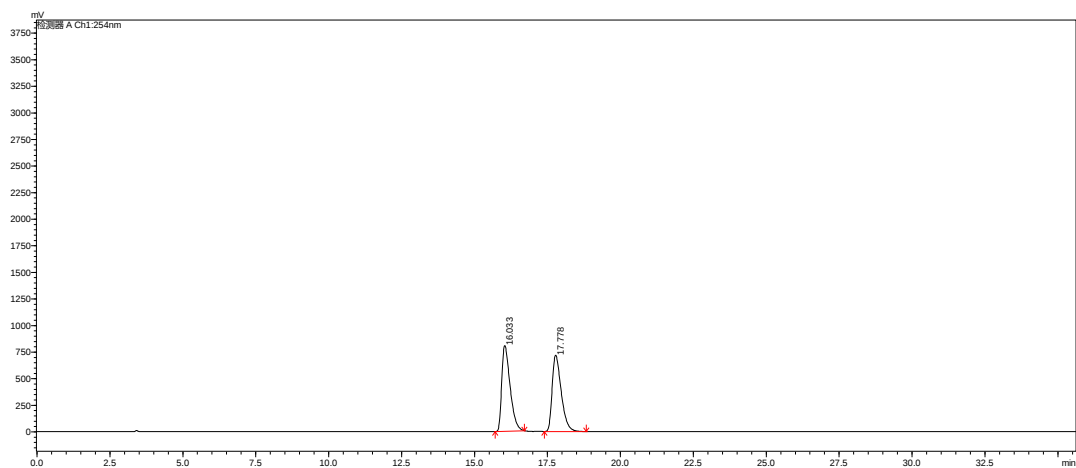
ee = 99%

99% ee, Daicel Shimadzu HPLC (Model: LC20AT) for ee determination [99% ee, Daicel AD-H 0.46*25 cm, n-Hexane:i-PrOH 98:2, 1mL/min, 35°C, 3.2 Mpa, 254 nm, t_r (major 1) 29.9 min, t_r (major 2) 42.3 min, t_r (minor 1) 32.0 min, t_r (minor 1) 48.6 min.

HPLC of amide 3c

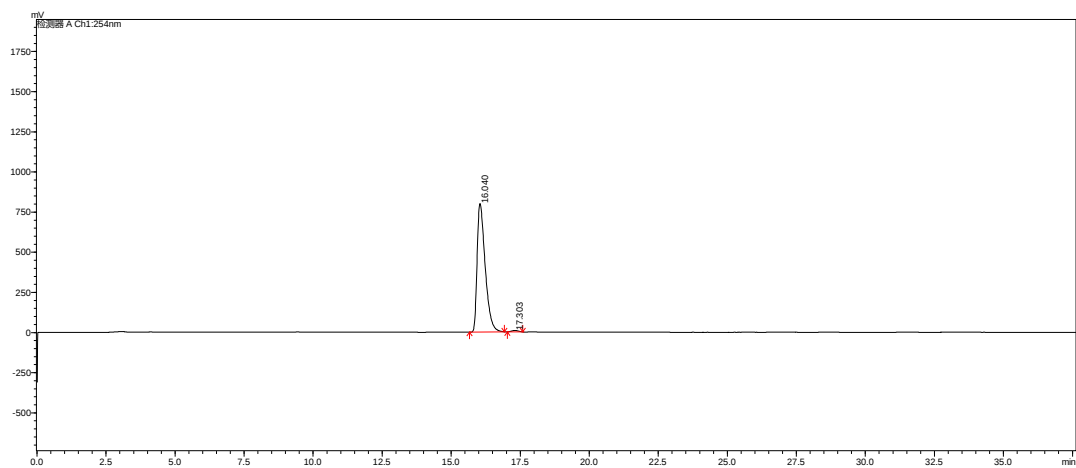


Racemic sample:



peak	Retentiontime (min)	Concertration	Area	Height
1	16.033	50.64248	16047734	806155
2	17.778	49.35752	15640554	717876

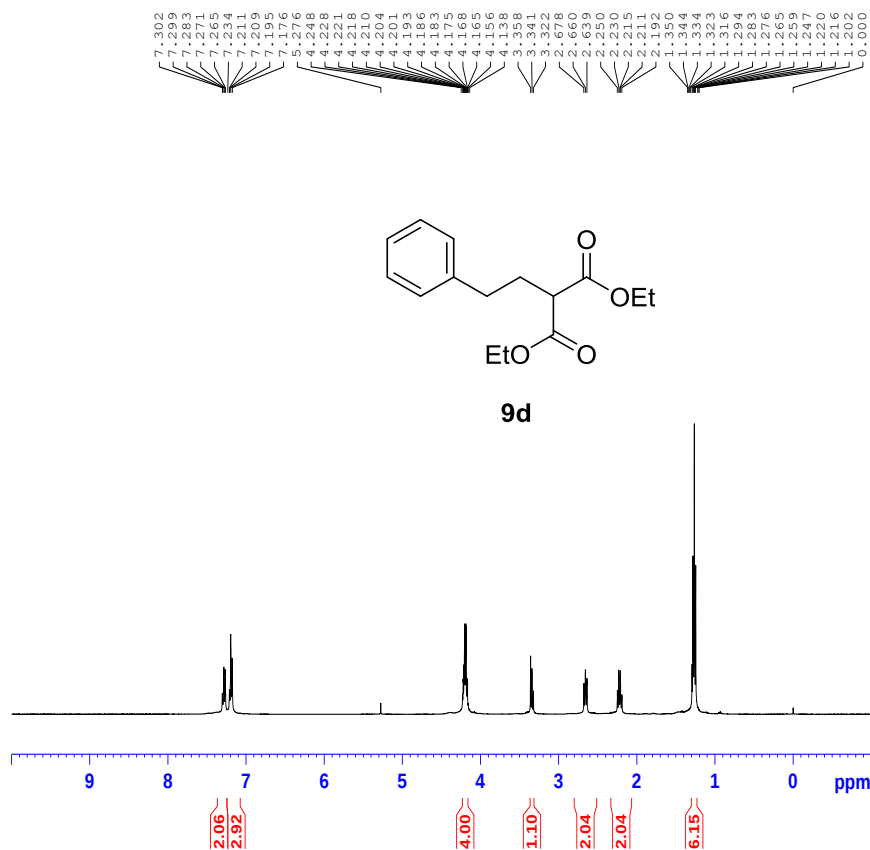
Enantio-enriched sample:



peak	Retentiontime (min)	Concertration	Area	Height
1	16.040	99.07259	16253255	801038
2	17.303	0.92741	152145	9017

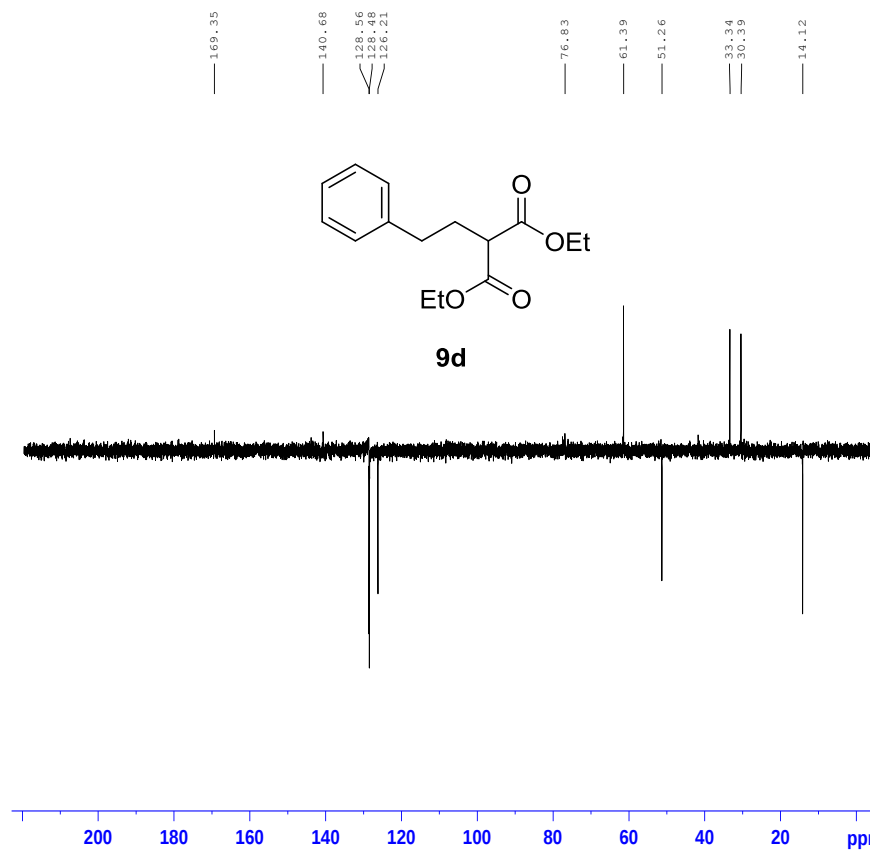
ee = 98%

99% ee, Daicel Shimadzu HPLC (Model: LC20AT) for ee determination [99% ee, Daicel AD-H 0.46*25 cm, n-Hexane:i-PrOH 96:4, 1mL/min, 35°C, 3.4 Mpa, 254 nm, t_r (major) 16.0 min, t_r (minor) 17.3 min.



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SOLVENT CDCl3
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DS 2
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DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
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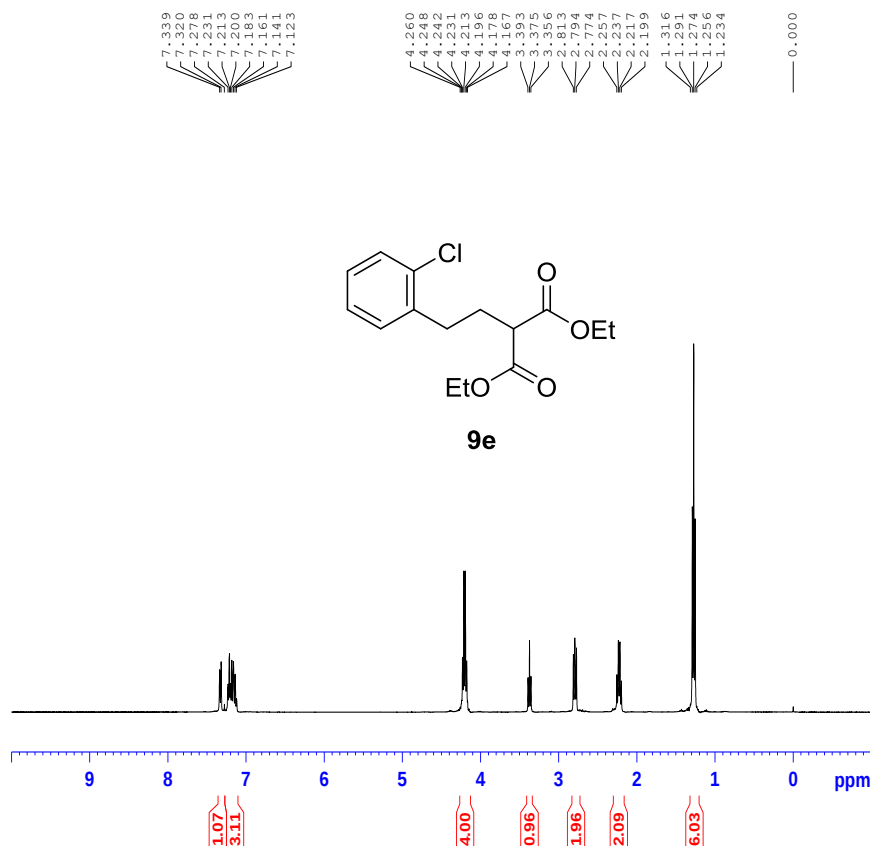
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SI 32768
SF 400.1300094 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



NAME wangxuejuan
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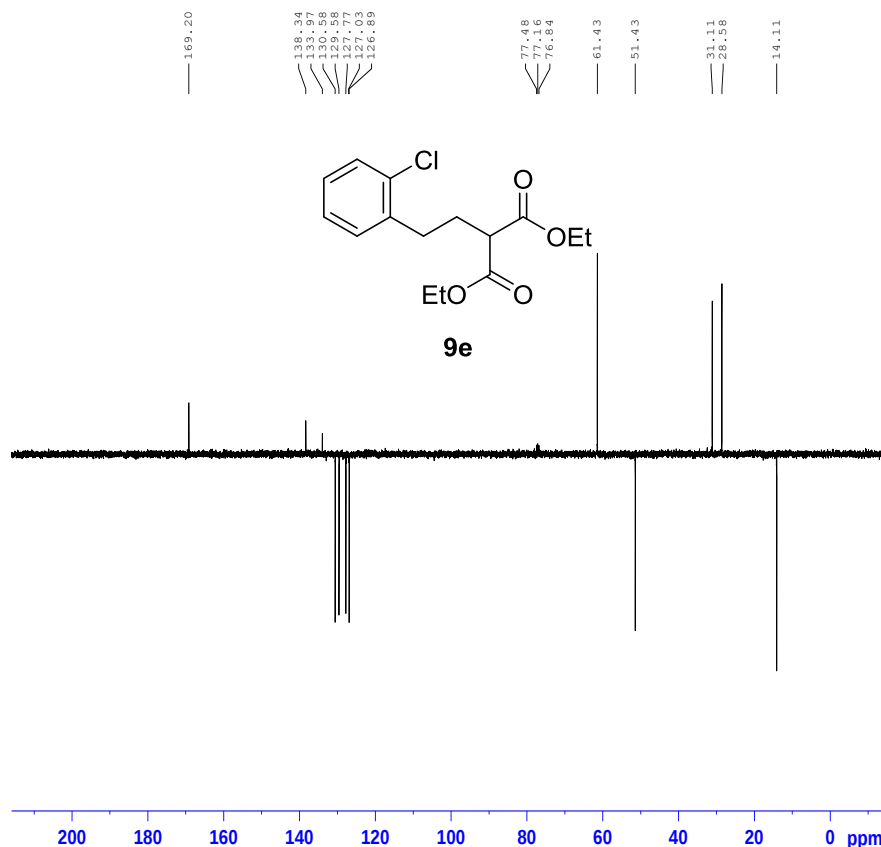
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PL12 15.46 dB
PL2W 10.19825935 W
PL12W 0.29008549 W
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SI 32768
SF 100.6127679 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



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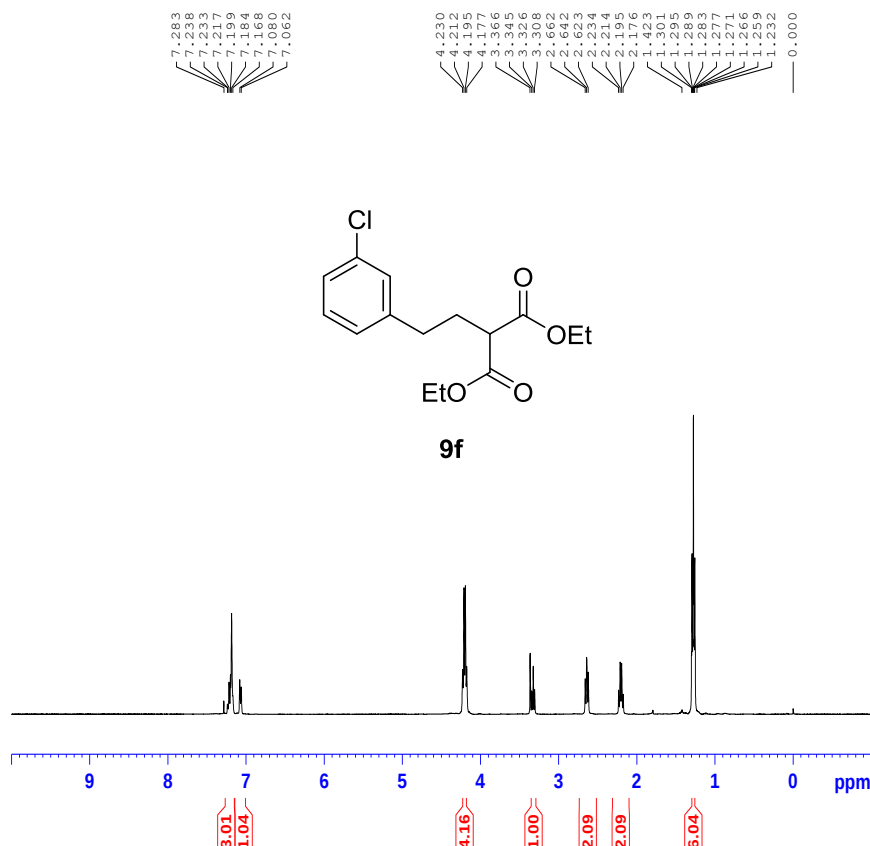
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 SF 400.1300026 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



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 Time_ 21.14
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 SOLVENT CDCl₃
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 DS 4
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 RG 203
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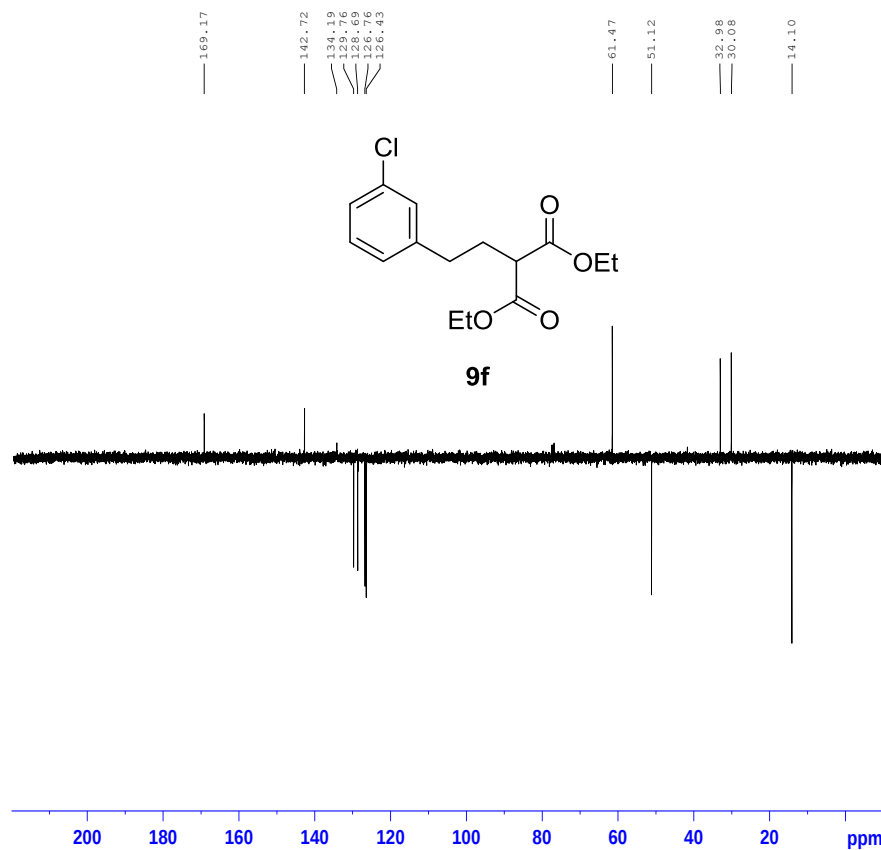
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 P2 23.60 usec
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 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
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 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127671 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



NAME wangxuejuan01
EXPNO 701
PROCNO 1
Date_ 20170925
Time_ 18.51
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 4
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 40.3
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TD0 1

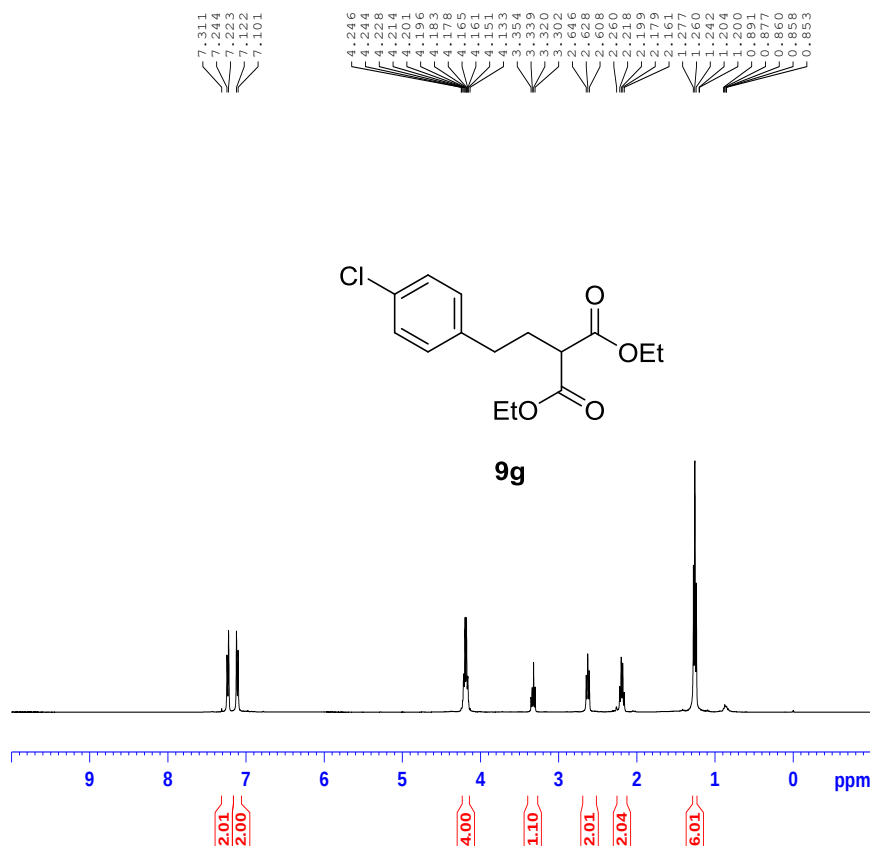
===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300005 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



NAME wangxuejuan01
EXPNO 703
PROCNO 1
Date_ 20170925
Time_ 20.51
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT CDCl3
NS 9
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
D20 0.00689655 sec
TD0 1

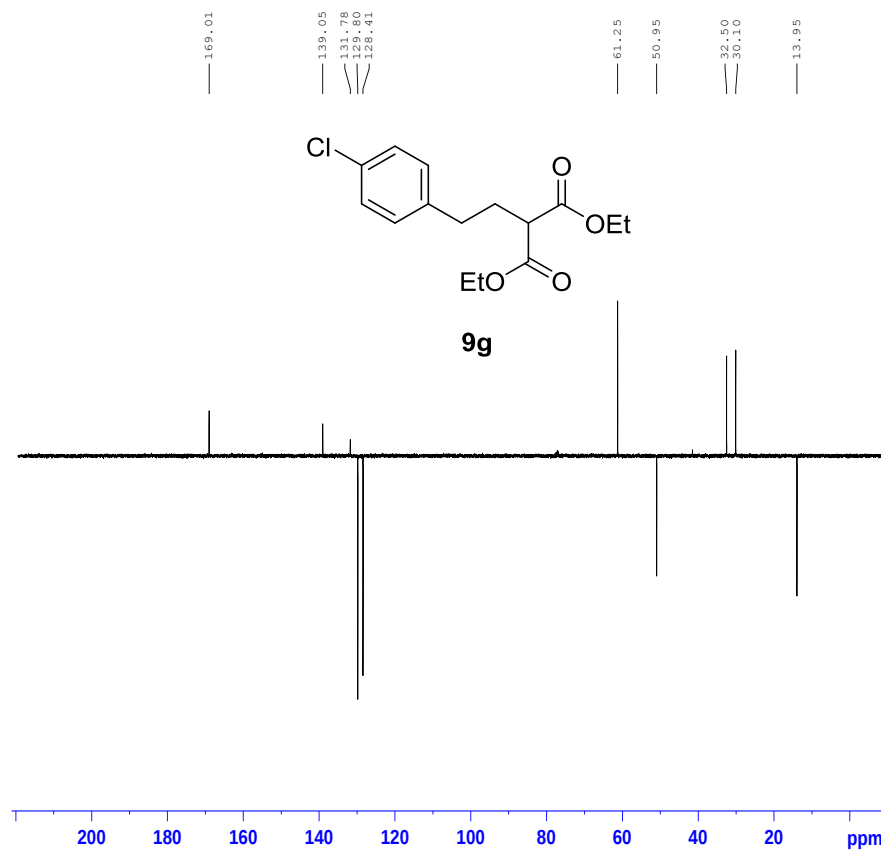
===== CHANNEL f1 =====
NUC1 13C
P1 11.80 usec
P2 23.60 usec
PL1 0.00 dB
PL1W 34.91522217 W
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.46 dB
PL12W 10.19825935 W
PL12W 0.29008549 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127665 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



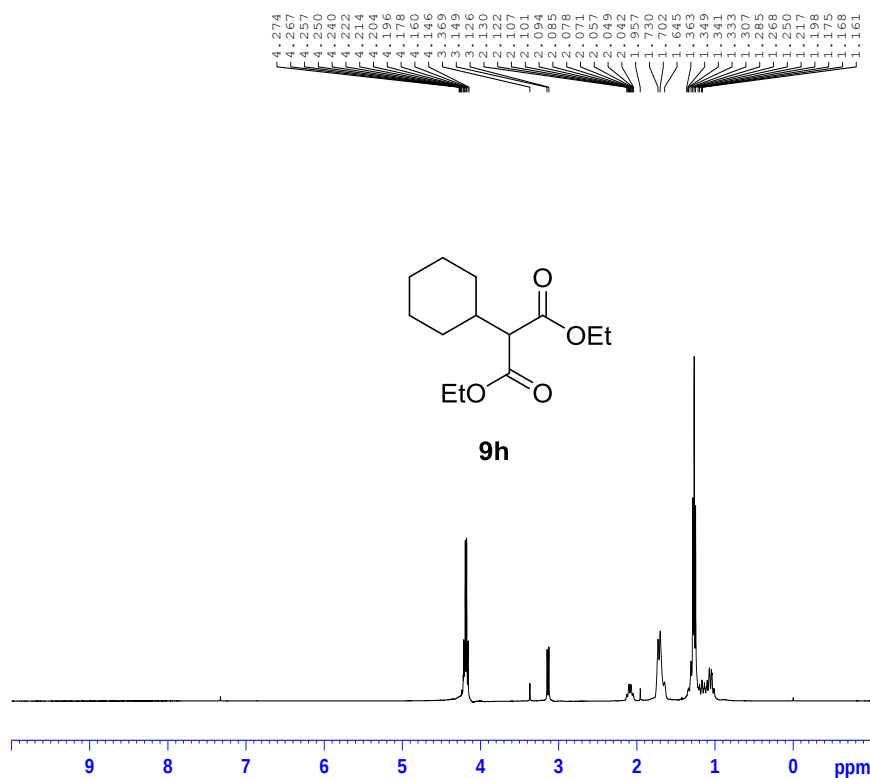
NAME wangxuejuan01
 EXPNO 354
 PROCNO 1
 Date_ 20170522
 Time_ 8.40
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 18
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1299888 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



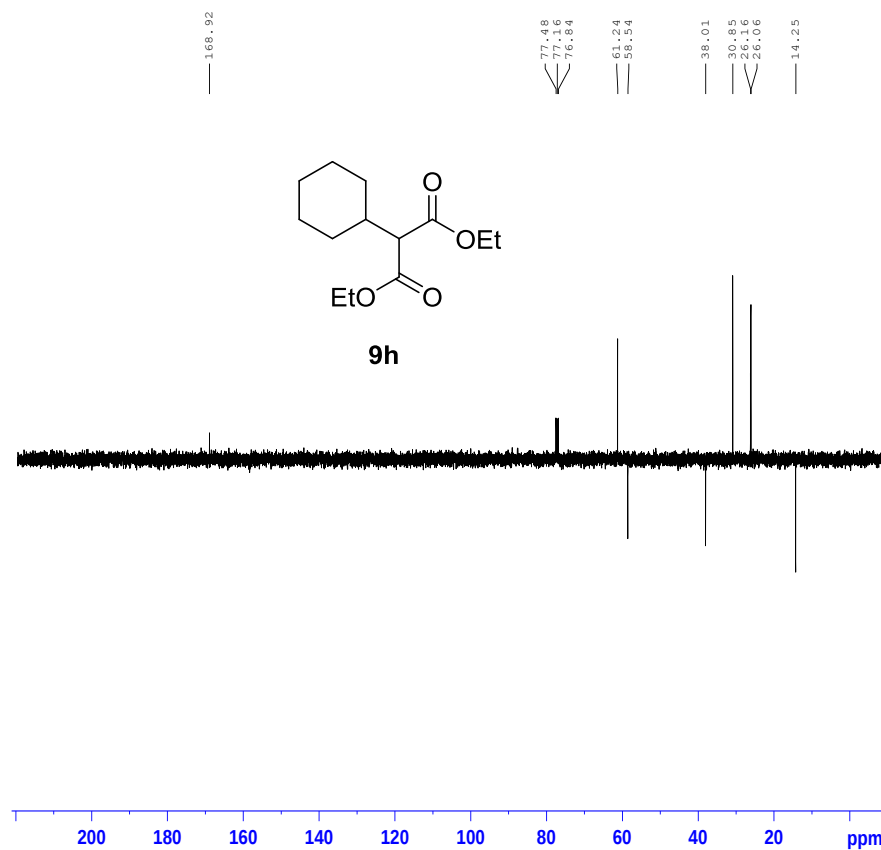
NAME wangxuejuan01
 EXPNO 355
 PROCNO 1
 Date_ 20170522
 Time_ 8.41
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 12
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz
 ===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127771 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



NAME wangxuejuan01
EXPNO 686
PROCNO 1
Date_ 20170915
Time_ 14.46
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 3
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 28.5
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TD0 1

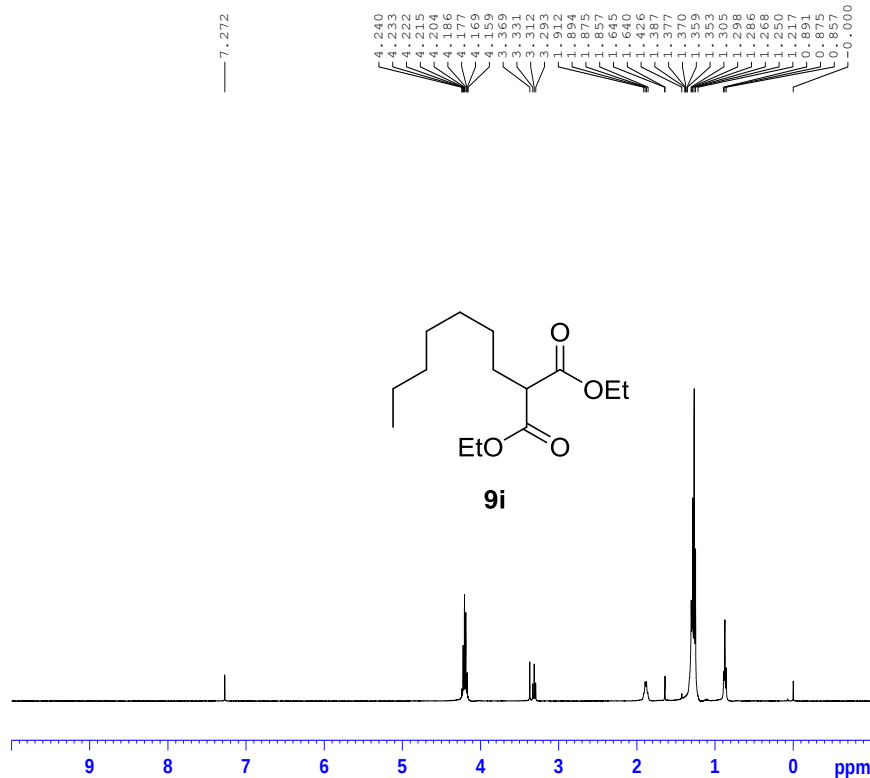
===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1299834 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



NAME wangxuejuan
EXPNO 830
PROCNO 1
Date_ 20161208
Time_ 8.51
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT CDCl3
NS 54
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
D20 0.00689655 sec
TD0 1

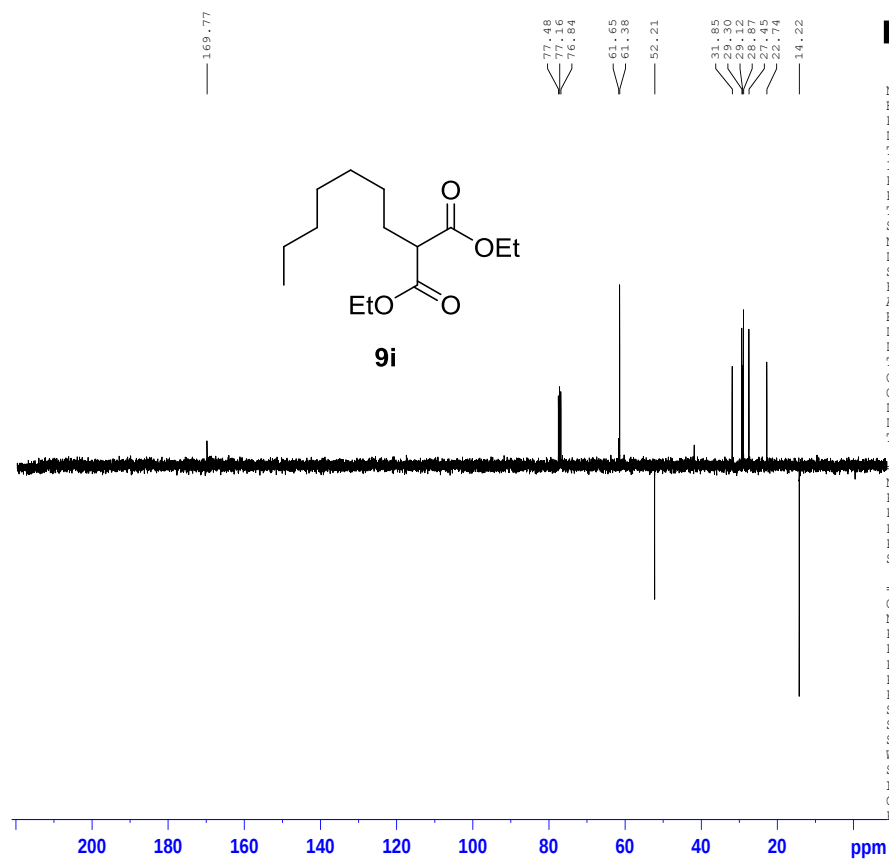
===== CHANNEL f1 =====
NUC1 13C
P1 11.80 usec
P2 23.60 usec
PL1 0.00 dB
PL1W 34.91522217 W
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.46 dB
PL2W 10.19825935 W
PL12W 0.29008549 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127568 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



NAME wangxuejuan01
EXPNO 689
PROCNO 1
Date_ 20170918
Time_ 8.29
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 3
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 161
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TDO 1

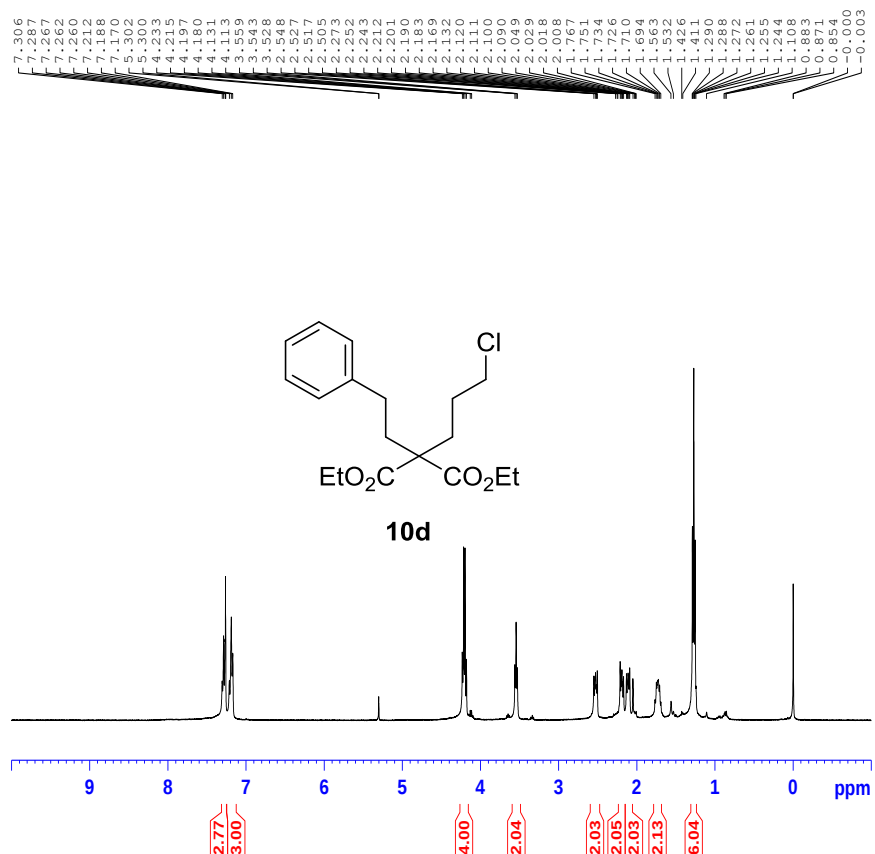
===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300053 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



NAME wangxuejuan01
EXPNO 690
PROCNO 1
Date_ 20170918
Time_ 8.44
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT CDCl3
NS 256
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
D20 0.00689655 sec
TDO 1

===== CHANNEL f1 =====
NUC1 13C
P1 11.80 usec
P2 23.60 usec
PL1 0.00 dB
PL1W 34.91522217 W
SFO1 100.6228298 MHz

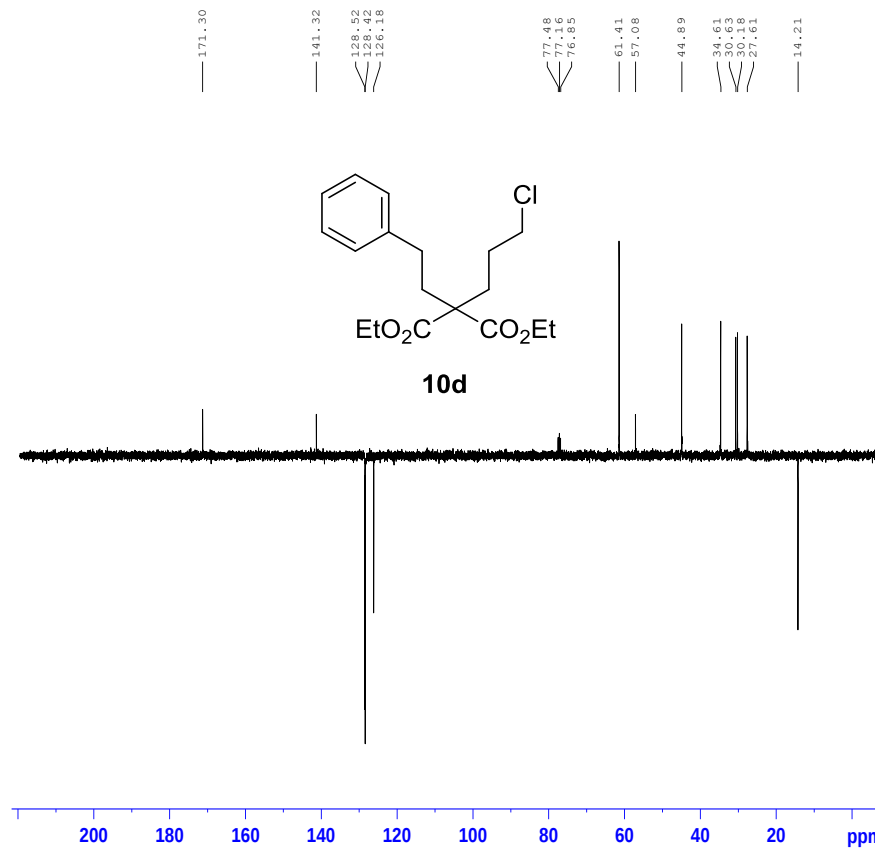
===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.46 dB
PL2W 10.19825935 W
PL12W 0.29008549 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127568 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



BRUKER

NAME wangxuejuan
 EXPNO 805
 PROCNO 1
 Date_ 20161127
 Time_ 10.13
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 8
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 203
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300094 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

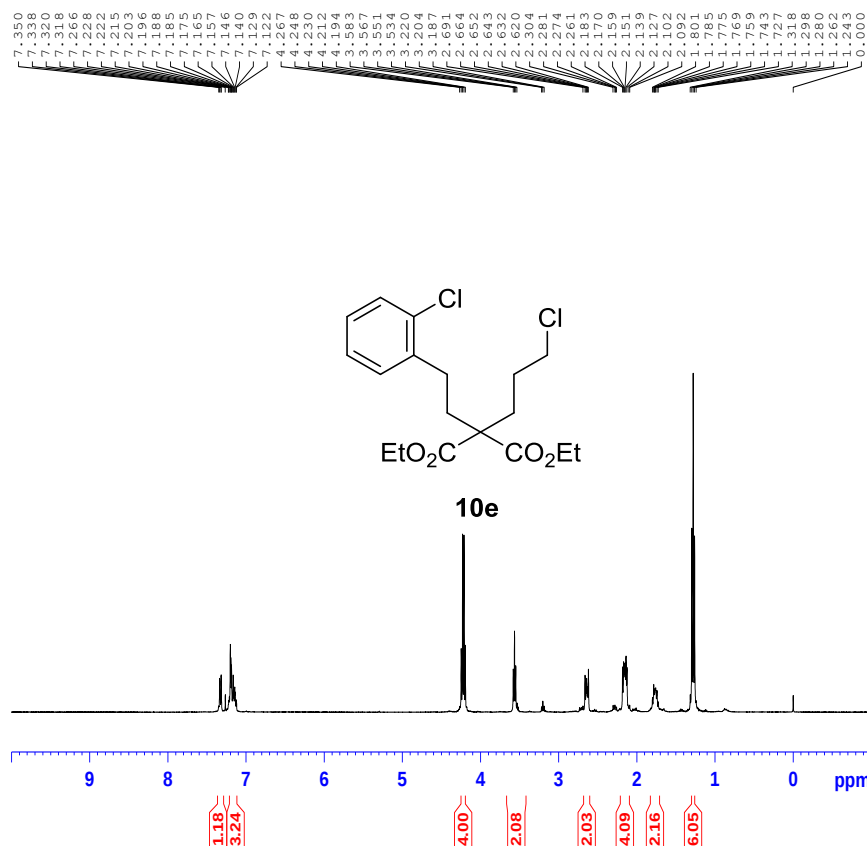


BRUKER

NAME wangxuejuan
 EXPNO 806
 PROCNO 1
 Date_ 20161127
 Time_ 10.46
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 39
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TDO 1

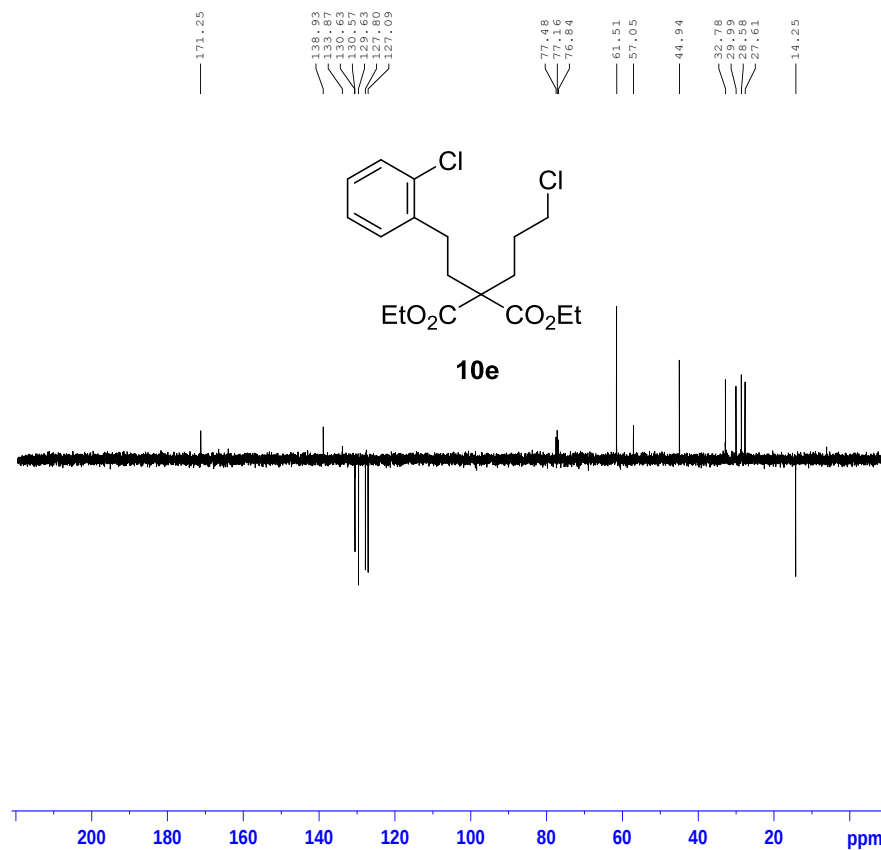
===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127642 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



NAME wangxuejuan01
 EXPNO 411
 PROCNO 1
 Date_ 20170606
 Time_ 15.18
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 3
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 50.8
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TDO 1

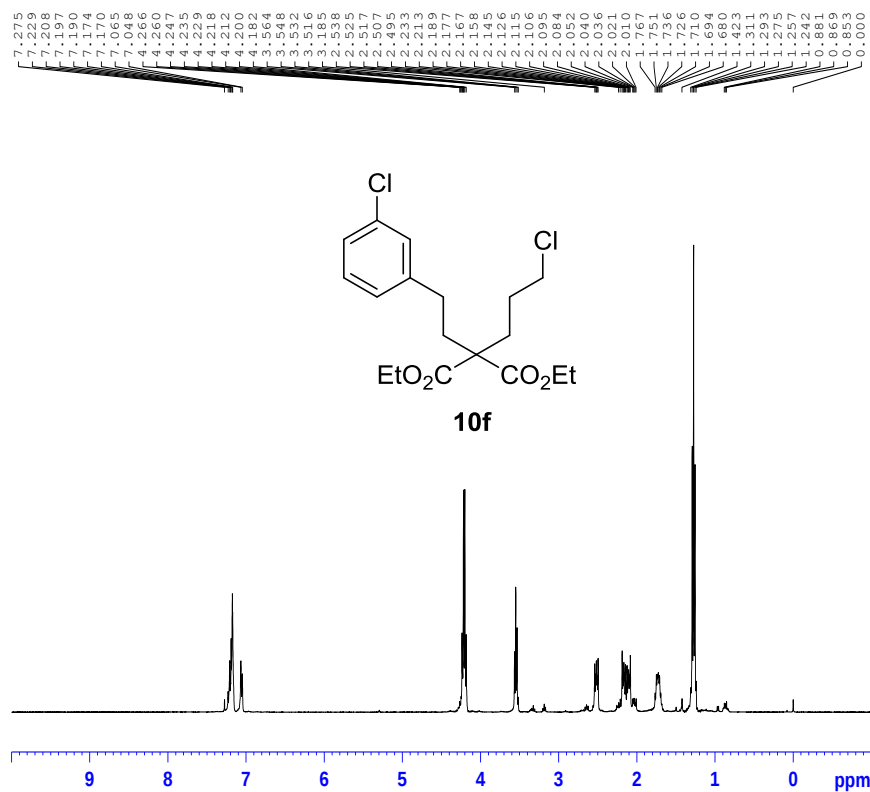
===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300073 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



NAME wangxuejuan01
 EXPNO 412
 PROCNO 1
 Date_ 20170606
 Time_ 15.20
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 28
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TDO 1

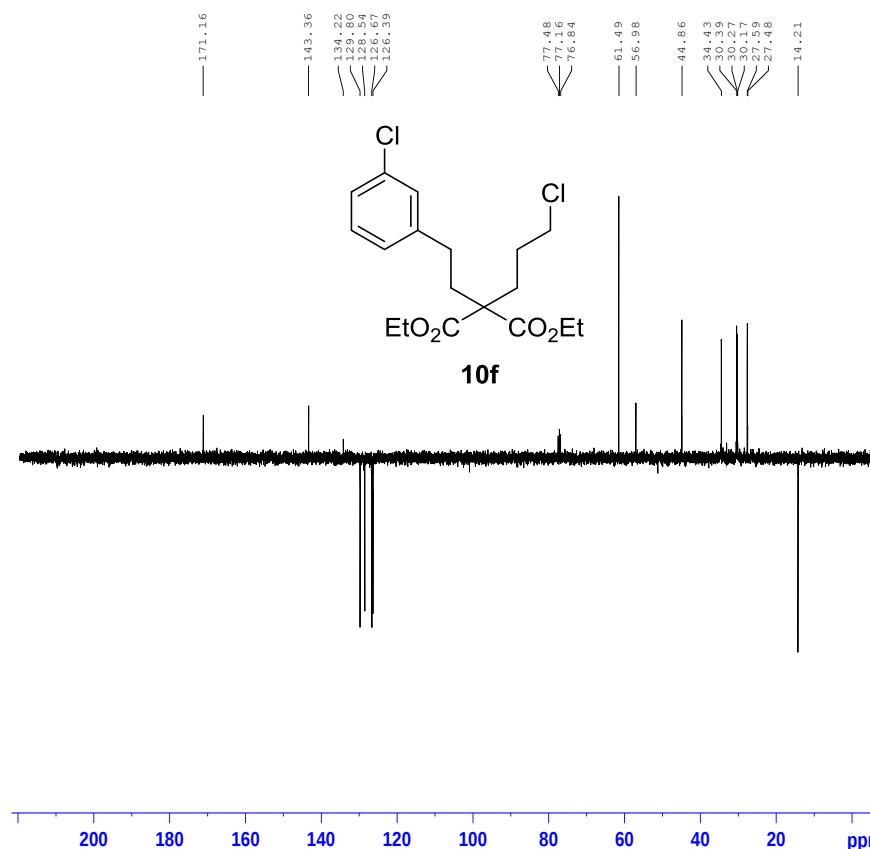
===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127597 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



NAME wangxuejuan01
 EXPNO 497
 PROCNO 1
 Date_ 20170626
 Time_ 17.44
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 4
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 40.3
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TD0 1

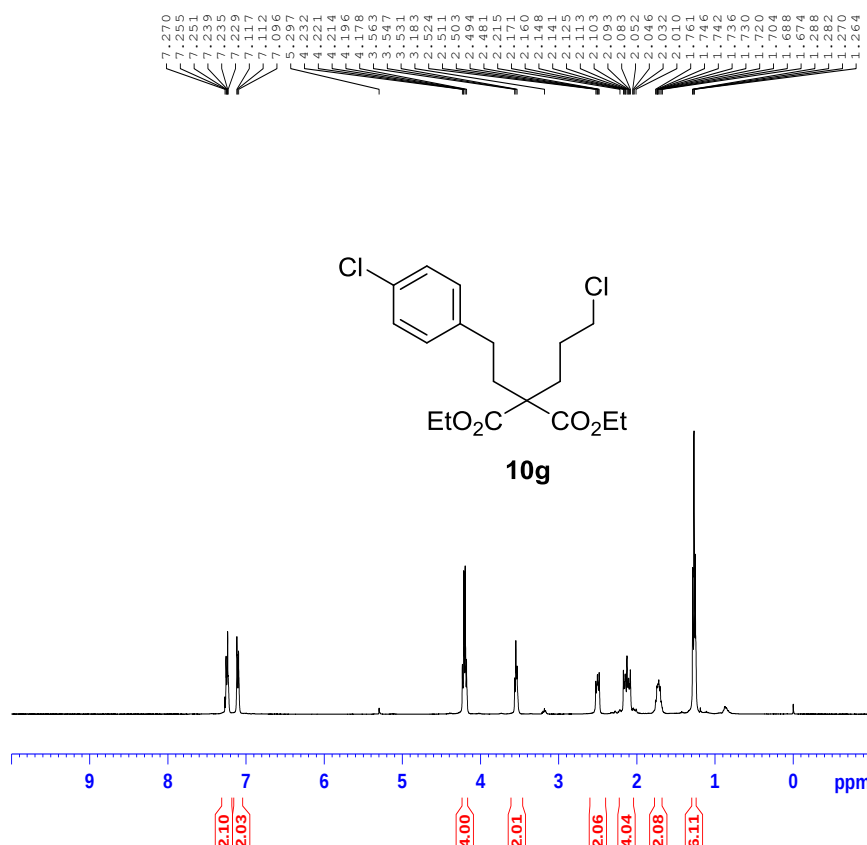
===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300038 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



NAME wangxuejuan01
 EXPNO 498
 PROCNO 1
 Date_ 20170626
 Time_ 17.46
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 32
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TD0 1

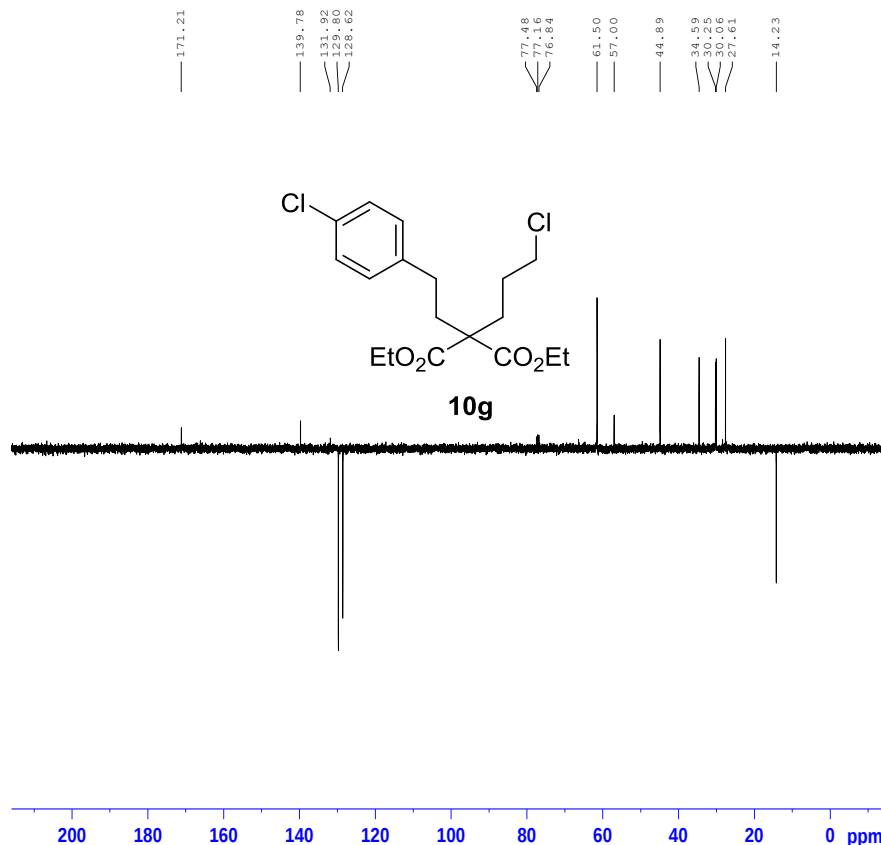
===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127619 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



NAME wangxuejuan01
 EXPNO 368
 PROCNO 1
 Date_ 20170524
 Time_ 9.18
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 40.3
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TDO 1

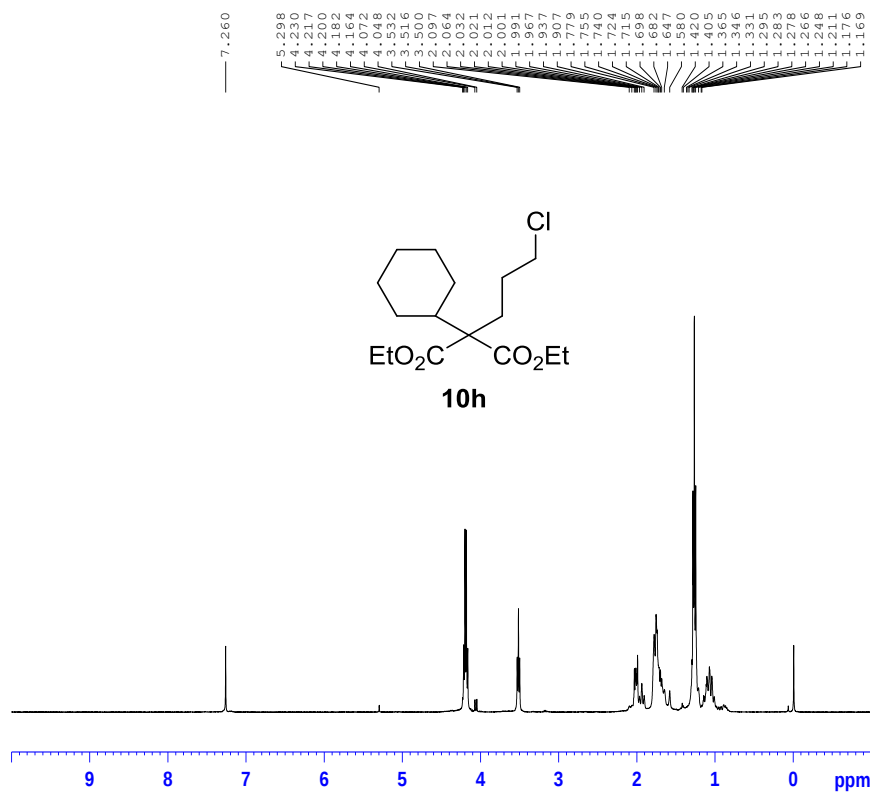
===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300058 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



NAME wangxuejuan01
 EXPNO 369
 PROCNO 1
 Date_ 20170524
 Time_ 9.20
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 29
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TDO 1

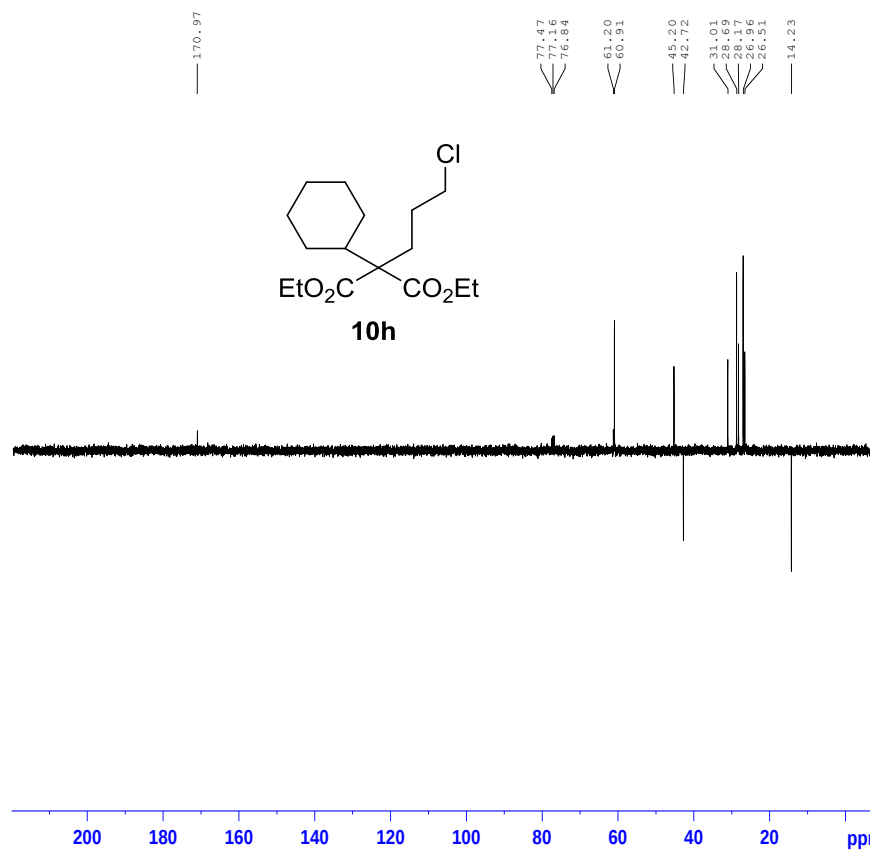
===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127612 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



NAME wangxuejuan
EXPNO 843
PROCNO 1
Date_ 20161215
Time_ 16.42
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 8
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TD0 1

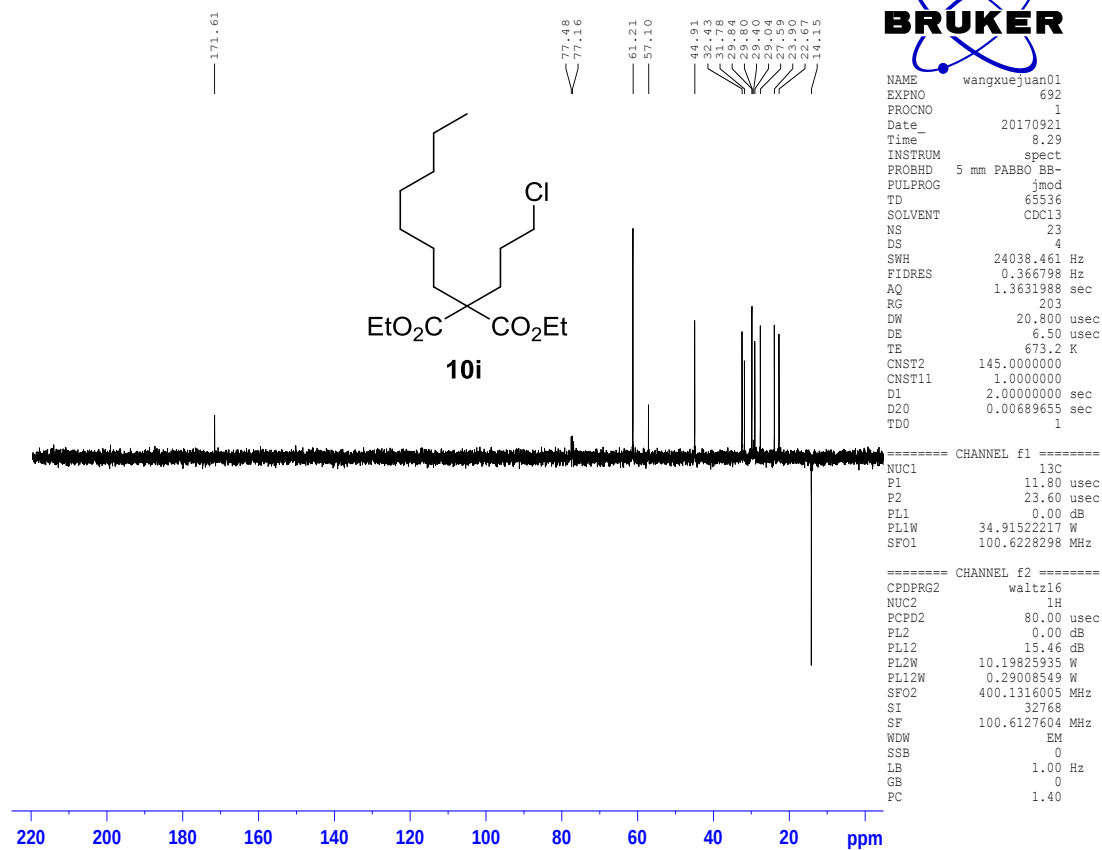
===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300100 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

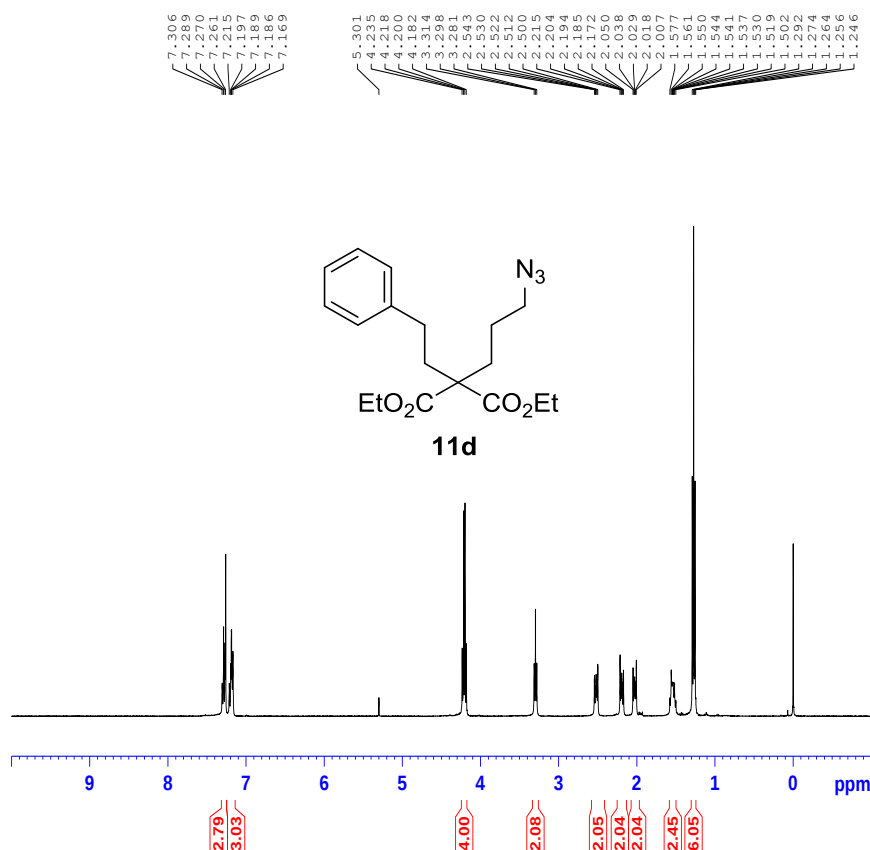


NAME wangxuejuan01
EXPNO 3
PROCNO 1
Date_ 20170105
Time_ 19.27
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT CDCl3
NS 24
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
D20 0.00689655 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 11.80 usec
P2 23.60 usec
PL1 0.00 dB
PL1W 34.91522217 W
SFO1 100.6228298 MHz

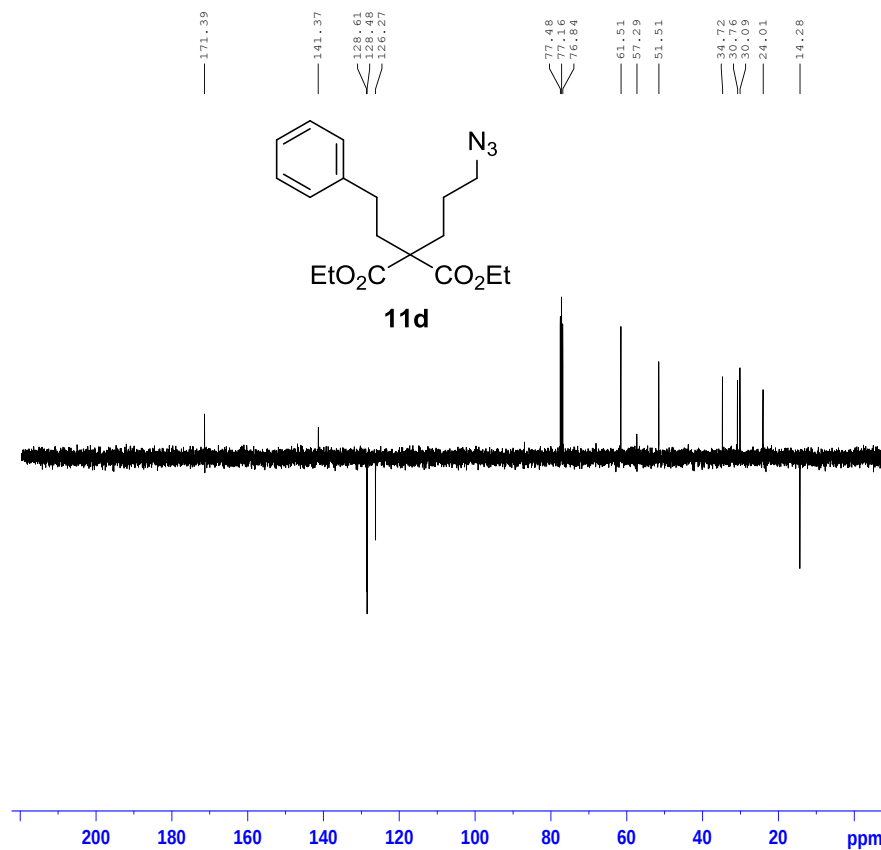
===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.46 dB
PL2W 10.19825935 W
PL12W 0.29008549 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127606 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40





NAME wangxuejuan
EXPNO 856
PROCNO 1
Date_ 20161221
Time_ 17.57
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TD0 1

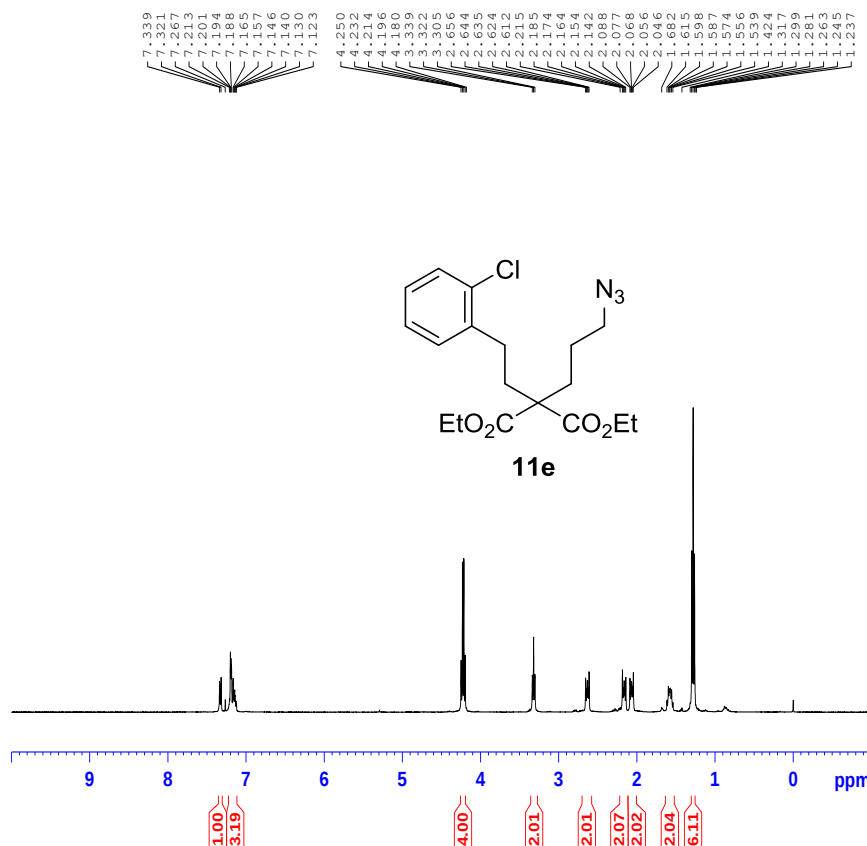
===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300093 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



NAME wangxuejuan
EXPNO 857
PROCNO 1
Date_ 20161221
Time_ 18.21
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT CDCl3
NS 400
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
D20 0.00689655 sec
TD0 1

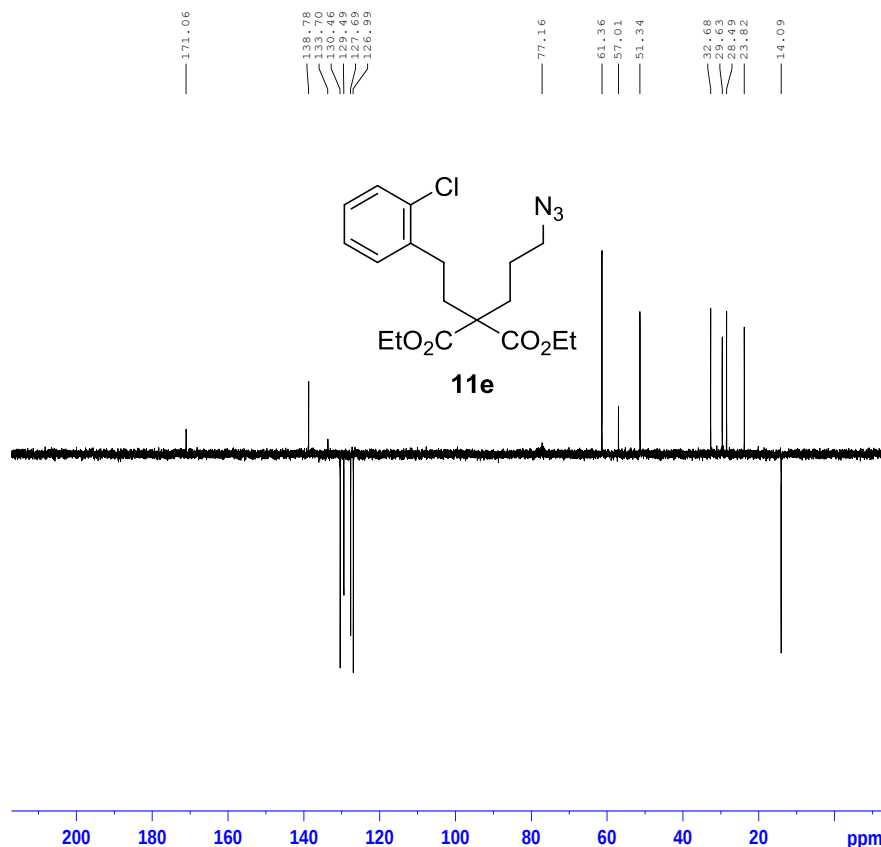
===== CHANNEL f1 =====
NUC1 13C
P1 11.80 usec
P2 23.60 usec
PL1 0.00 dB
PL1W 34.91522217 W
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.46 dB
PL2W 10.19825935 W
PL12W 0.29008549 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127560 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



NAME wangxuejuan01
 EXPNO 433
 PROCNO 1
 Date_ 20170610
 Time_ 11.15
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 50.8
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TDO 1

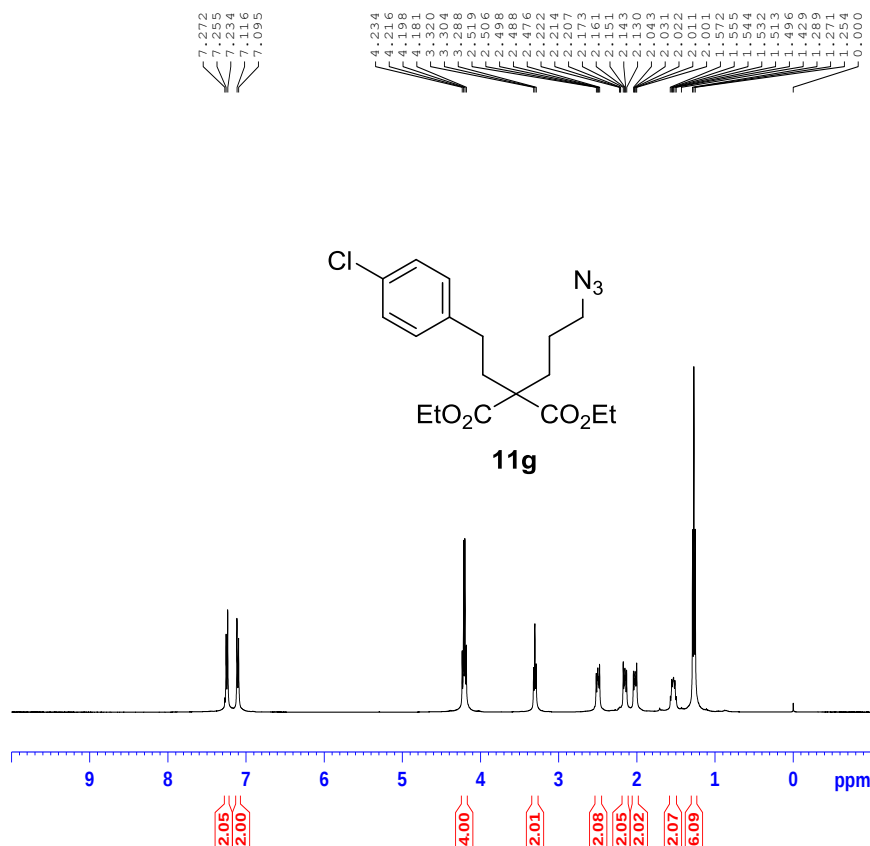
===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300071 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



NAME wangxuejuan01
 EXPNO 430
 PROCNO 1
 Date_ 20170609
 Time_ 20.11
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 18
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TDO 1

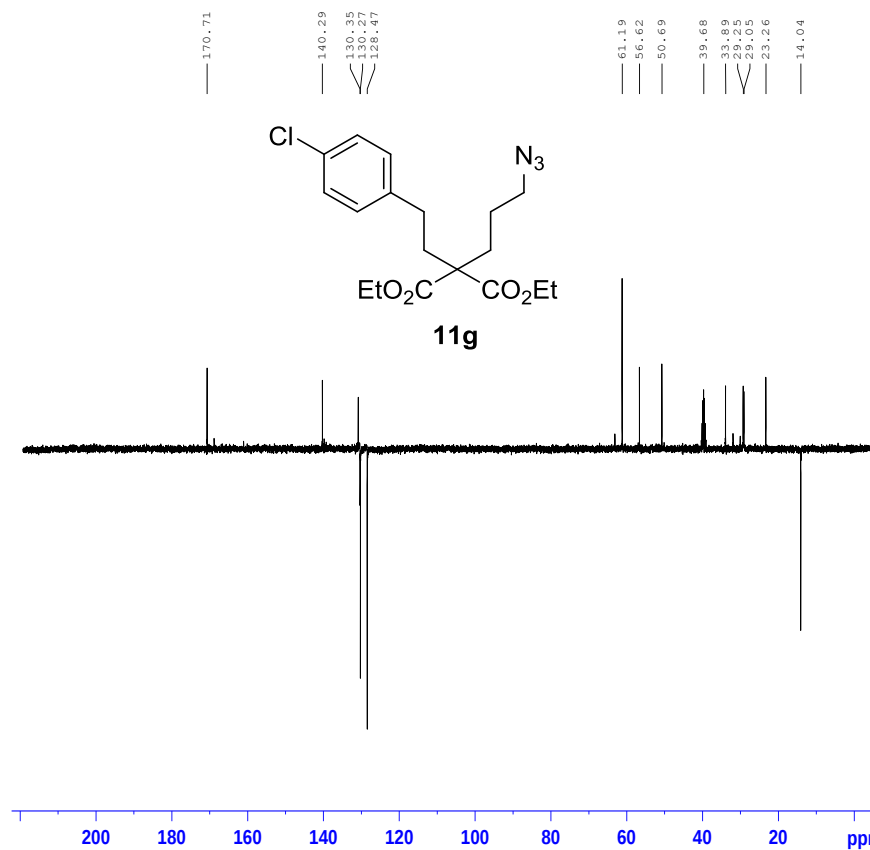
===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127708 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



NAME wangxuejuan01
 EXPNO 385
 PROCNO 1
 Date_ 20170527
 Time_ 10.04
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl₃
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 40.3
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TDO 1

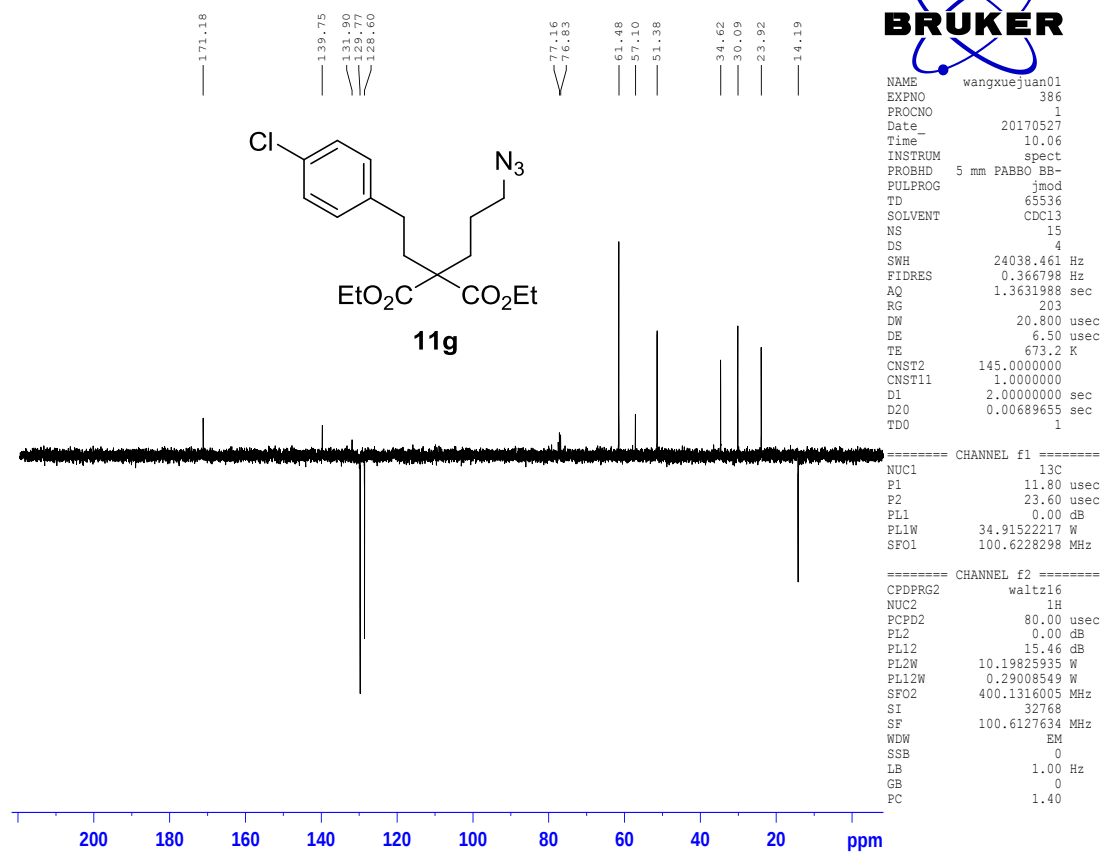
===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300051 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

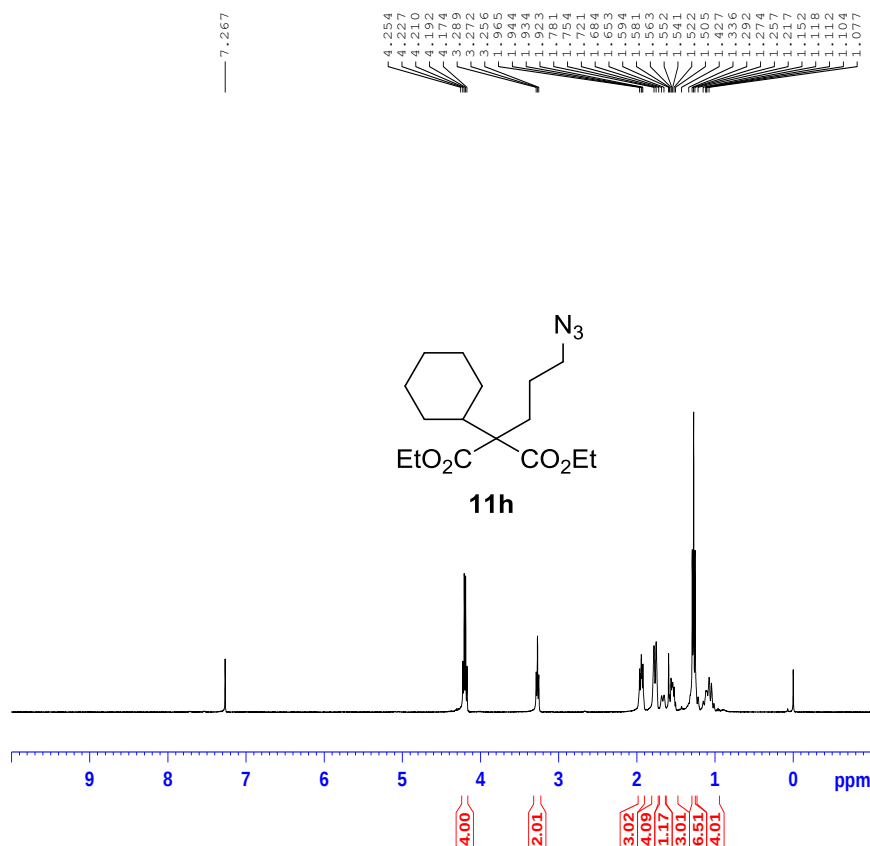


NAME wangxuejuan02
 EXPNO 106
 PROCNO 1
 Date_ 20171120
 Time_ 19.11
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT DMSO
 NS 96
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

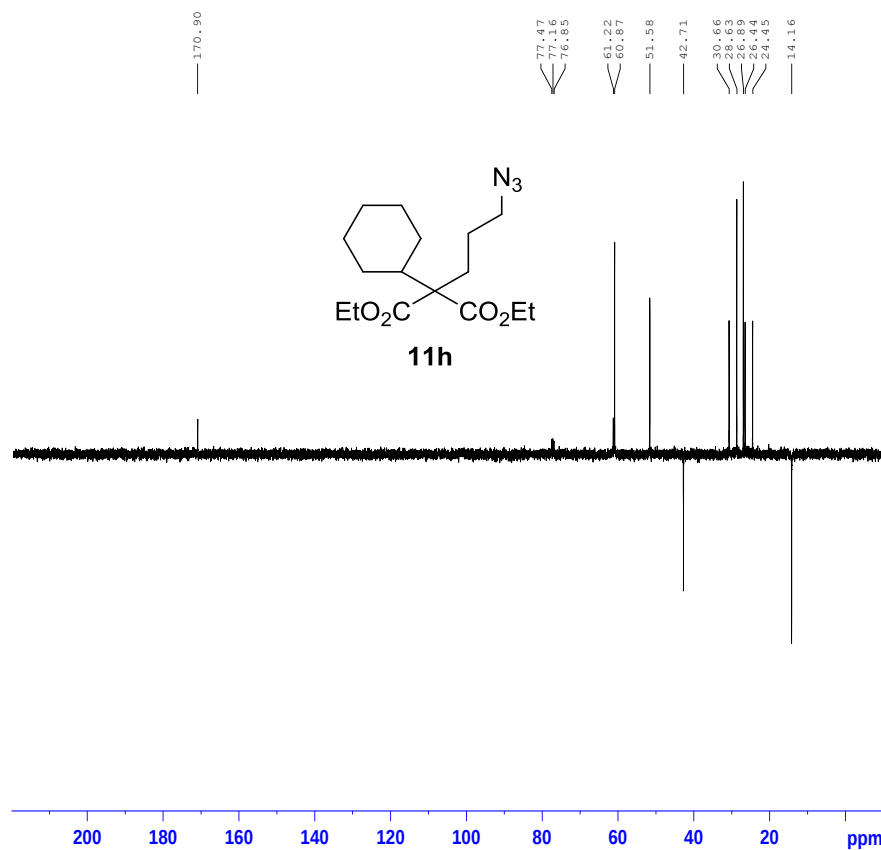
===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127979 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40





NAME wangxuejuan01
EXPNO 681
PROCNO 1
Date_ 20170915
Time_ 9.09
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 4
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TD0 1

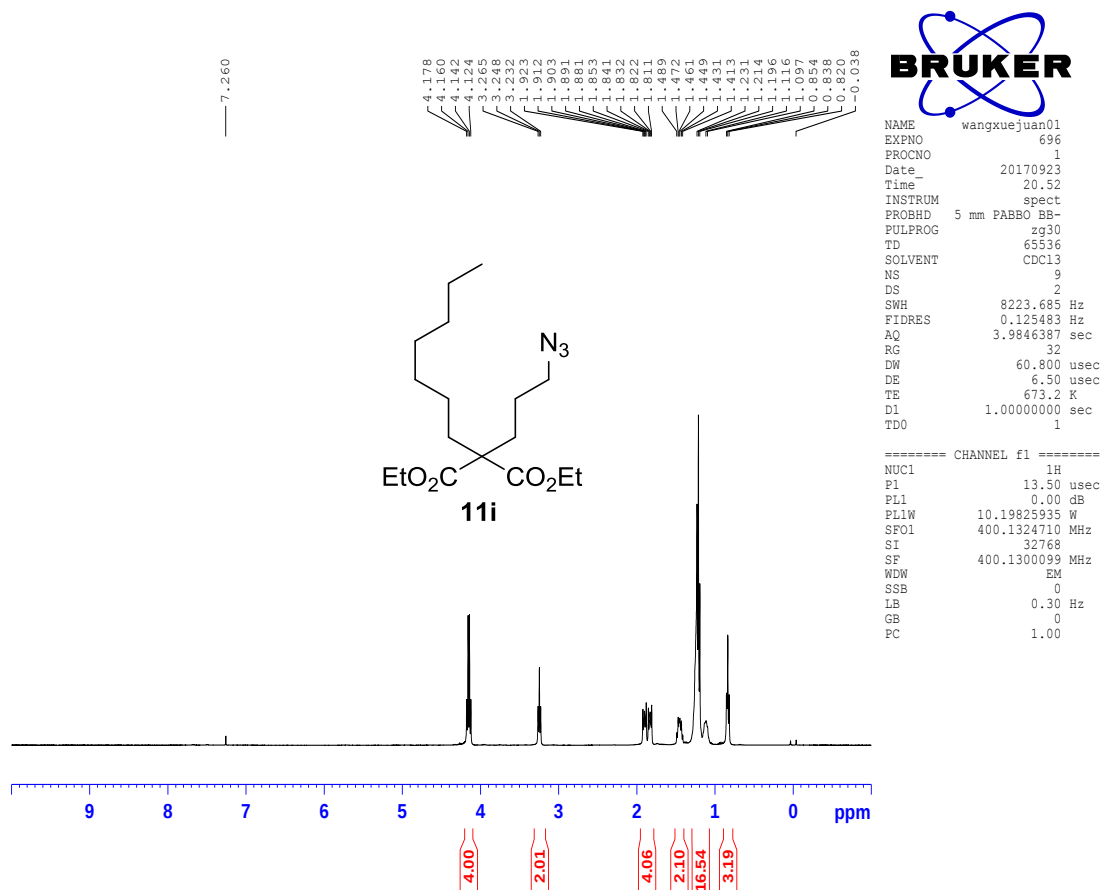
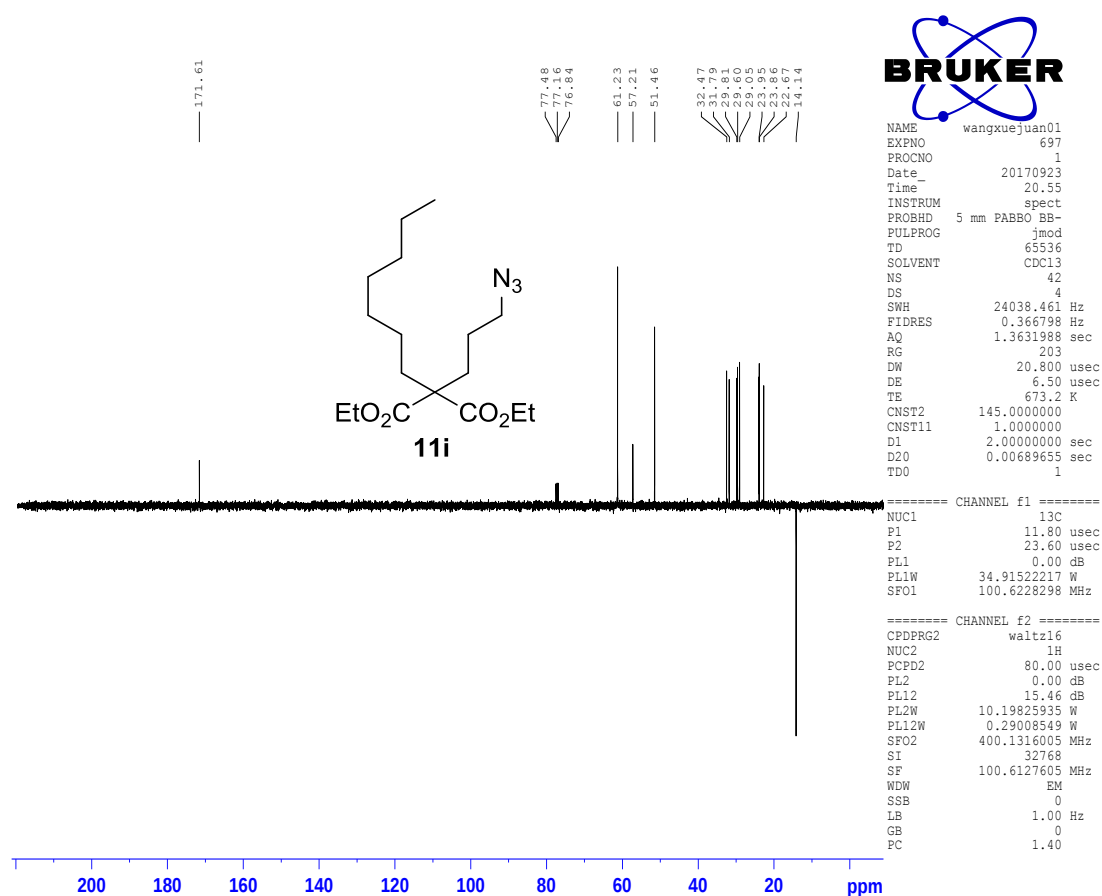
===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300075 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00

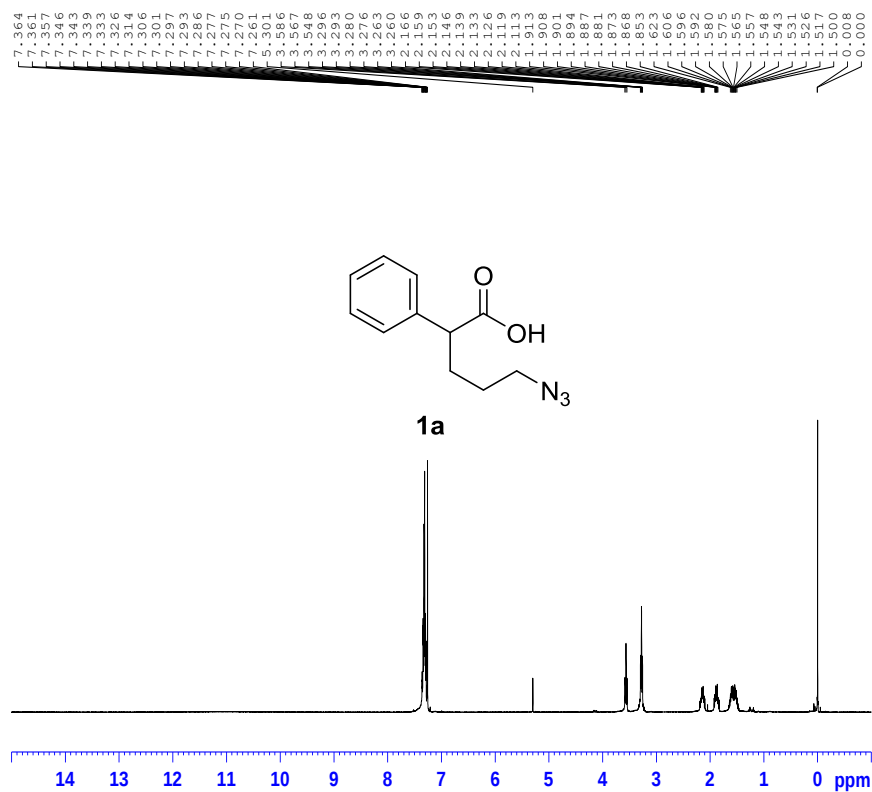


NAME wangxuejuan01
EXPNO 13
PROCNO 1
Date_ 20170109
Time_ 8.54
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT CDCl3
NS 24
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
D20 0.00689655 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 11.80 usec
P2 23.60 usec
PL1 0.00 dB
PL1W 34.91522217 W
SFO1 100.6228298 MHz

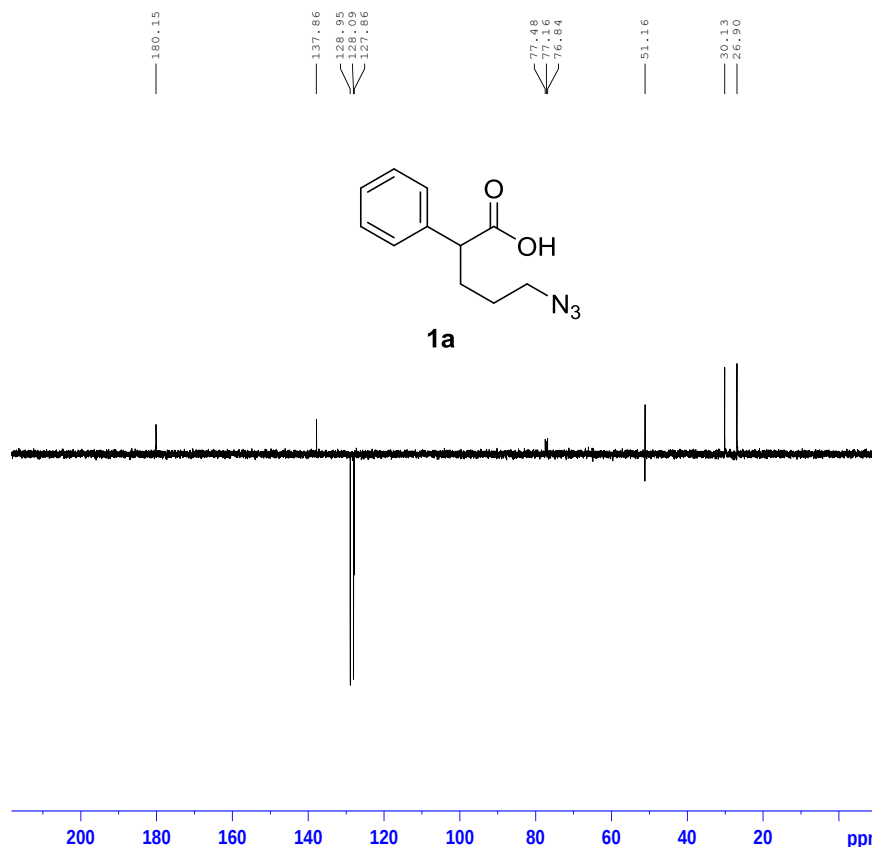
===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.46 dB
PL2W 10.19825935 W
PL12W 0.29008549 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127649 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40





NAME wangxuejuan
 EXPNO 435
 PROCNO 1
 Date_ 20160612
 Time_ 21.53
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 14
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 203
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TD0 1

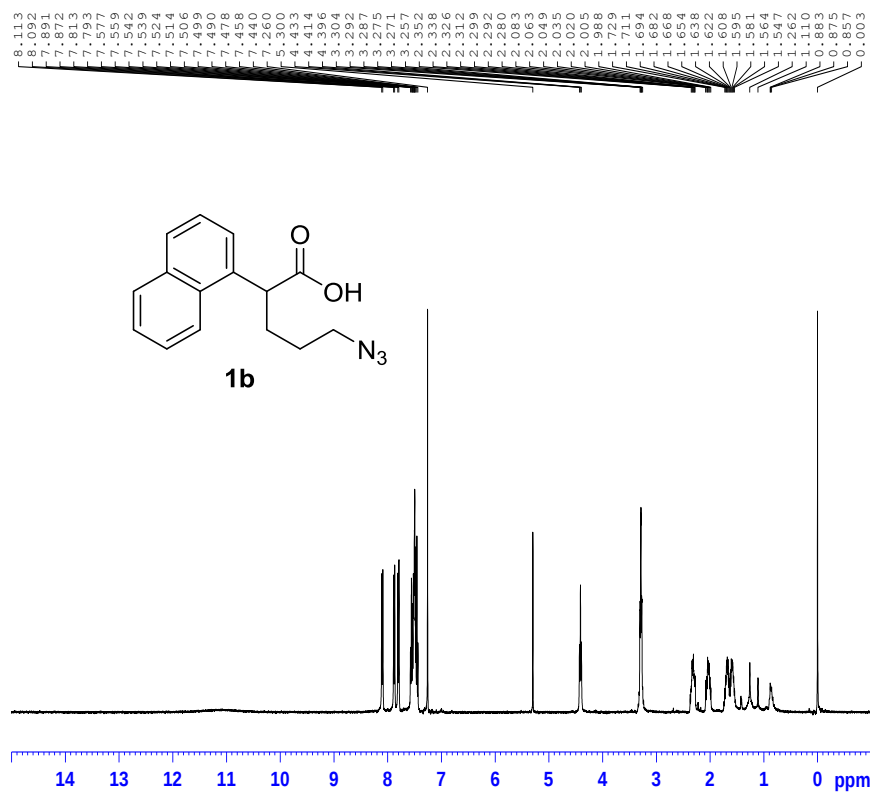
===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300096 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



NAME wangxuejuan
 EXPNO 390
 PROCNO 1
 Date_ 20160530
 Time_ 9.28
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 22
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TD0 1

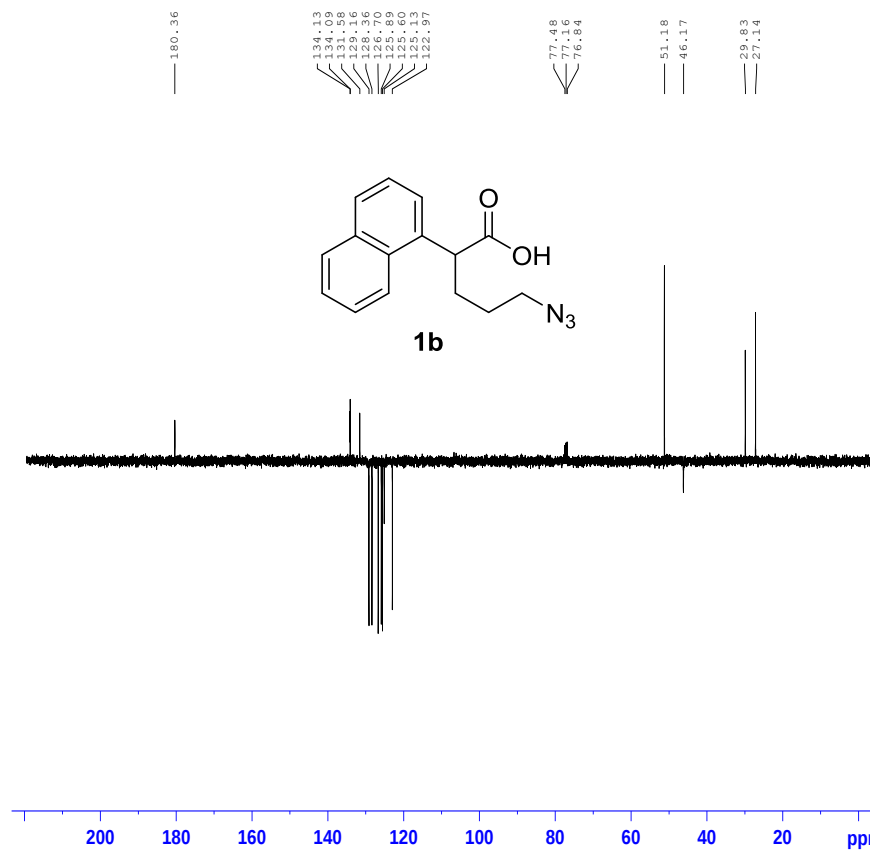
===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127620 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



NAME wangxuejuan01
 EXPNO 327
 PROCNO 1
 Date_ 20170513
 Time_ 15.47
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 3
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 203
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TDO 1

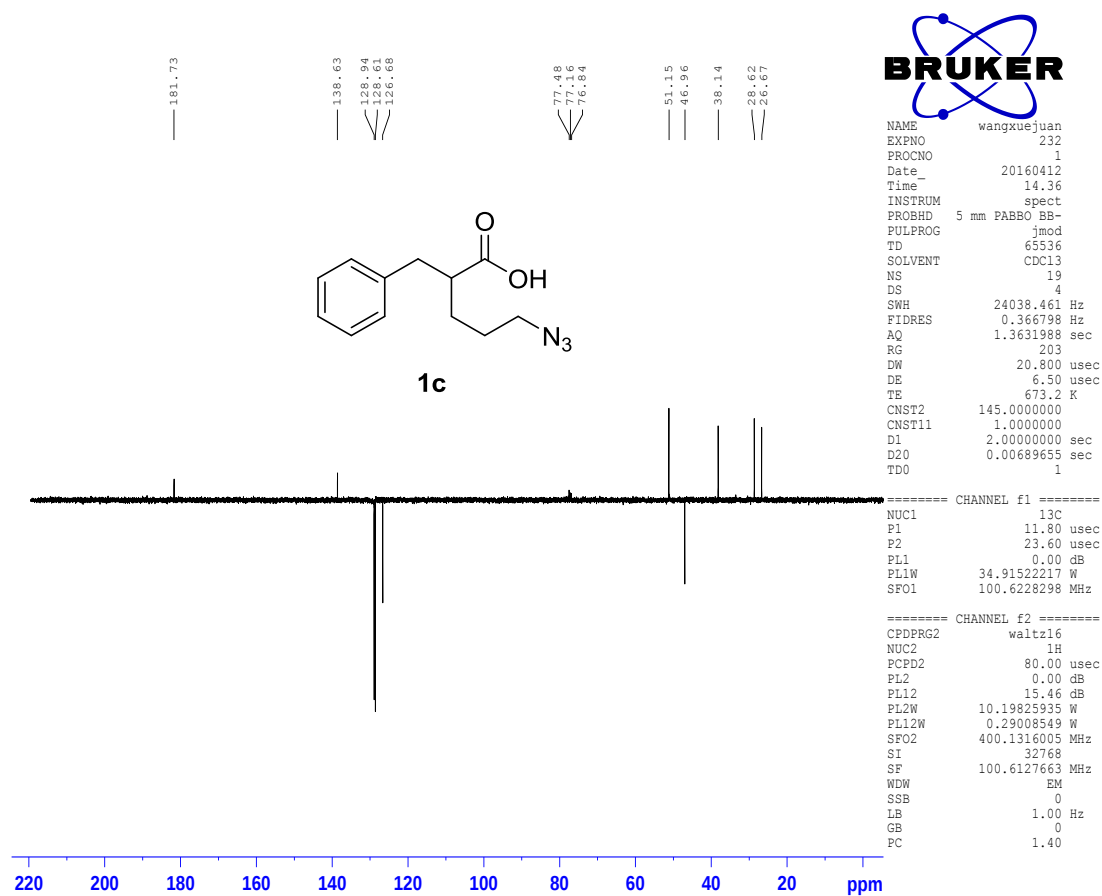
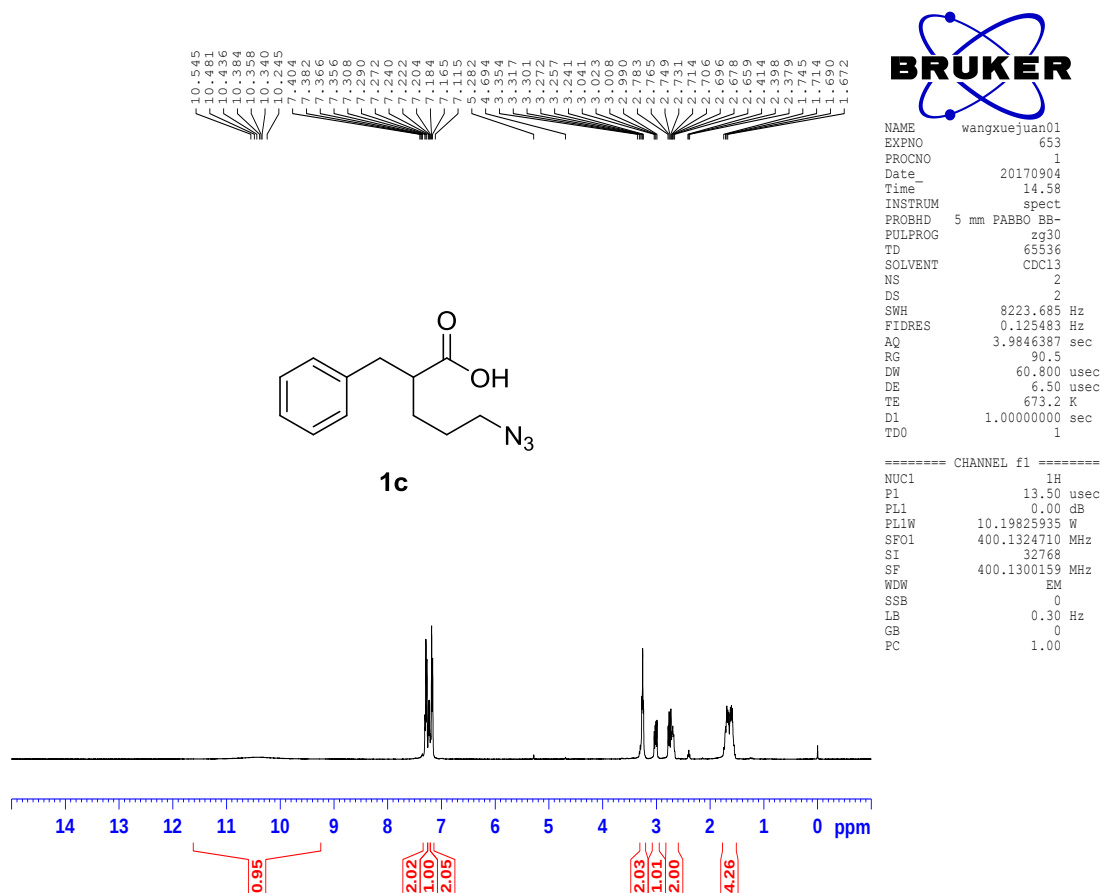
===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300100 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

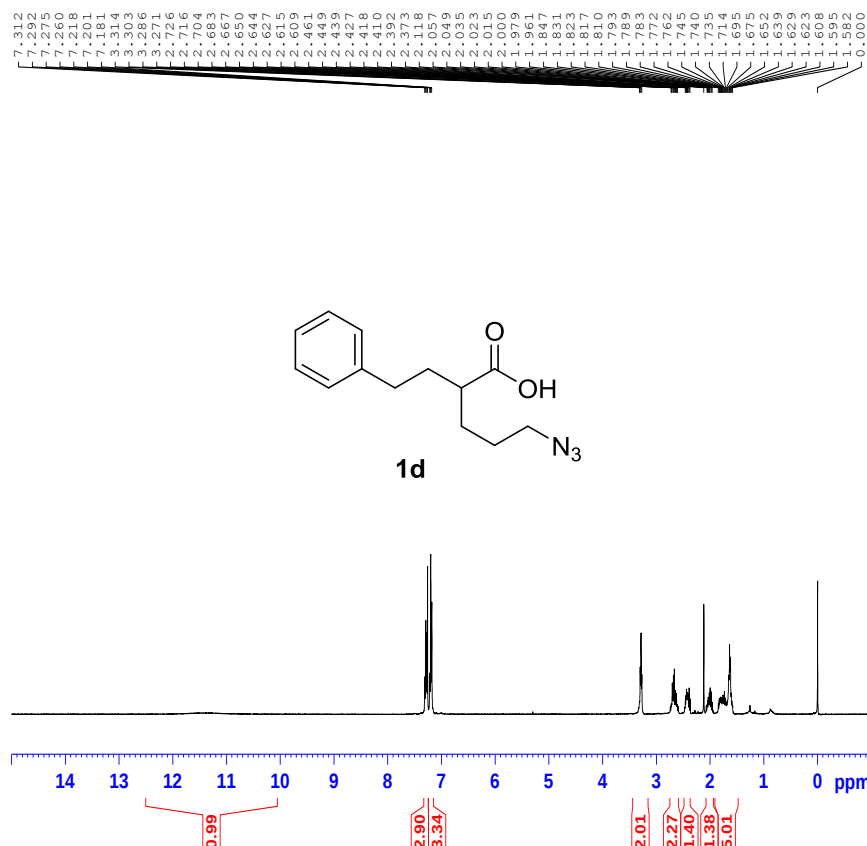


NAME wangxuejuan01
 EXPNO 336
 PROCNO 1
 Date_ 20170516
 Time_ 15.28
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 19
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

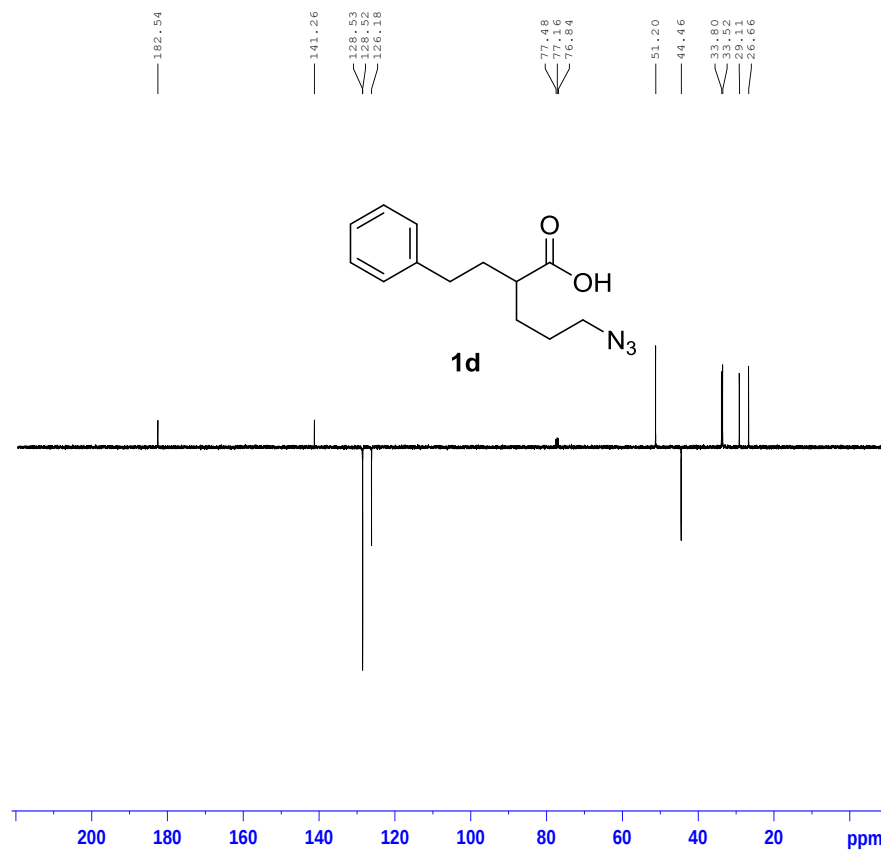
===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127700 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40





NAME wangxuejuan01
 EXPNO 236
 PROCNO 1
 Date_ 20170420
 Time_ 17.20
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 4
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 203
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TDO 1

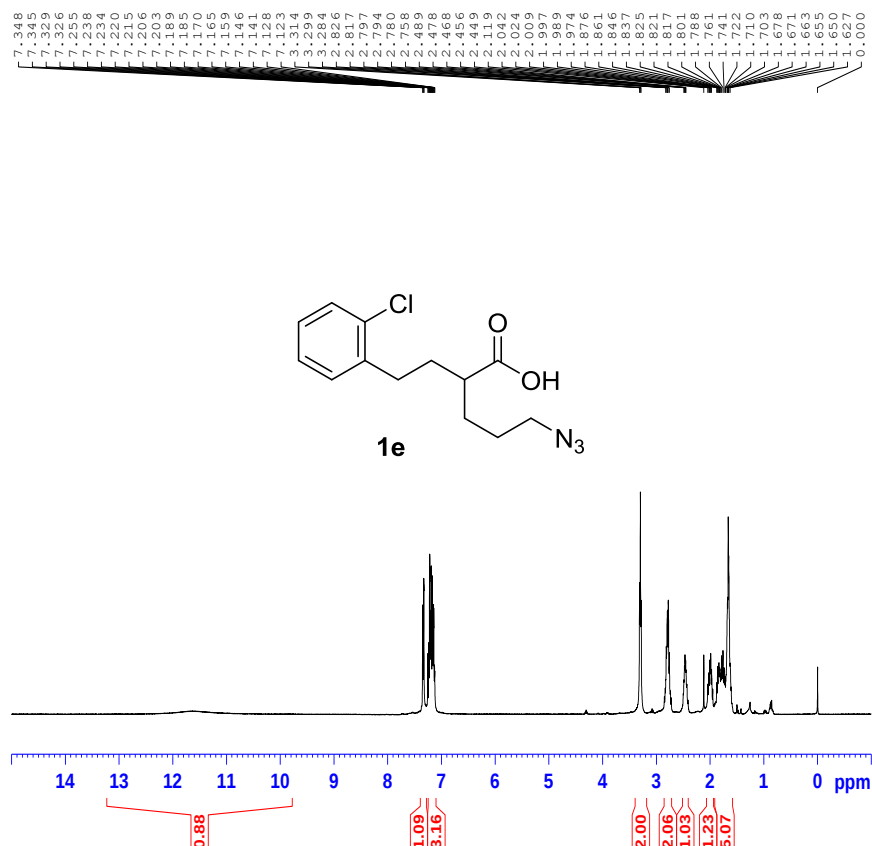
===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300100 MHz
 WDW EM
 SSB 0
 LB 0.60 Hz
 GB 0
 PC 1.00



NAME wangxuejuan
 EXPNO 882
 PROCNO 1
 Date_ 20161231
 Time_ 15.49
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 79
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TDO 1

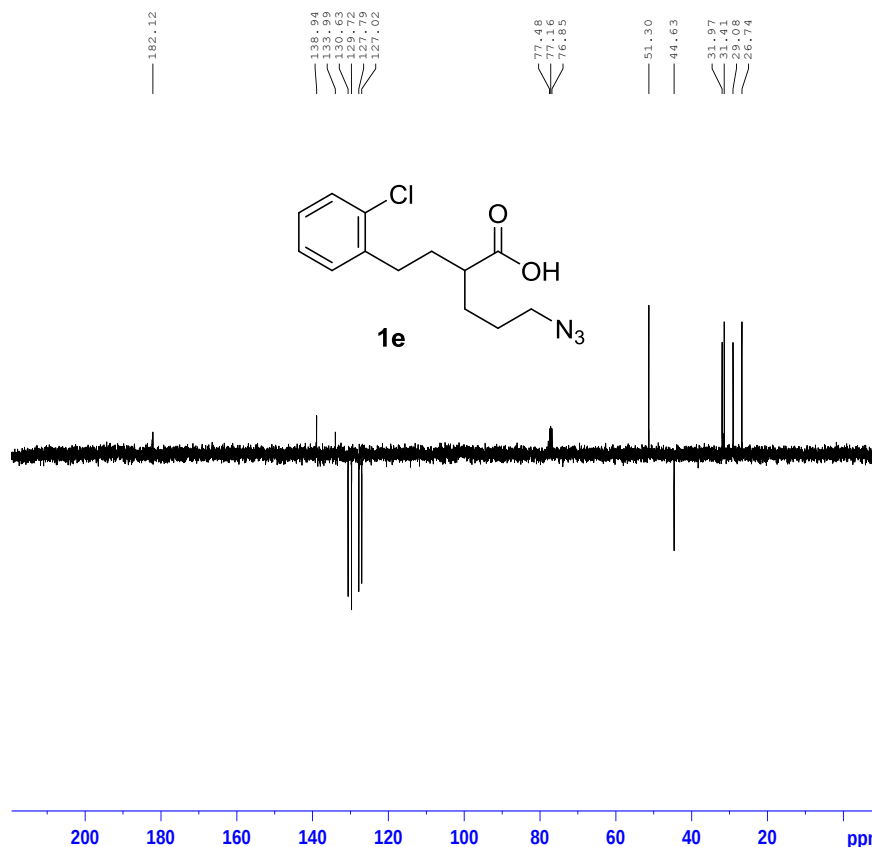
===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127667 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



NAME wangxuejuan01
 EXPNO 456
 PROCNO 1
 Date_ 20170619
 Time_ 20.16
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 4
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 128
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TDO 1

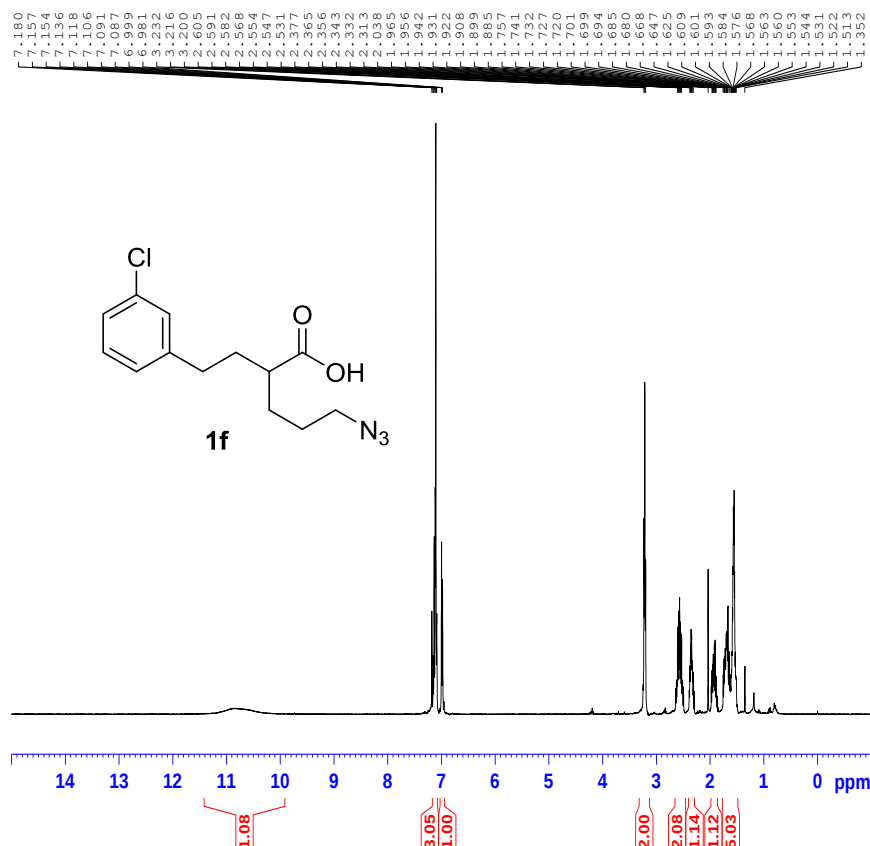
===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300122 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



NAME wangxuejuan01
 EXPNO 457
 PROCNO 1
 Date_ 20170619
 Time_ 20.19
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 56
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TDO 1

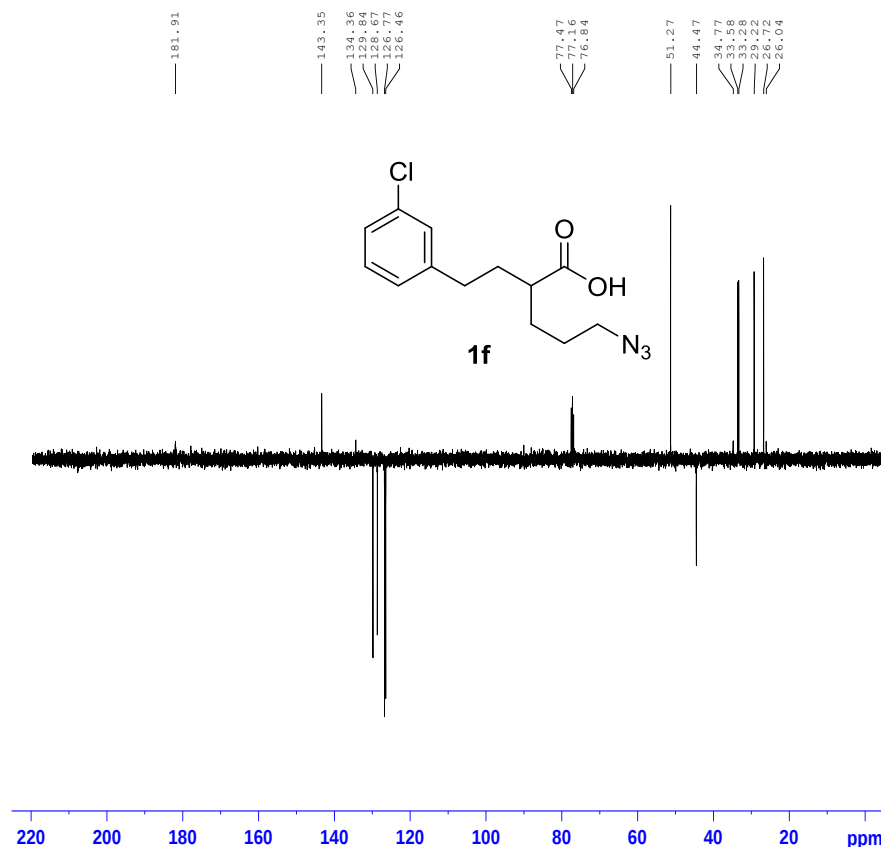
===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127575 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



NAME wangxuejuan01
 EXPNO 578
 PROCNO 1
 Date_ 20170819
 Time_ 8.13
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 4
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 161
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TDO 1

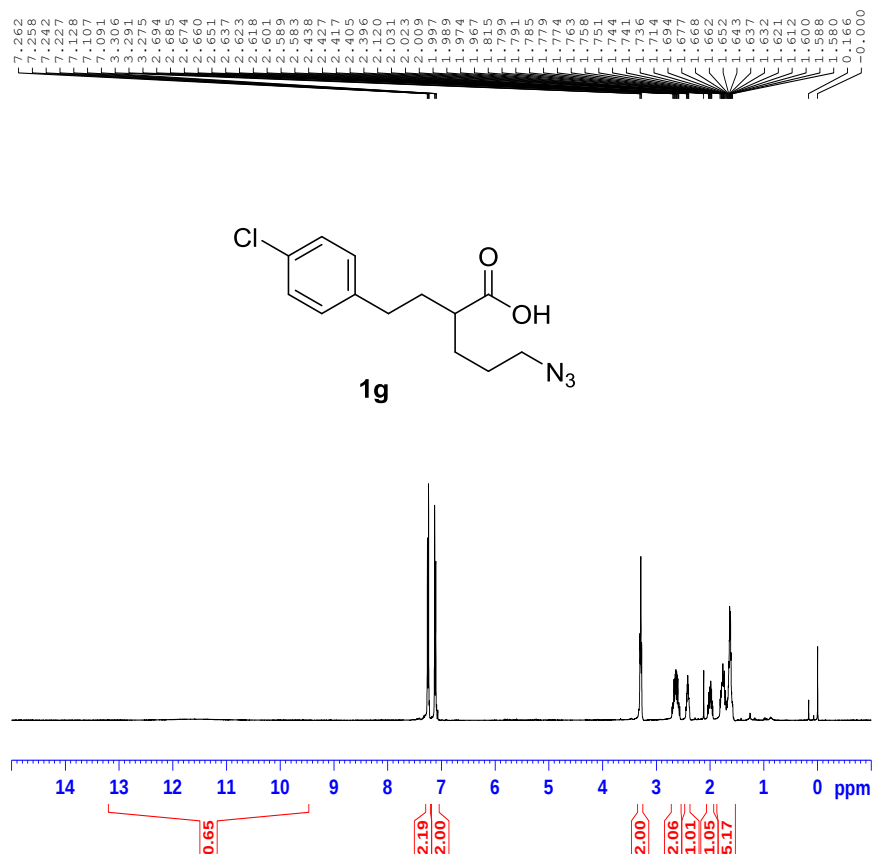
===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300419 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



NAME wangxuejuan01
 EXPNO 579
 PROCNO 1
 Date_ 20170819
 Time_ 8.28
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 256
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TDO 1

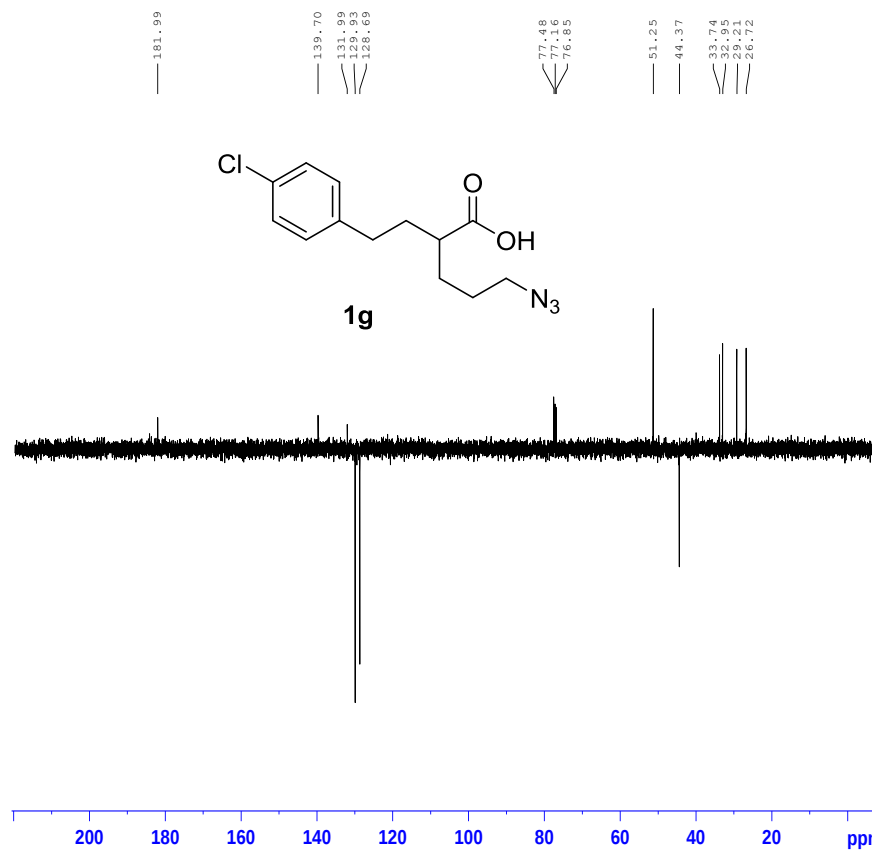
===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127561 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



NAME wangxuejuan01
 EXPNO 453
 PROCNO 1
 Date_ 20170619
 Time_ 14.44
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 8
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 203
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TDO 1

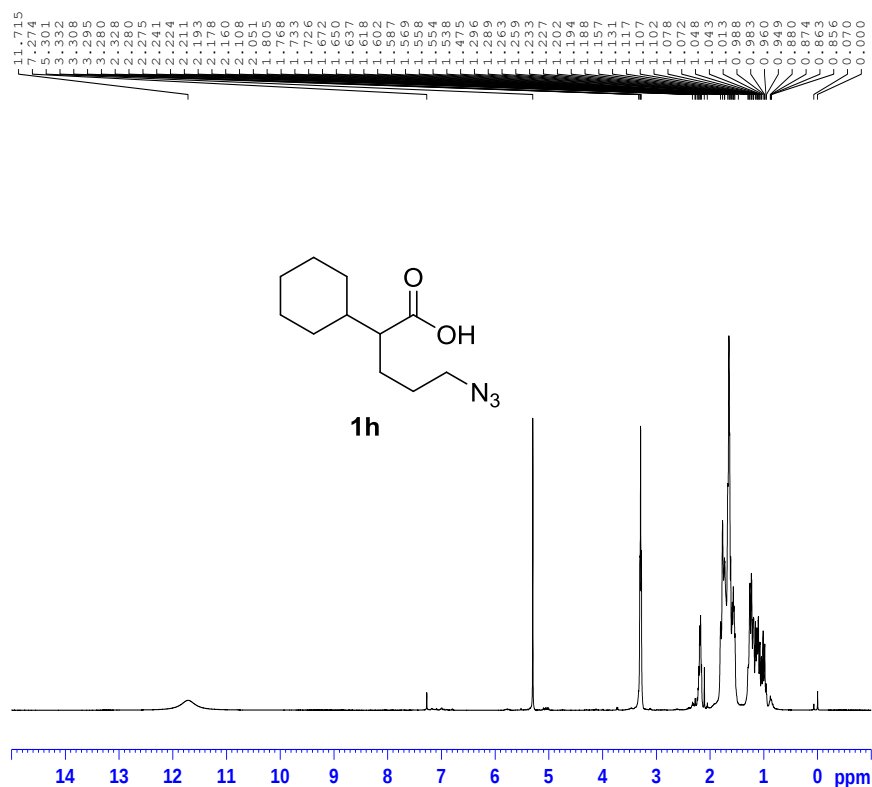
===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1300108 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



NAME wangxuejuan01
 EXPNO 454
 PROCNO 1
 Date_ 20170619
 Time_ 14.48
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 64
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TDO 1

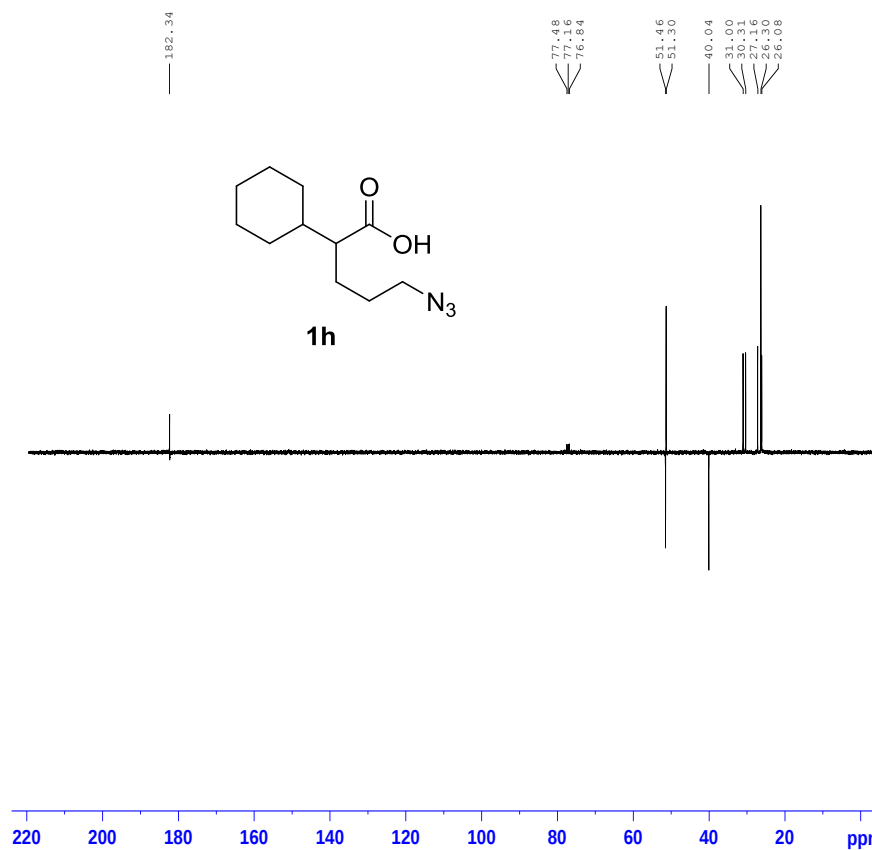
===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127568 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40



NAME wangxuejuan01
EXPNO 144
PROCNO 1
Date_ 20170322
Time_ 8.40
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl₃
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 32
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TD0 1

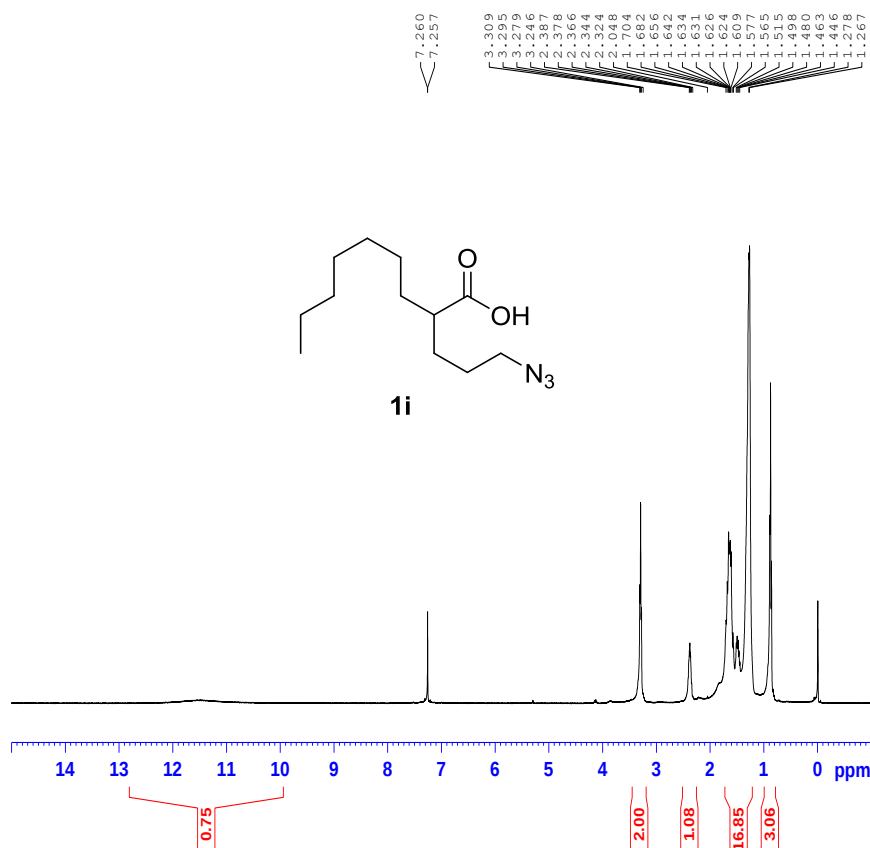
===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300039 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



NAME wangxuejuan01
EXPNO 145
PROCNO 1
Date_ 20170322
Time_ 19.55
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT CDCl₃
NS 32
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
D20 0.00689655 sec
TD0 1

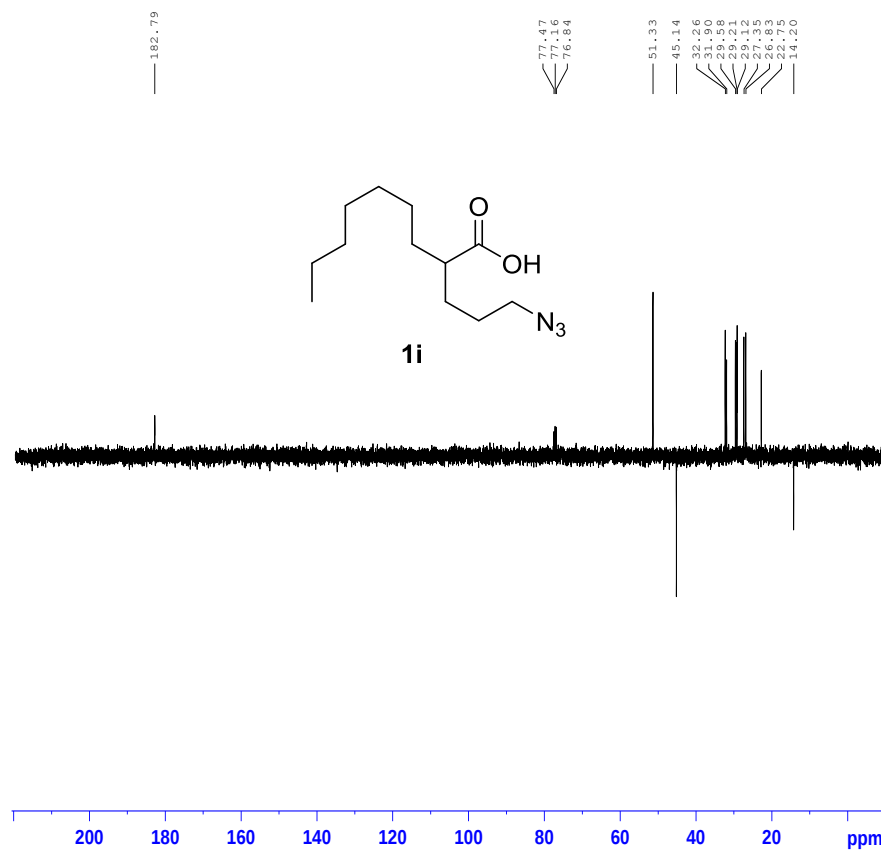
===== CHANNEL f1 =====
NUC1 13C
P1 11.80 usec
P2 23.60 usec
PL1 0.00 dB
PL1W 34.91522217 W
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.46 dB
PL2W 10.19825935 W
PL12W 0.29008549 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127635 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



NAME wangxuejuan
EXPNO 749
PROCNO 1
Date_ 20161108
Time_ 10.47
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl₃
NS 8
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TDO 1

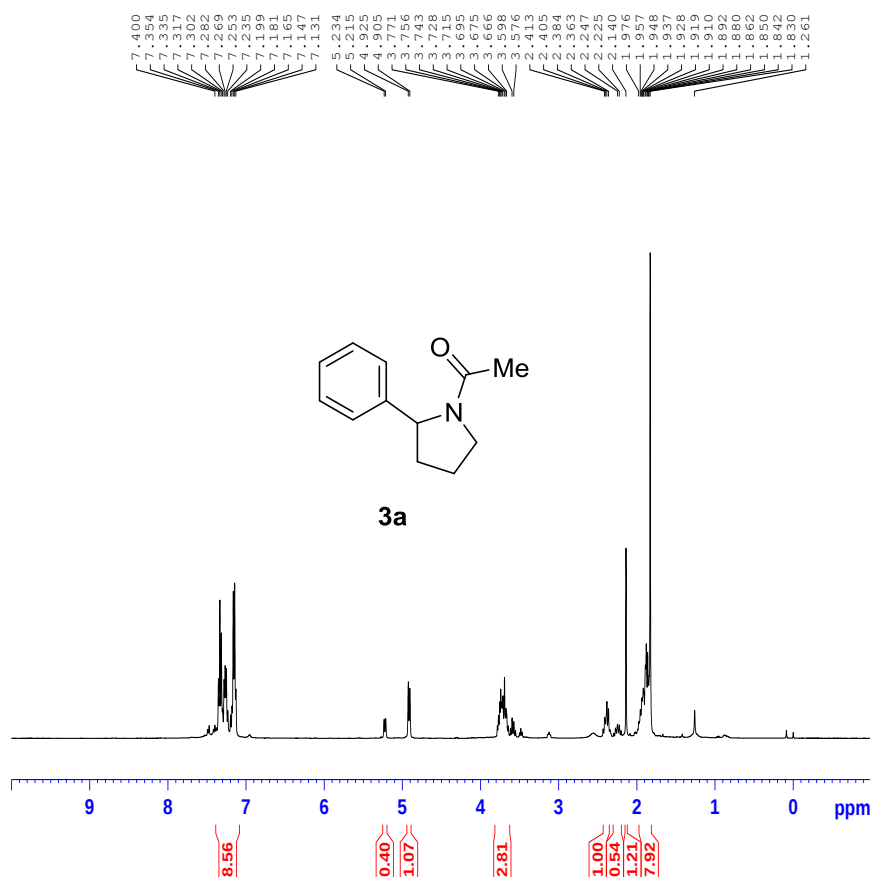
===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300101 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



NAME wangxuejuan
EXPNO 750
PROCNO 1
Date_ 20161108
Time_ 11.07
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT CDCl₃
NS 48
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
D20 0.00689655 sec
TDO 1

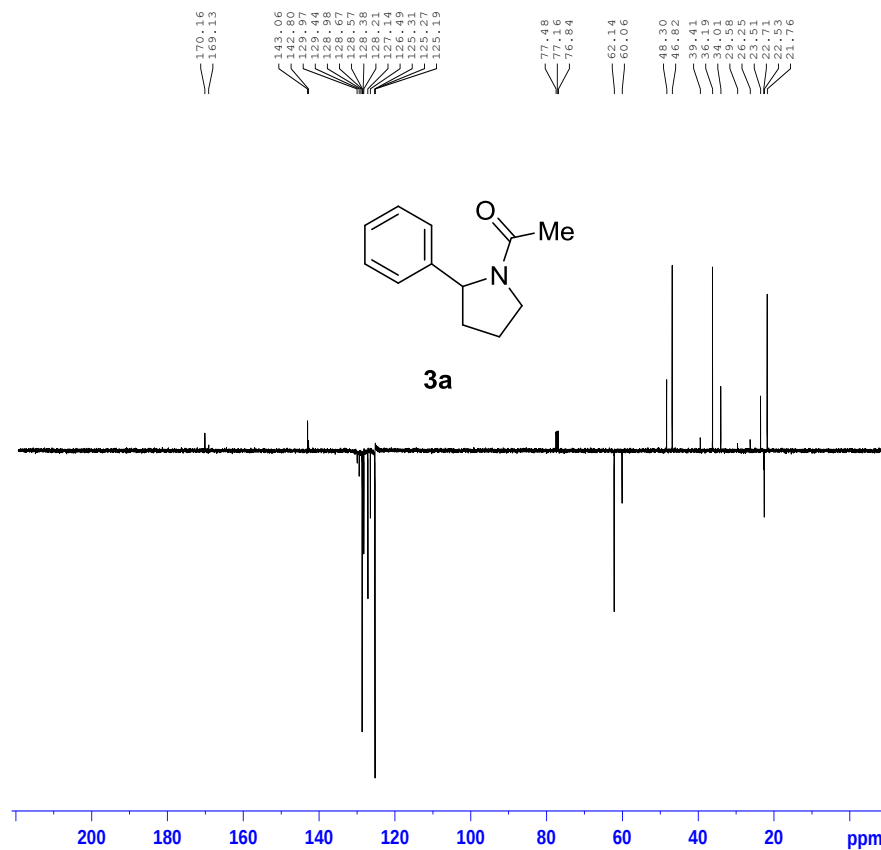
===== CHANNEL f1 =====
NUC1 13C
P1 11.80 usec
P2 23.60 usec
PL1 0.00 dB
PL1W 34.91522217 W
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.46 dB
PL2W 10.19825935 W
PL12W 0.29008549 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127583 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



NAME wangxuejuan01
 EXPNO 634
 PROCNO 1
 Date_ 20170831
 Time_ 14.55
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 16
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 32
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TD0 1

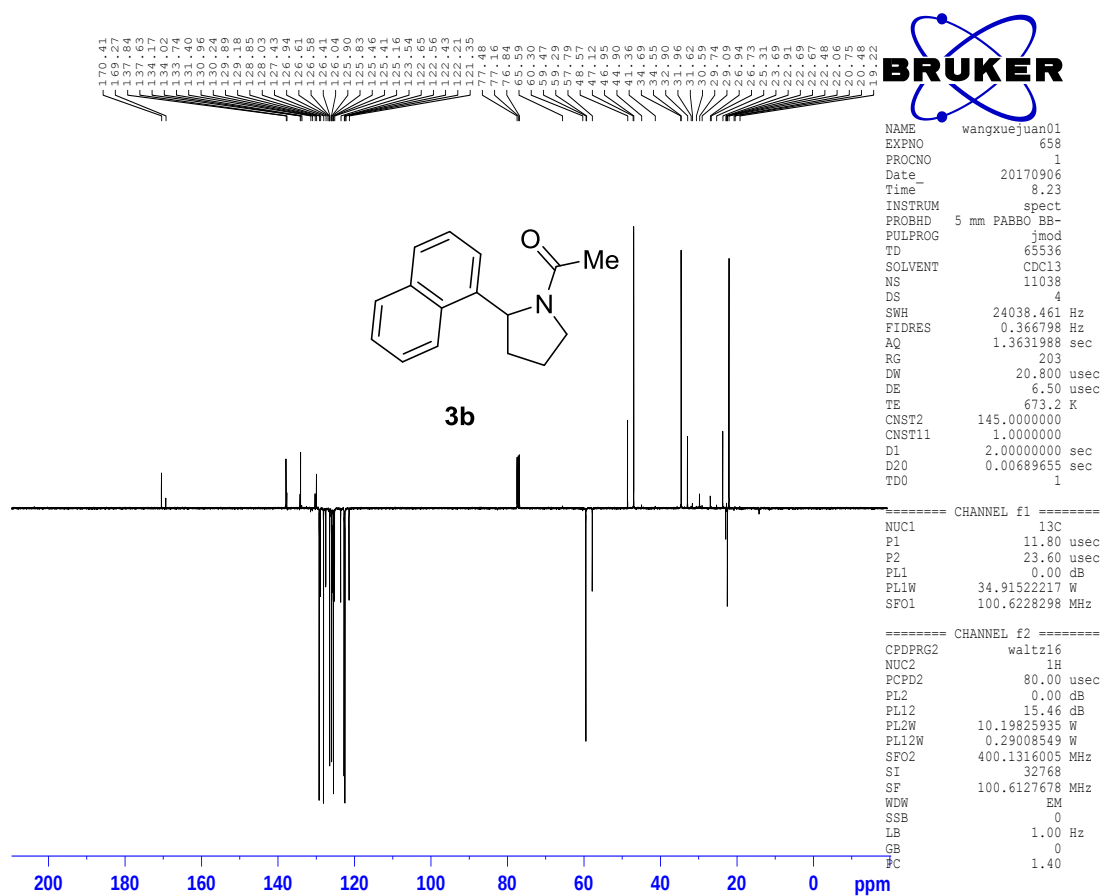
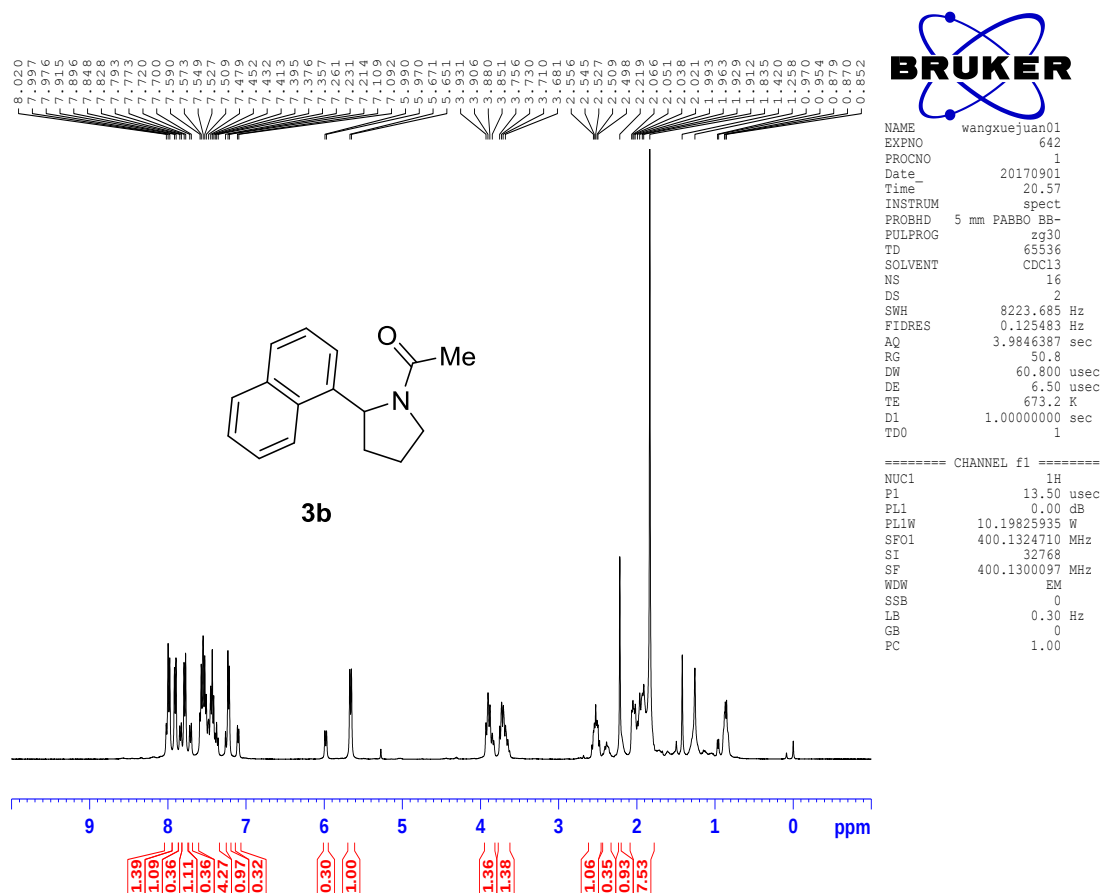
===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1299903 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00

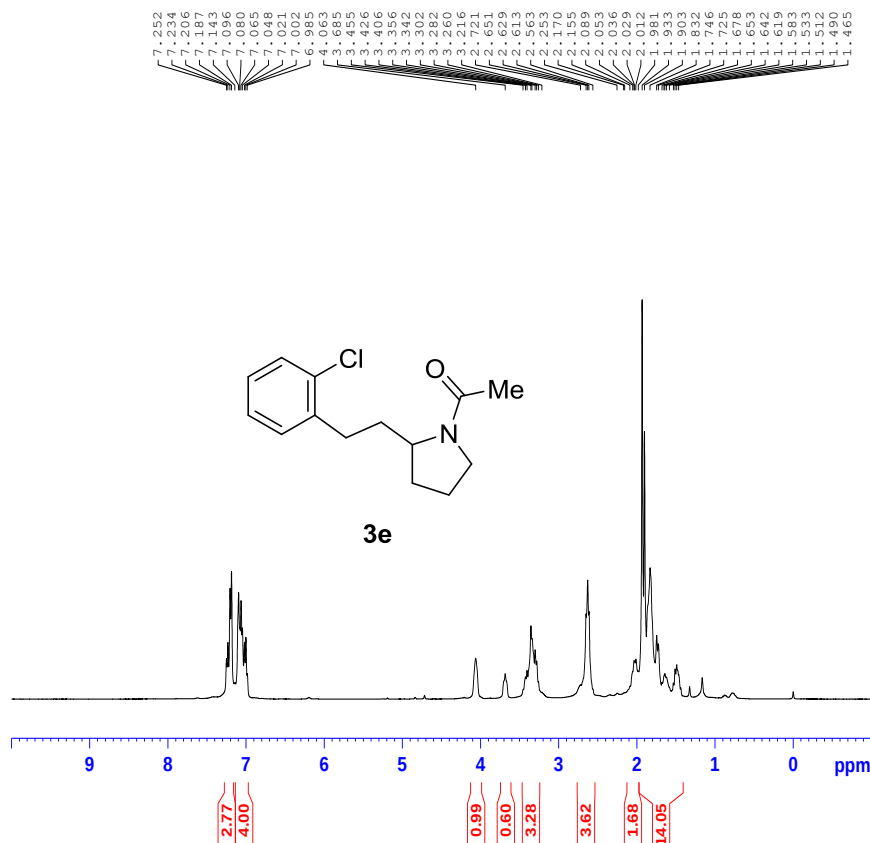


NAME wangxuejuan01
 EXPNO 635
 PROCNO 1
 Date_ 20170831
 Time_ 15.09
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 234
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TD0 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

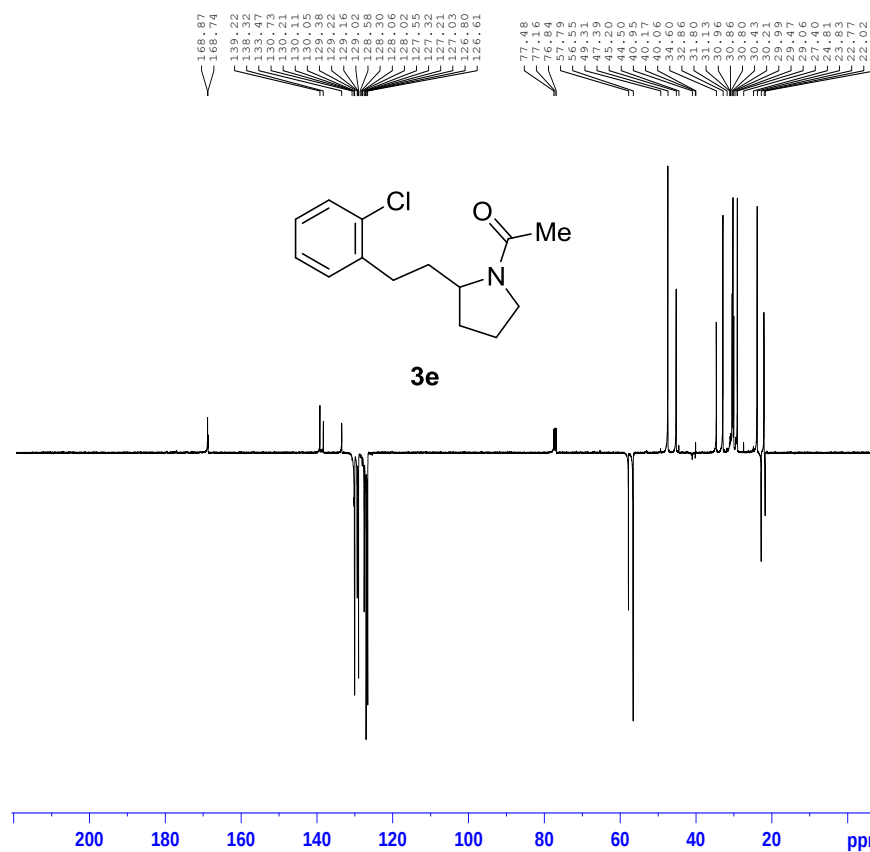
===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127785 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40





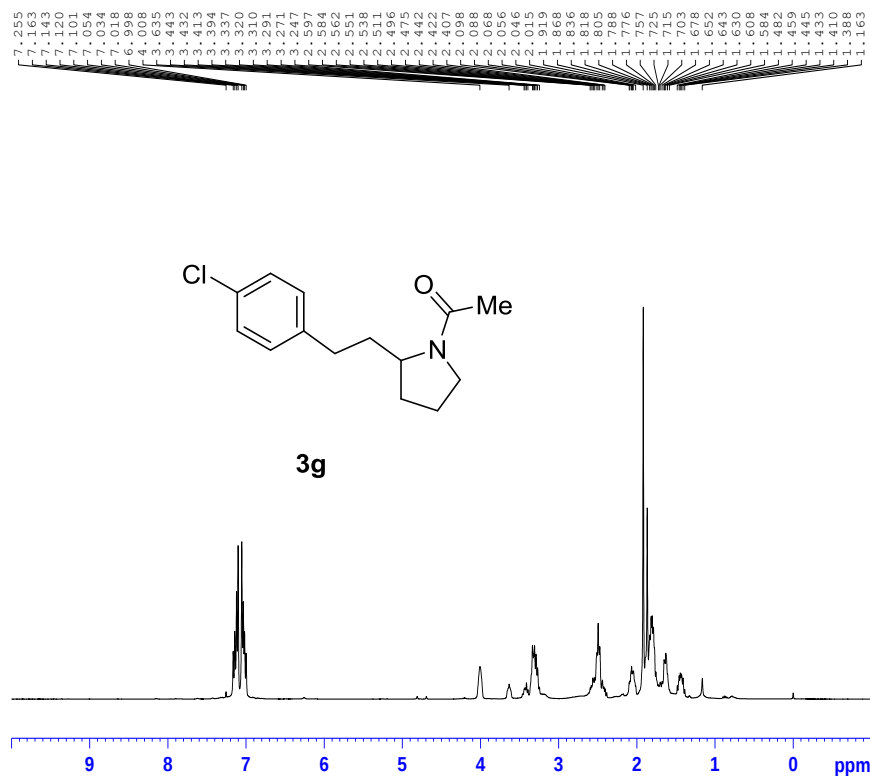
NAME wangxuejuan01
EXPNO 587
PROCNO 1
Date_ 20170821
Time_ 17.10
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 28.5
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300188 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



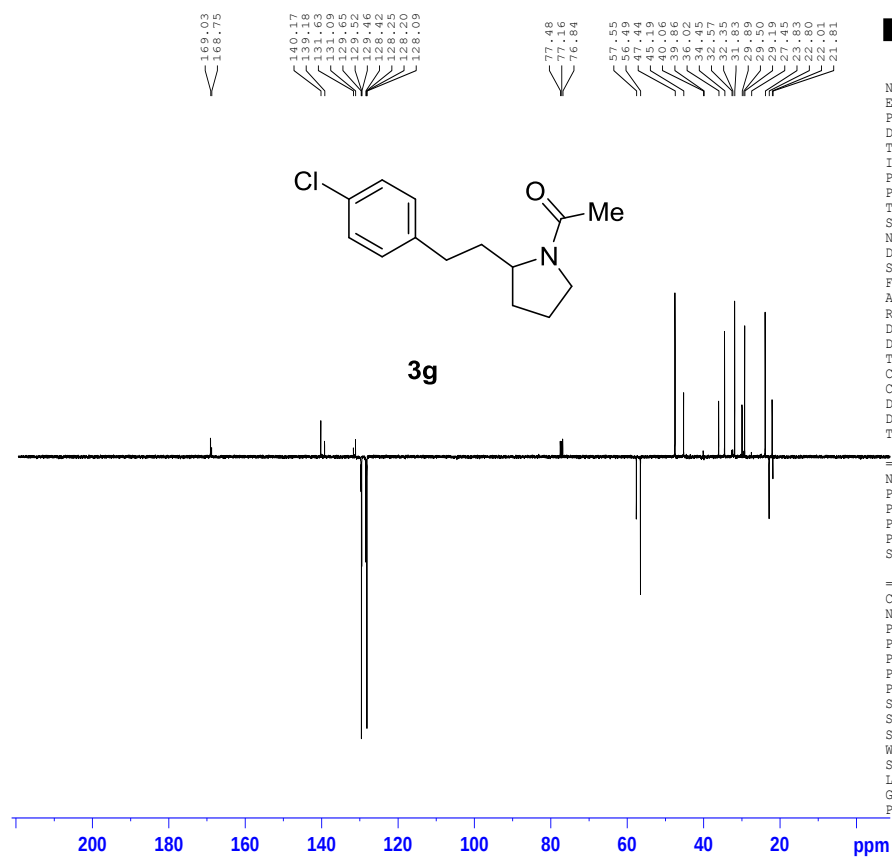
NAME wangxuejuan01
EXPNO 657
PROCNO 1
Date_ 20170908
Time_ 8.01
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT CDCl3
NS 10364
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
D20 0.00689655 sec
TD0 1

===== CHANNEL f1 =====
NUC1 13C
P1 11.80 usec
P2 23.60 usec
PL1 0.00 dB
PL1W 34.91522217 W
SFO1 100.6228298 MHz
===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.46 dB
PL2W 10.19825935 W
PL12W 0.29008549 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127872 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



NAME wangxuejuan01
EXPNO 585
PROCNO 1
Date_ 20170821
Time_ 16.52
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl₃
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 25.4
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TDO 1

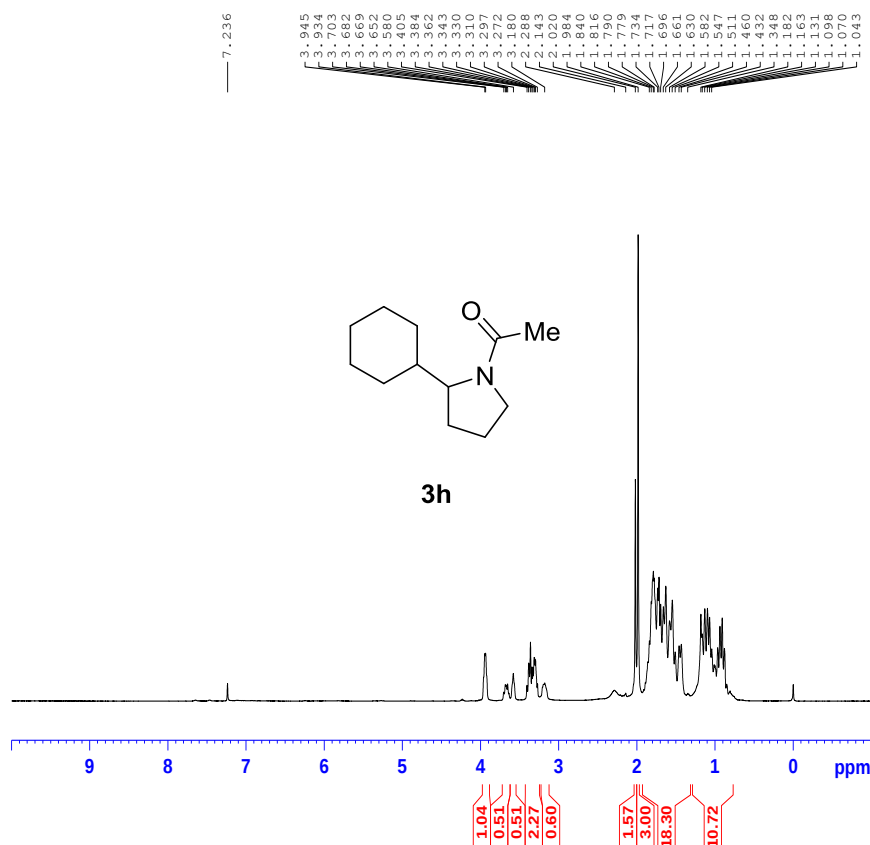
===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300120 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



NAME wangxuejuan01
EXPNO 586
PROCNO 1
Date_ 20170821
Time_ 17.05
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT CDCl₃
NS 219
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
D20 0.00689655 sec
TDO 1

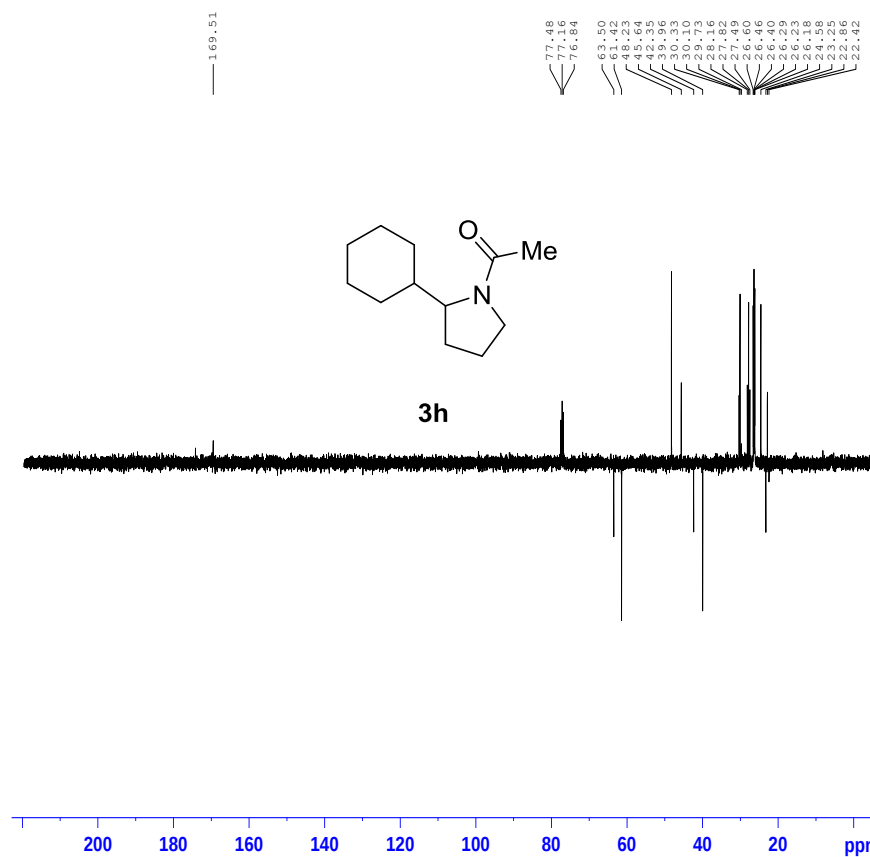
===== CHANNEL f1 =====
NUC1 13C
P1 11.80 usec
P2 23.60 usec
PL1 0.00 dB
PL1W 34.91522217 W
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.46 dB
PL2W 10.19825935 W
PL12W 0.29008549 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127846 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



NAME wangxuejuan01
EXPNO 604
PROCNO 1
Date_ 20170824
Time_ 20.39
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 40.3
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TD0 1

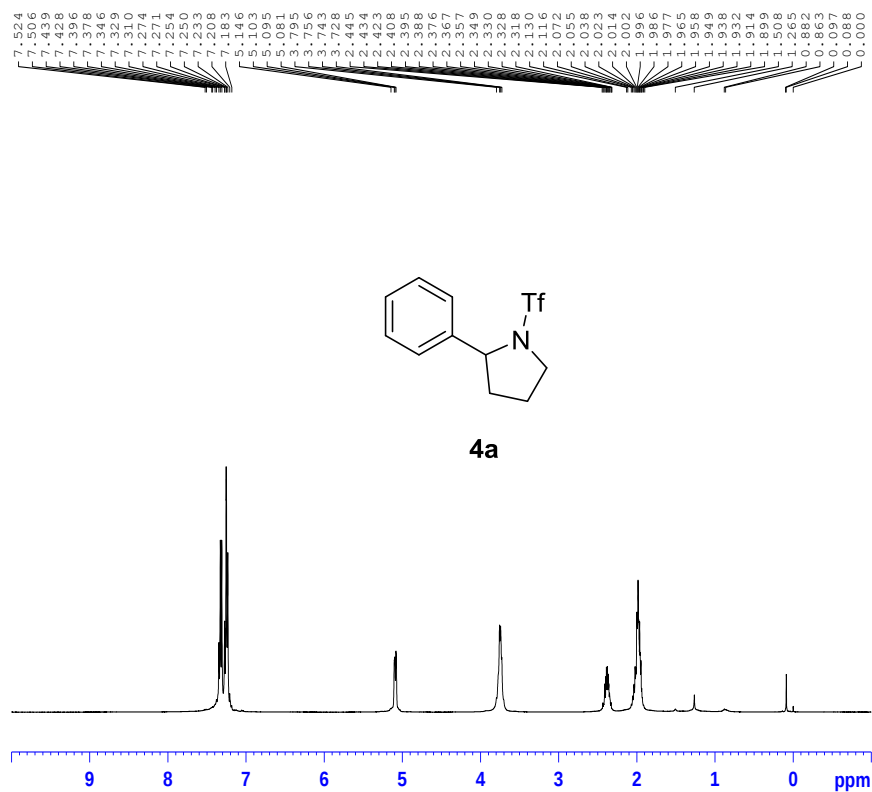
===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300194 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



NAME wangxuejuan01
EXPNO 605
PROCNO 1
Date_ 20170824
Time_ 20.46
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT CDCl3
NS 126
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
D20 0.00689655 sec
TD0 1

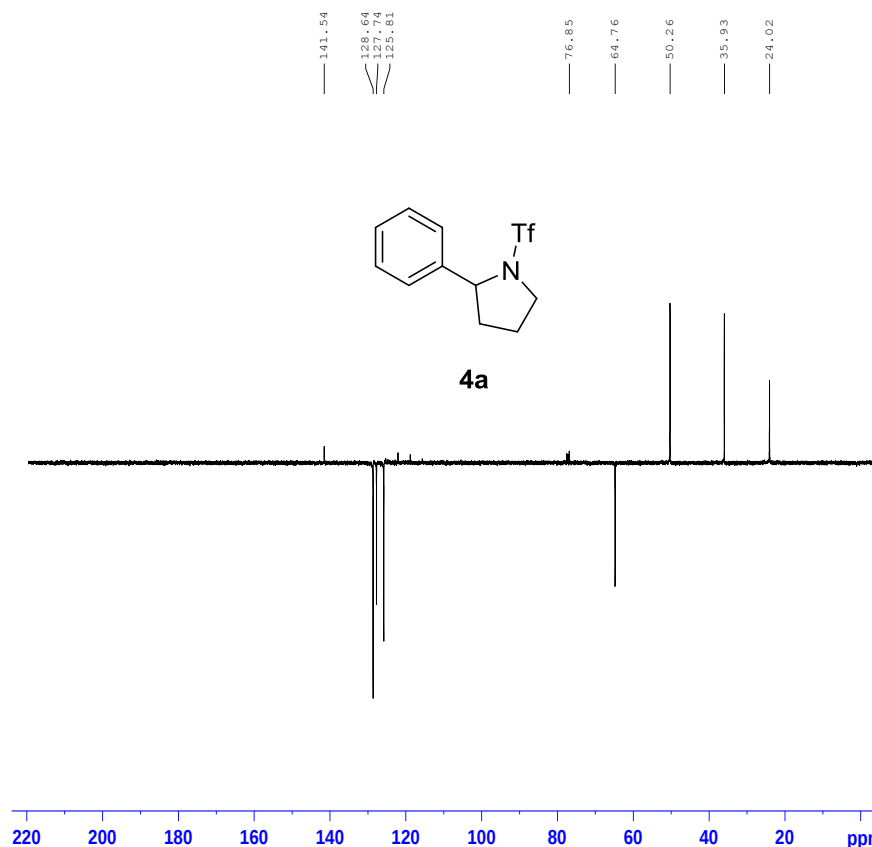
===== CHANNEL f1 =====
NUC1 13C
P1 11.80 usec
P2 23.60 usec
PL1 0.00 dB
PL1W 34.91522217 W
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.46 dB
PL2W 10.19825935 W
PL12W 0.29008549 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127634 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



NAME wangxuejuan
EXPNO 579
PROCNO 1
Date_ 20160825
Time_ 14.42
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 4
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 32
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TD0 1

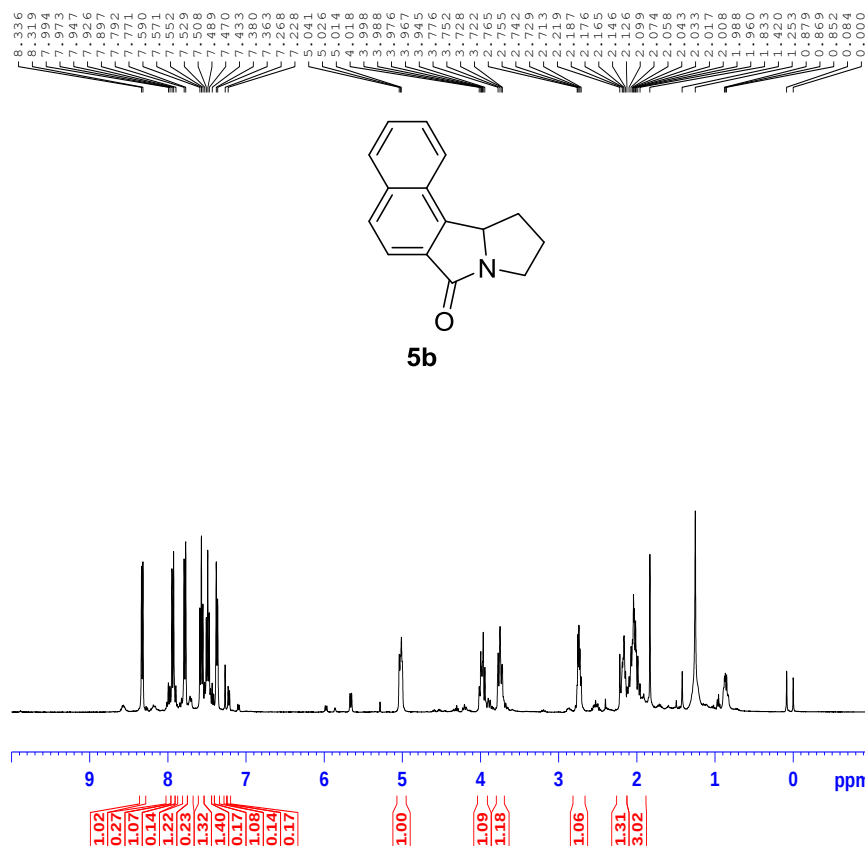
===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300304 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



NAME wangxuejuan
EXPNO 580
PROCNO 1
Date_ 20160825
Time_ 14.56
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT CDCl3
NS 149
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
D20 0.00689655 sec
TD0 1

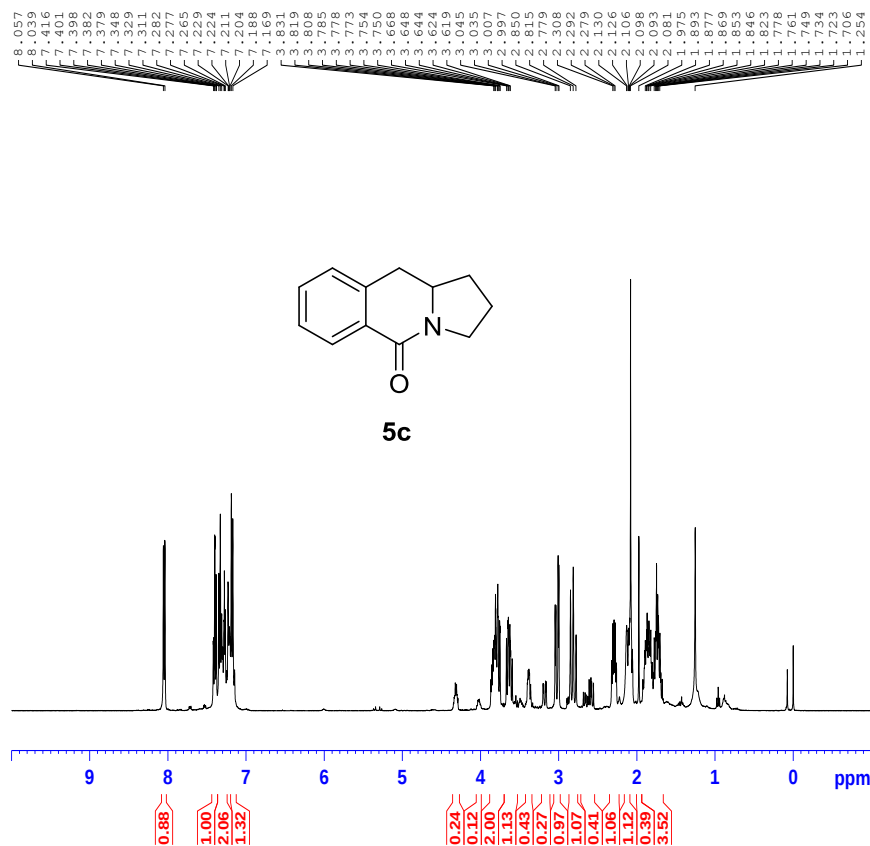
===== CHANNEL f1 =====
NUC1 13C
P1 11.80 usec
P2 23.60 usec
PL1 0.00 dB
PL1W 34.91522217 W
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.46 dB
PL12W 10.19825935 W
SFO2 0.29008549 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127670 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



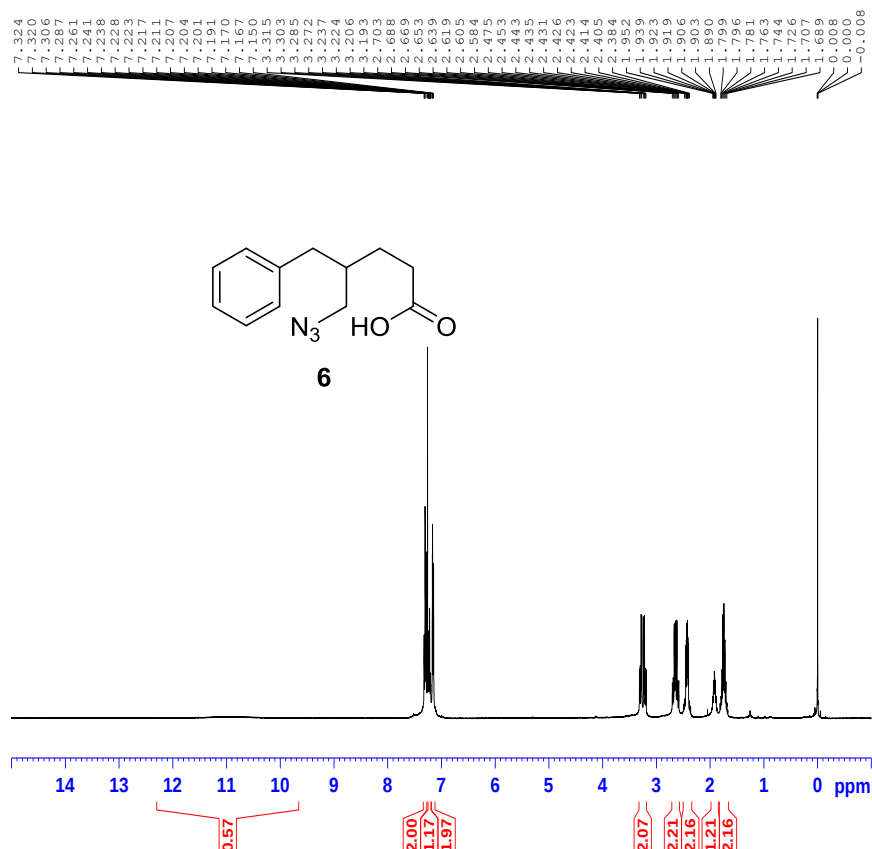
NAME wangxuejuan01
EXPNO 644
PROCNO 1
Date_ 20170901
Time_ 21.17
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 101
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300072 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



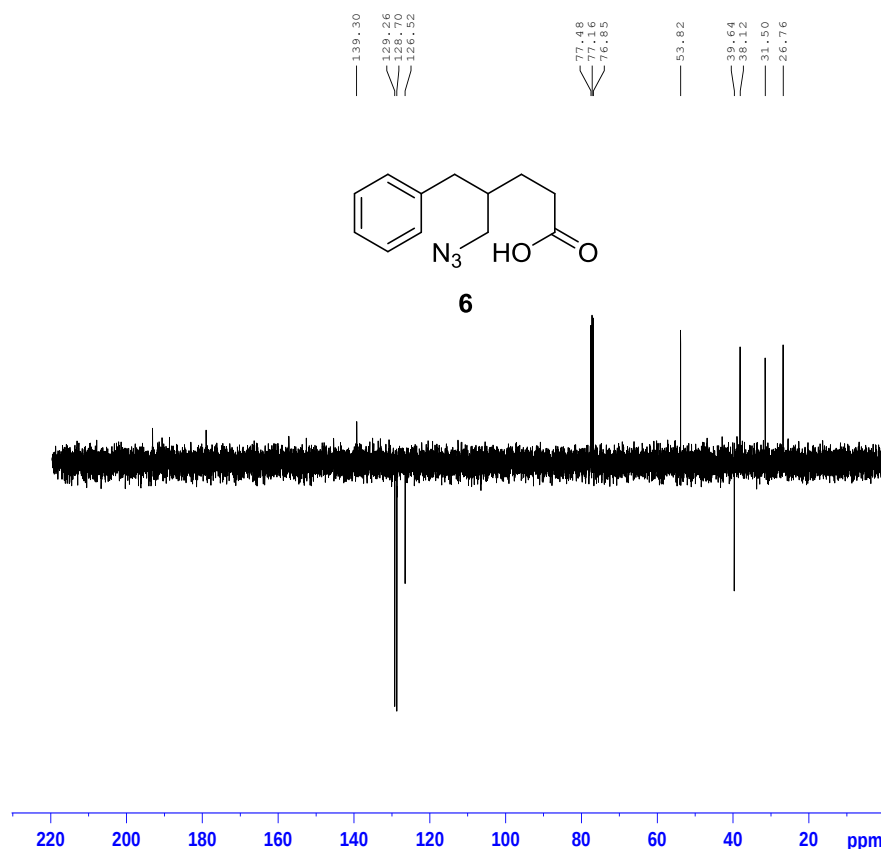
NAME wangxuejuan01
EXPNO 665
PROCNO 1
Date_ 20170907
Time_ 15.48
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 16
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 114
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TD0 1

===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300034 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



NAME wangxuejuan
EXPNO 434
PROCNO 1
Date_ 20160612
Time_ 21.36
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG zg30
TD 65536
SOLVENT CDCl3
NS 15
DS 2
SWH 8223.685 Hz
FIDRES 0.125483 Hz
AQ 3.9846387 sec
RG 203
DW 60.800 usec
DE 6.50 usec
TE 673.2 K
D1 1.00000000 sec
TD0 1

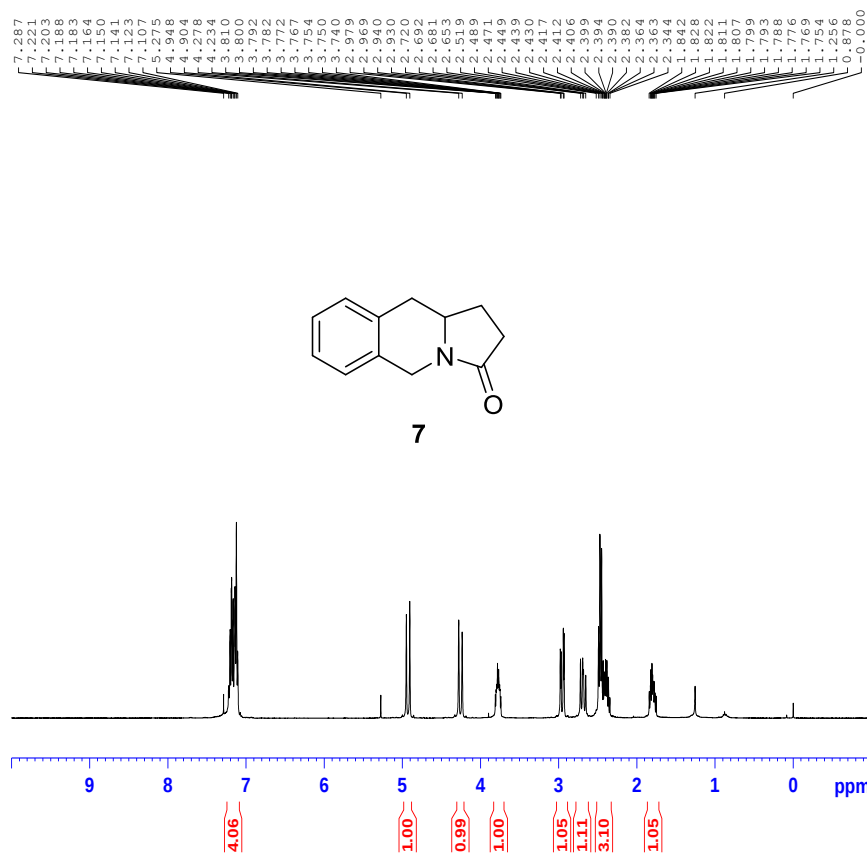
===== CHANNEL f1 =====
NUC1 1H
P1 13.50 usec
PL1 0.00 dB
PL1W 10.19825935 W
SFO1 400.1324710 MHz
SI 32768
SF 400.1300096 MHz
WDW EM
SSB 0
LB 0.30 Hz
GB 0
PC 1.00



NAME wangxuejuan
EXPNO 384
PROCNO 1
Date_ 20160528
Time_ 16.42
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT CDCl3
NS 113
DS 4
SWH 24038.461 Hz
FIDRES 0.366798 Hz
AQ 1.3631988 sec
RG 203
DW 20.800 usec
DE 6.50 usec
TE 673.2 K
CNST2 145.0000000
CNST11 1.0000000
D1 2.00000000 sec
D20 0.00689655 sec
TD0 1

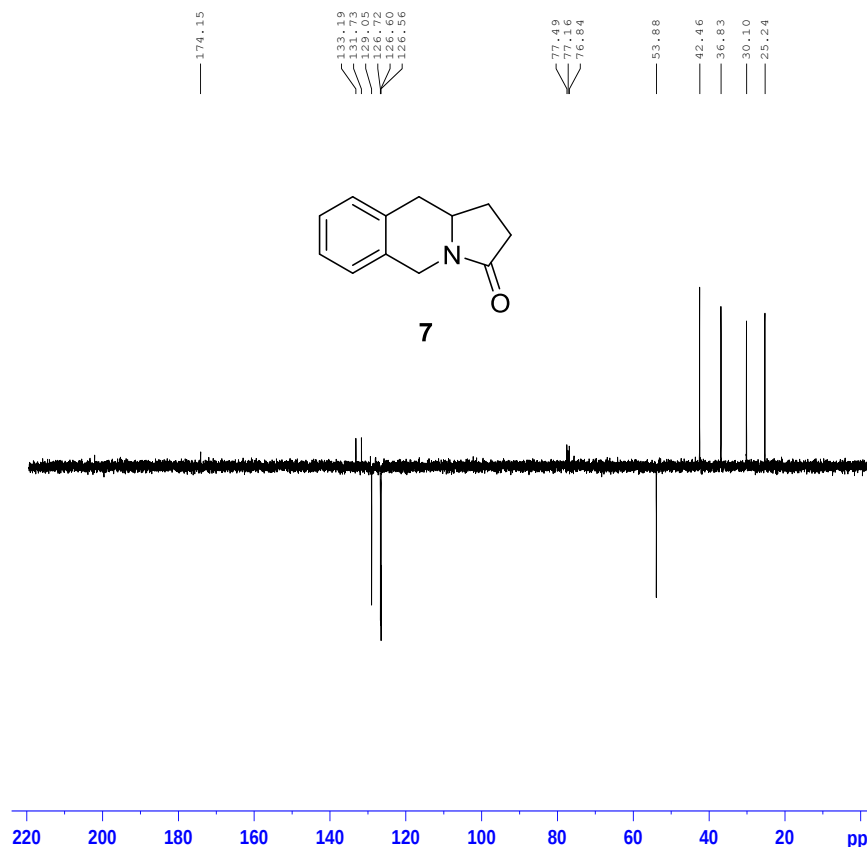
===== CHANNEL f1 =====
NUC1 13C
P1 11.80 usec
P2 23.60 usec
PL1 0.00 dB
PL1W 34.91522217 W
SFO1 100.6228298 MHz

===== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 0.00 dB
PL12 15.46 dB
PL2W 10.19825935 W
PL12W 0.29008549 W
SFO2 400.1316005 MHz
SI 32768
SF 100.6127561 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



NAME wangxuejuan
 EXPNO 459
 PROCNO 1
 Date_ 20160627
 Time_ 19.42
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG zg30
 TD 65536
 SOLVENT CDCl3
 NS 6
 DS 2
 SWH 8223.685 Hz
 FIDRES 0.125483 Hz
 AQ 3.9846387 sec
 RG 45.2
 DW 60.800 usec
 DE 6.50 usec
 TE 673.2 K
 D1 1.00000000 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 1H
 P1 13.50 usec
 PL1 0.00 dB
 PL1W 10.19825935 W
 SFO1 400.1324710 MHz
 SI 32768
 SF 400.1299988 MHz
 WDW EM
 SSB 0
 LB 0.30 Hz
 GB 0
 PC 1.00



NAME wangxuejuan
 EXPNO 460
 PROCNO 1
 Date_ 20160627
 Time_ 19.48
 INSTRUM spect
 PROBHD 5 mm PABBO BB-
 PULPROG jmod
 TD 65536
 SOLVENT CDCl3
 NS 38
 DS 4
 SWH 24038.461 Hz
 FIDRES 0.366798 Hz
 AQ 1.3631988 sec
 RG 203
 DW 20.800 usec
 DE 6.50 usec
 TE 673.2 K
 CNST2 145.0000000
 CNST11 1.0000000
 D1 2.00000000 sec
 D20 0.00689655 sec
 TDO 1

===== CHANNEL f1 =====
 NUC1 13C
 P1 11.80 usec
 P2 23.60 usec
 PL1 0.00 dB
 PL1W 34.91522217 W
 SFO1 100.6228298 MHz

===== CHANNEL f2 =====
 CPDPRG2 waltz16
 NUC2 1H
 PCPD2 80.00 usec
 PL2 0.00 dB
 PL12 15.46 dB
 PL2W 10.19825935 W
 PL12W 0.29008549 W
 SFO2 400.1316005 MHz
 SI 32768
 SF 100.6127732 MHz
 WDW EM
 SSB 0
 LB 1.00 Hz
 GB 0
 PC 1.40