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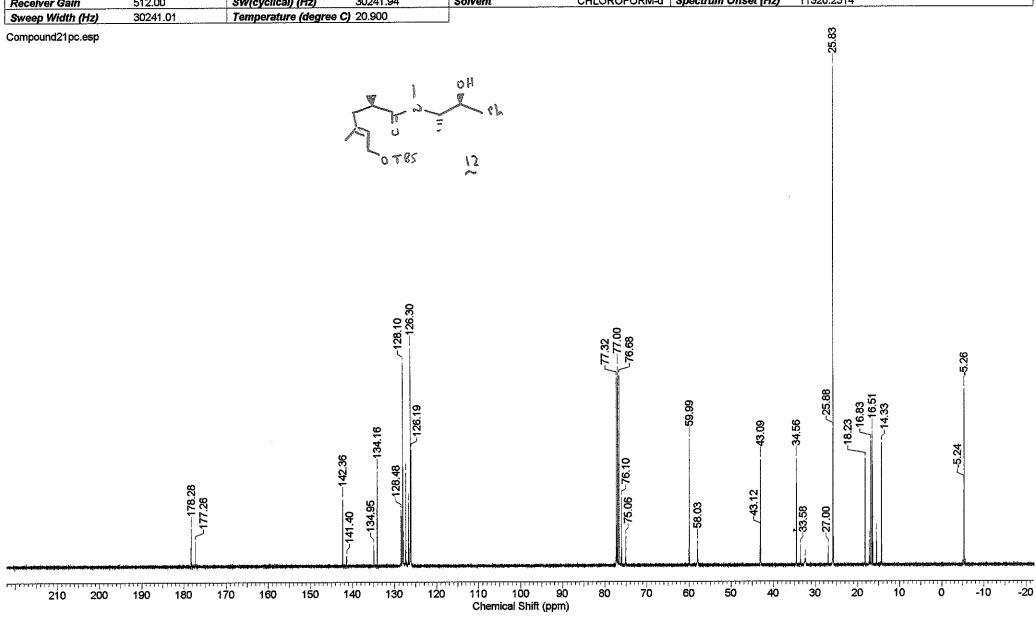
## Approaches to the total synthesis of chaetochalasin A

Eric J. Thomas\*<sup>a</sup> and Mark Willis<sup>a</sup>

Supplementary data –  $^{1}$ H and  $^{13}$ C NMR spectra of key compounds.

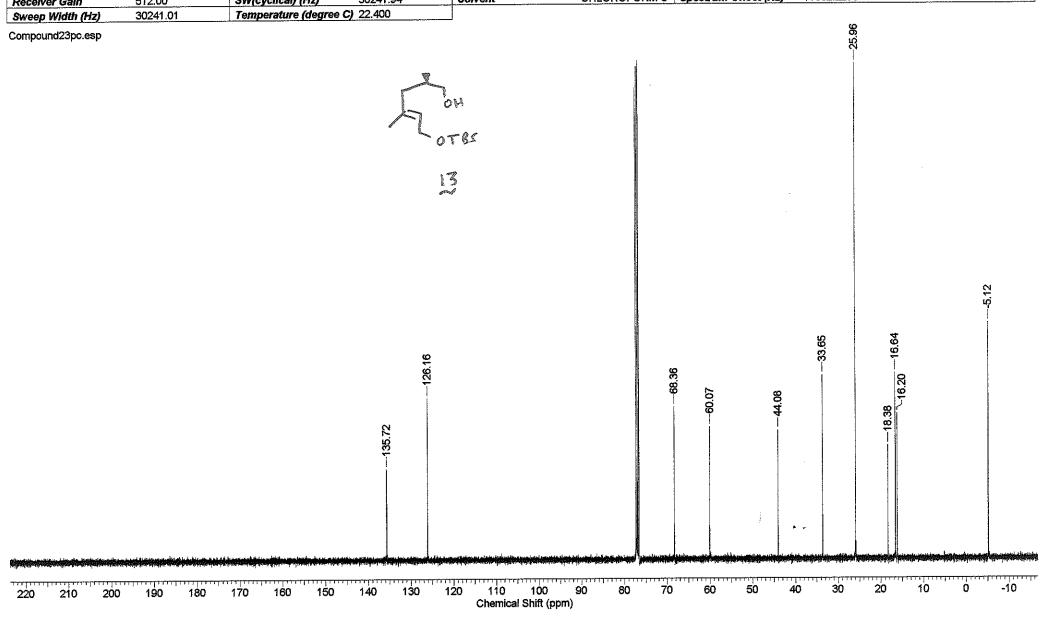
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requency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
riginal Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
leceiver Gain	64.00	SW(cyclical) (Hz)	8264.46	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2465,1973
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Acquisition Time (sec)	1.0835	Comment	MWB092pc mCAR	BON CDCl3 (e:\bruk400dat	ta\2009\Aug} ejt 49	Date	03 Aug 2009 13:45:36
Date Stamp	03 Aug 2009 13:45	:36		File Name	I:\Chemistry\NMR\Y	ear 1\Data\Compound21\M	WB092pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
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Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11320.2314
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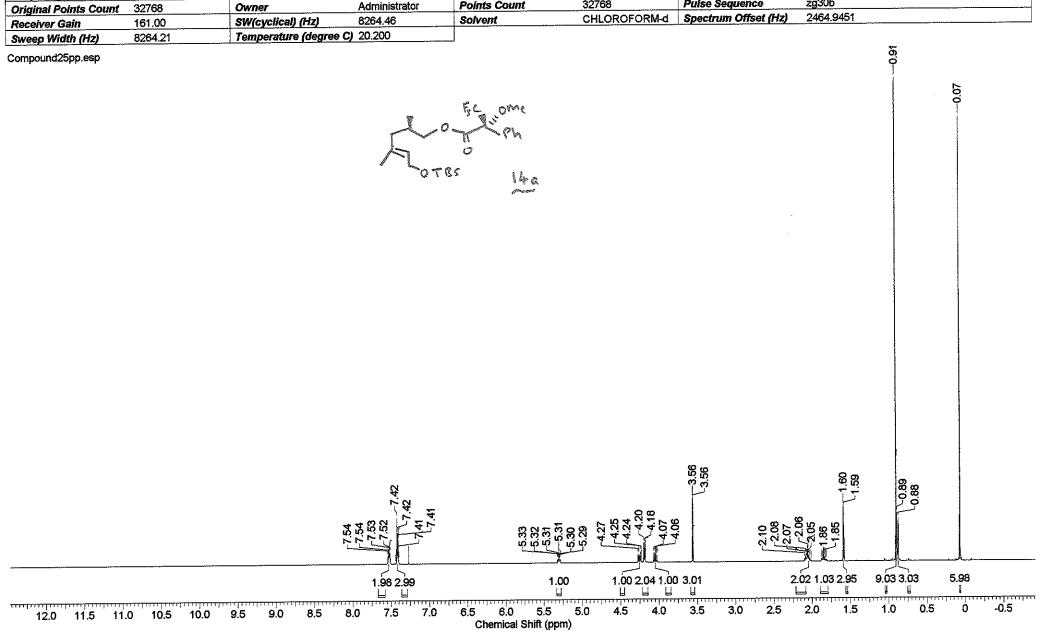


cquisition Time (sec)	3.9649	Comment	MWB036pp mPRO	FON CDCl3 (e:\bruk400da	ta\2009\Apr} ejt 15	Date	15 Apr 2009 07:21:36
ate Stamp	15 Apr 2009 07:21:3		444	File Name			ta\MWB036pp\MVVB036pp_000000fid
requency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
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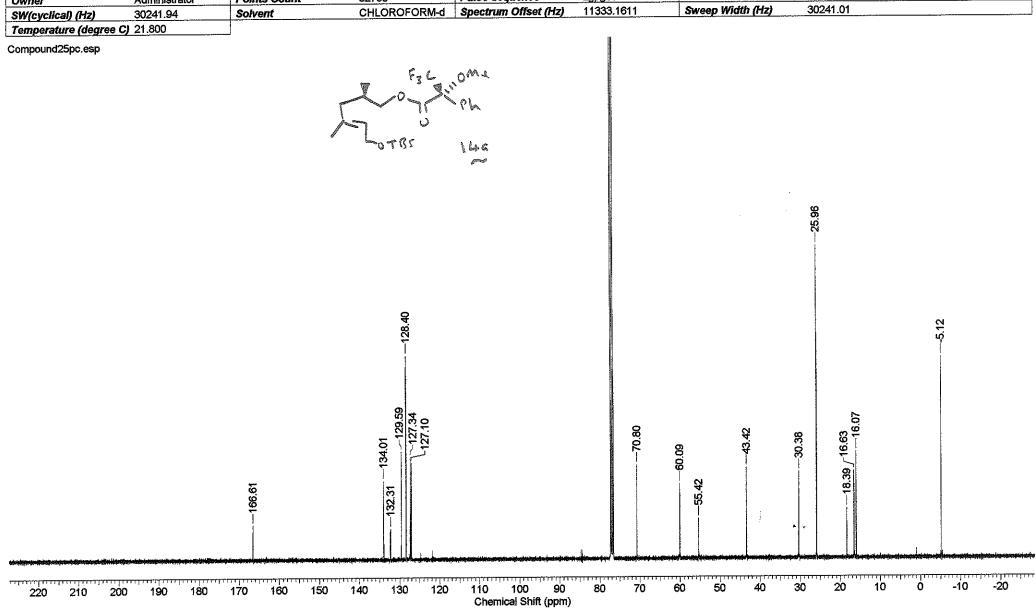
Acquisition Time (sec)	1.0835	Comment	MWB036pc mCA	RBON CDCl3 (e:\bruk400da	ta\2009\Apr} ejt 15	Date	15 Apr 2009 07:45:04
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Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11332.2295
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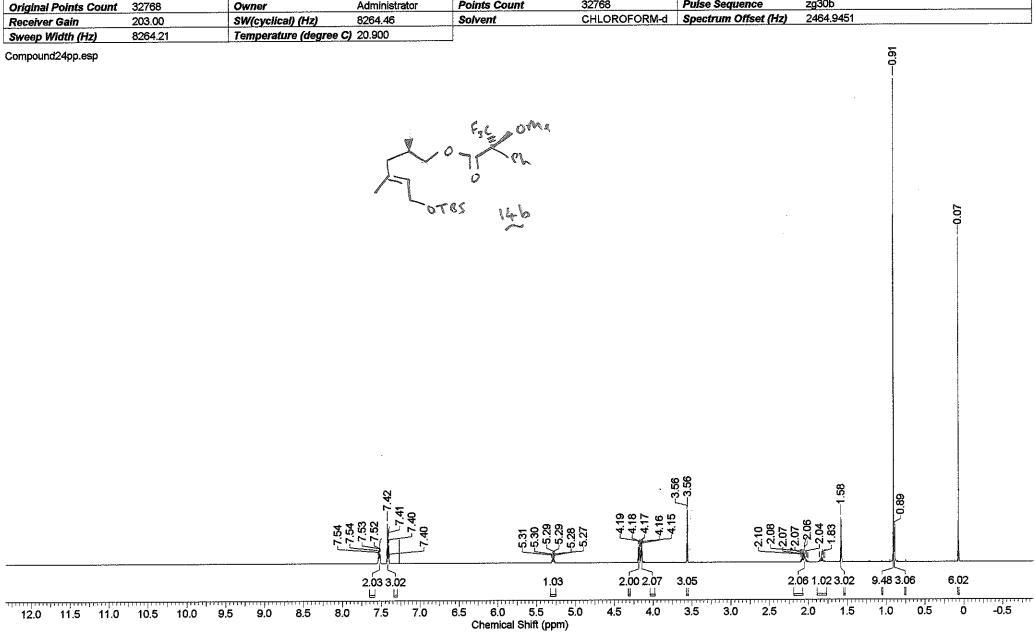
Acquisition Time (sec)	3,9649	Comment	MWB041pp mPROT	FON CDCI3 (e:\bruk400data	a\2009\Apr} ejt 18	Date	17 Apr 2009 07:28:00
Date Stamp	17 Apr 2009 07:28:0	0		File Name	C:\Users\Mark\Docui	ments\Chemistry\NMR\Dat	a\MV/B041pp\MV/B041pp_000000fid
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	161,00	SW(cyclical) (Hz)	8264.46	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2464.9451
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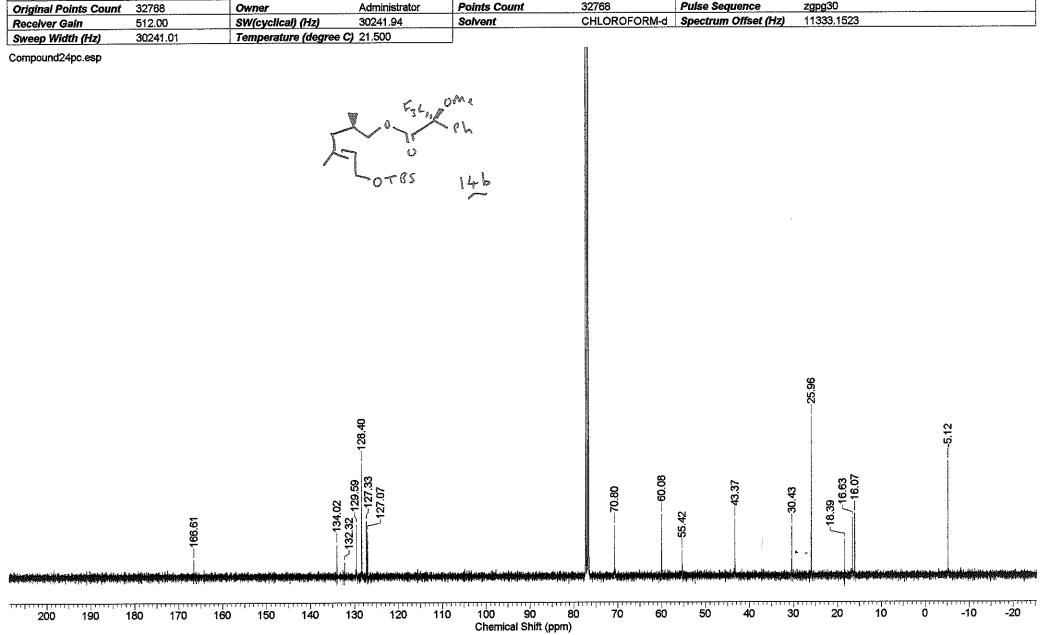
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Acquisition Time (sec)	3.9649	Comment	MWB040pp mPRO	TON CDCl3 (e:\bruk400dat	Date	16 Apr 2009 14:36:48	
Date Stamp	16 Apr 2009 14:36:4	8		File Name	C:\Users\Mark\Docu	ments\Chemistry\NMR\Da	ta\MWB040pp\MWB040pp_000000fid
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	203.00	SW(cyclical) (Hz)	8264.46	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2464,9451
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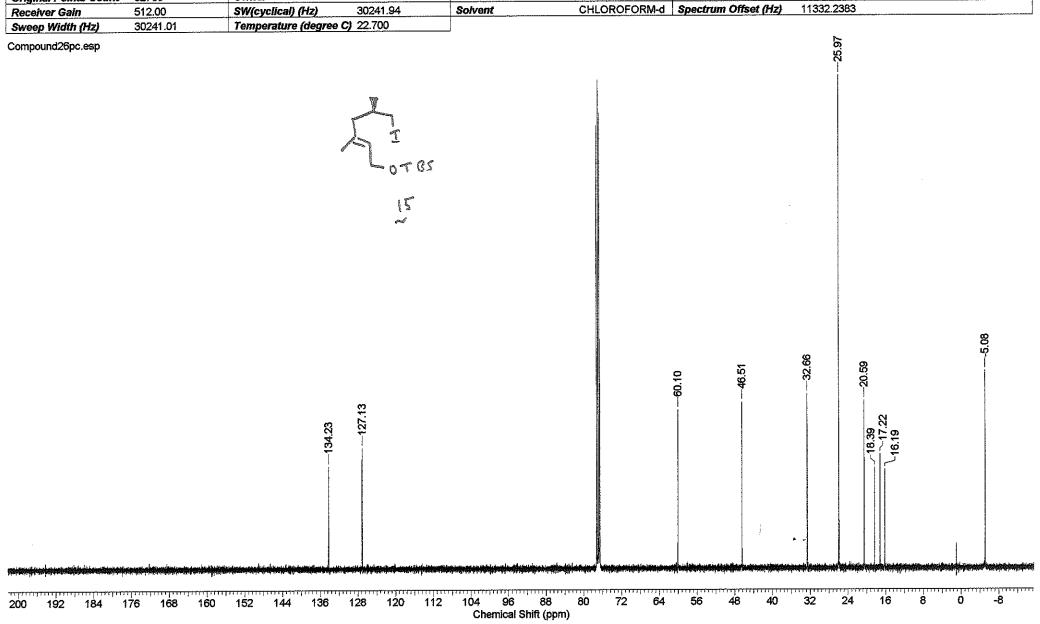


Acquisition Time (sec)	1.0835	Comment	MWB040pc mCAR	BON CDCl3 (e:\bruk400dat	a\2009\Apr} ejt 14	Date	16 Apr 2009 13:41:20	
Date Stamp	16 Apr 2009 13:41:2	20	File Name			C:\Users\Mark\Documents\Chemistry\NMR\Data\MWB040pc_000001r		
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400	
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30	
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ate Stamp	27 Apr 2009 08:08:32			File Name		ments\Chemistry\NMR\Da		p_000000fid
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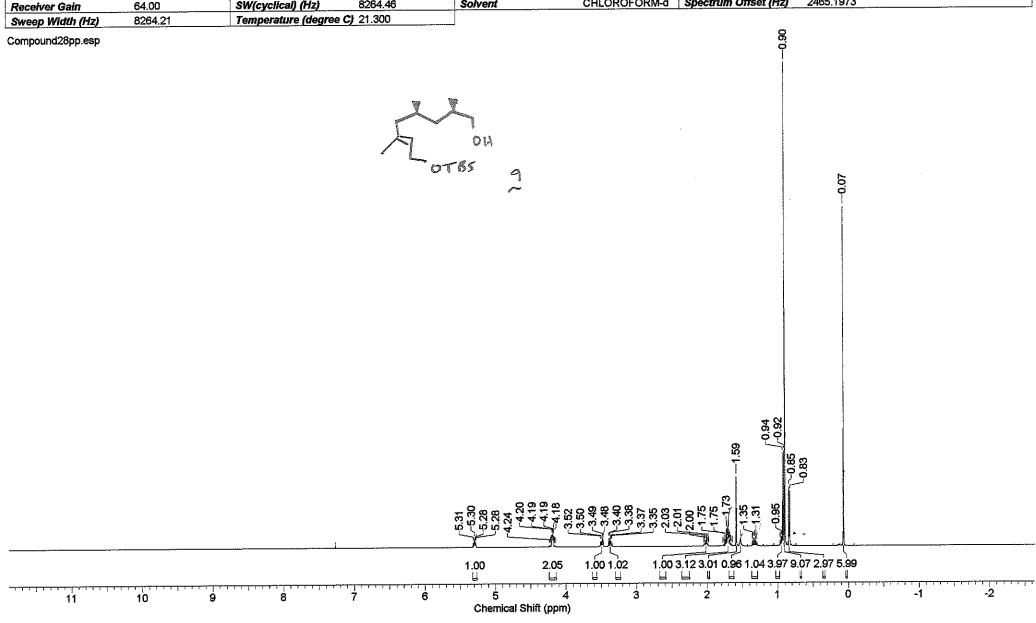
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Date Stamp	27 Apr 2009 08:33	2:00		File Name	C:\Users\Mark\Docu	ments\Chemistry\NMR\Da	ata\MVVB048pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11332.2383
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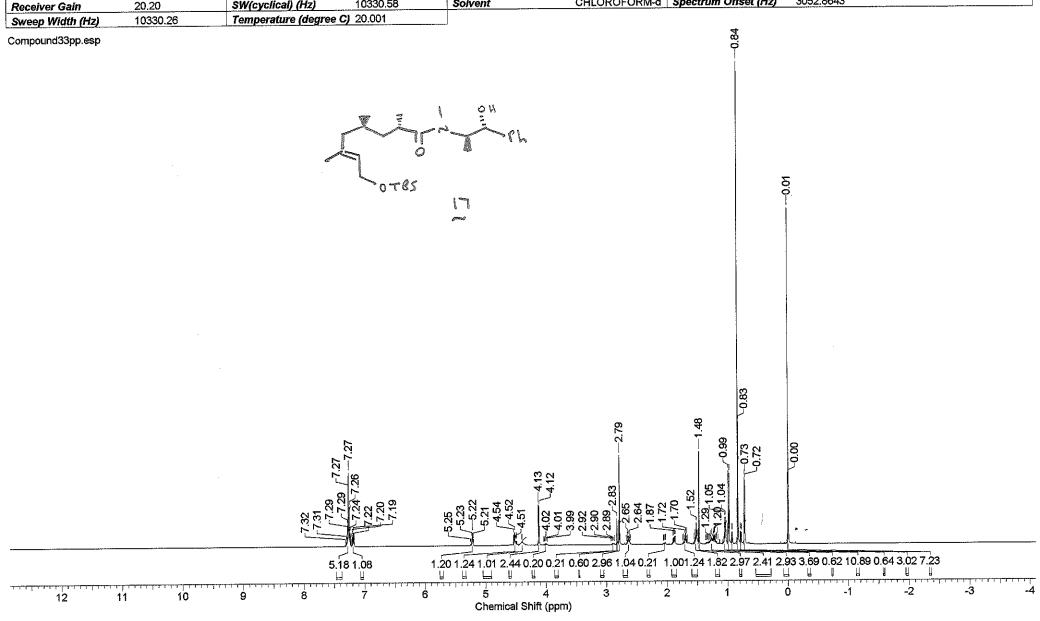
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ate Stamp	09 Oct 2009 16:17:	04		File Name		ear 1\Data\Compound27\N	AV400	
equency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin		
riginal Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30 11325.7686	
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Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	64.00	SW(cyclical) (Hz)	8264.46	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2465.1973
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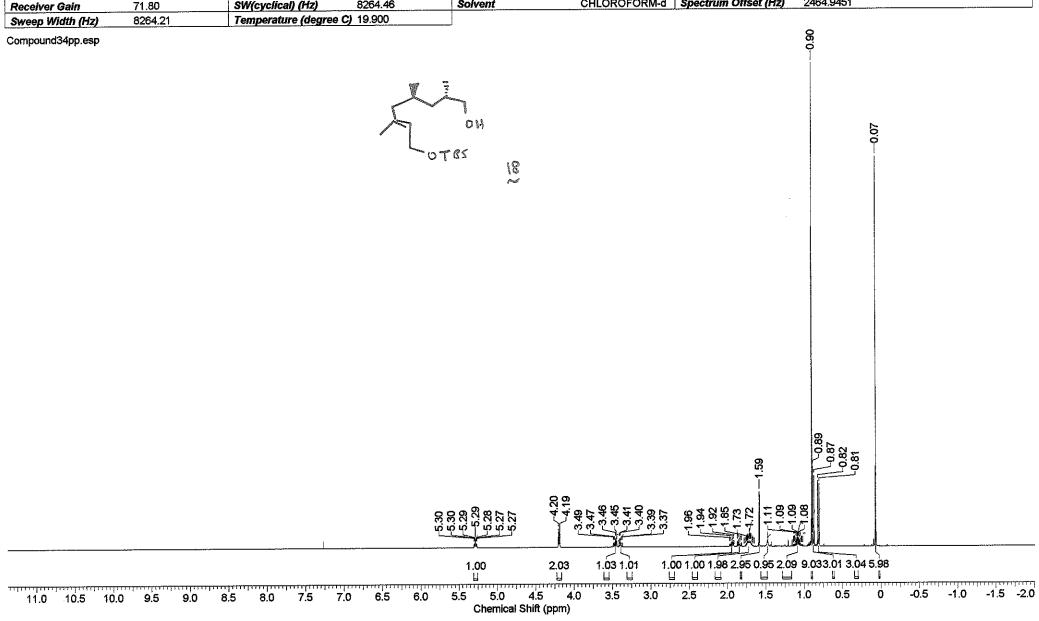
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	11 May 2009 11:09:5	2	13C	Number of Transients	256	Origin	AV400
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Acquisition Time (sec)	3.1719	Comment	MWC045pp mPRC	TON CDCl3 /opt/bruk500d	ata/2009/Nov eit 30	Date	16 Nov 2009 07:55:44	
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Frequency (MHz)	500.13	Nucleus	1H	Number of Transients	16	Origin	spect	
Original Points Count	32768	Owner	vnmr1	Points Count	32768	Pulse Sequence	zg30b	
Receiver Gain	20.20	SW(cyclical) (Hz)	10330.58	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	3052.8643	
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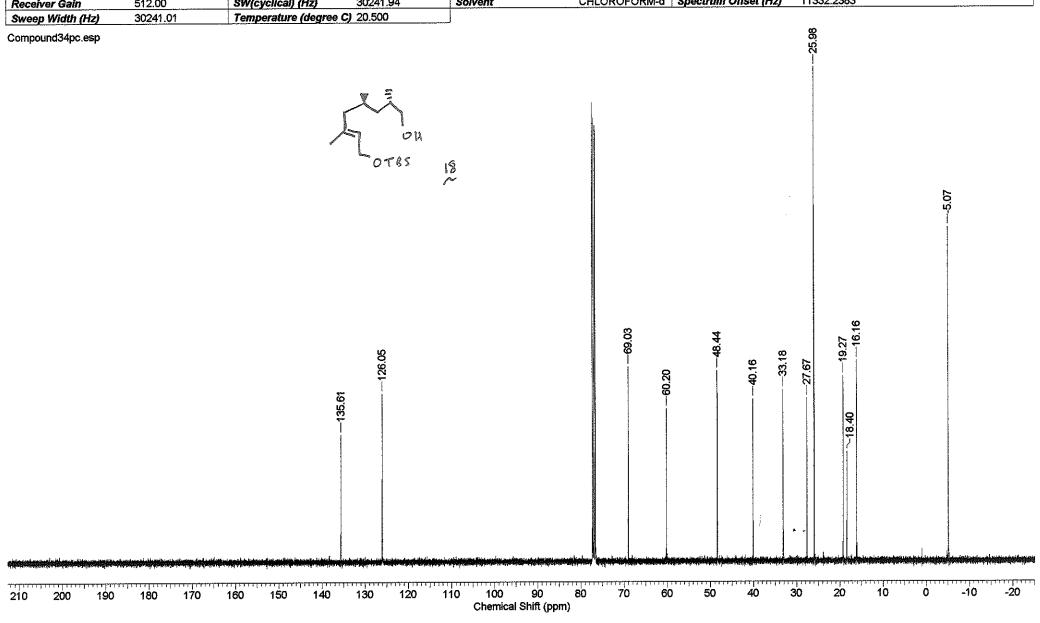


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	-141.32 -135.61 -125.92		<b>■</b>		, ji	
والمتعارف والمتع	~141.32 ~135.61 ~125.92			1.1 1	القلقال البياس الماليا	ككوا الافعال المفرط والمحادث ومحور بنفيا الموارين
أتمال والمدانية والمراجعة	~141.32 ~135.61 ~125.92	langt school obsesses comments the time as a solution of the second of t		Charles of the second of the s		post of the literal and the first terms of the first
208 200 192 184 176 168 160		120 112 104 96	88 80 72	64 56 48	40 32 24 16	

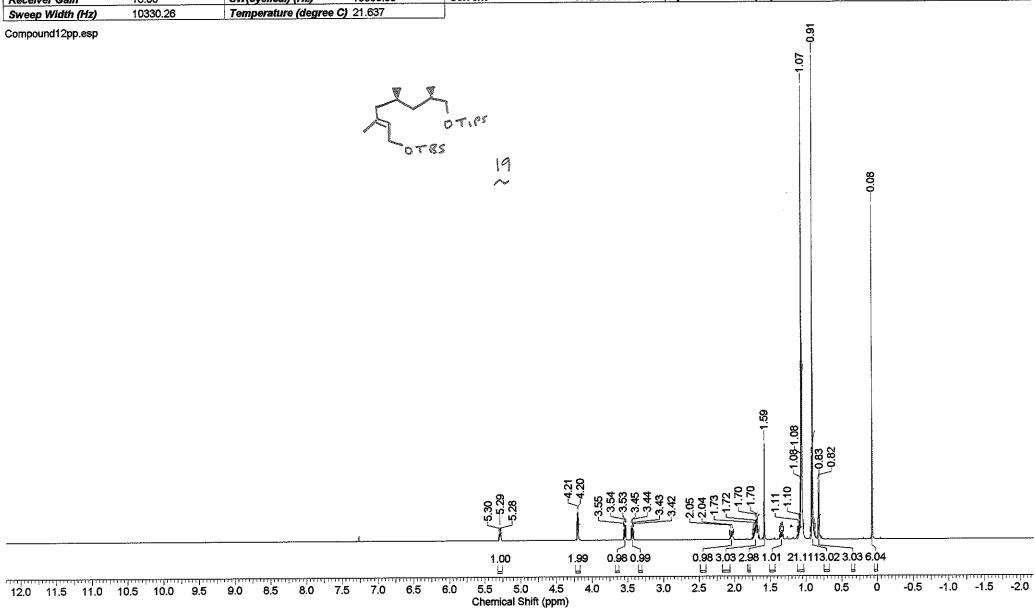
Acquisition Time (sec)	3.9649	Comment	MWC053pp mPR0	OTON CDCl3 (e:\bruk400dal		Date	26 Nov 2009 09:48:48	
Date Stamp	26 Nov 2009 09:48:	48		File Name	I:\Chemistry\NMR\Year 1\Data\Compound34\MWC053pp\MWC053pp_000000fid			
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400	
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b	
Receiver Gain	71.80	SW(cyclical) (Hz)	8264.46	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2464.9451	
Curan Midth (Un)	9264 24	Temperature (degree C)	19 900					



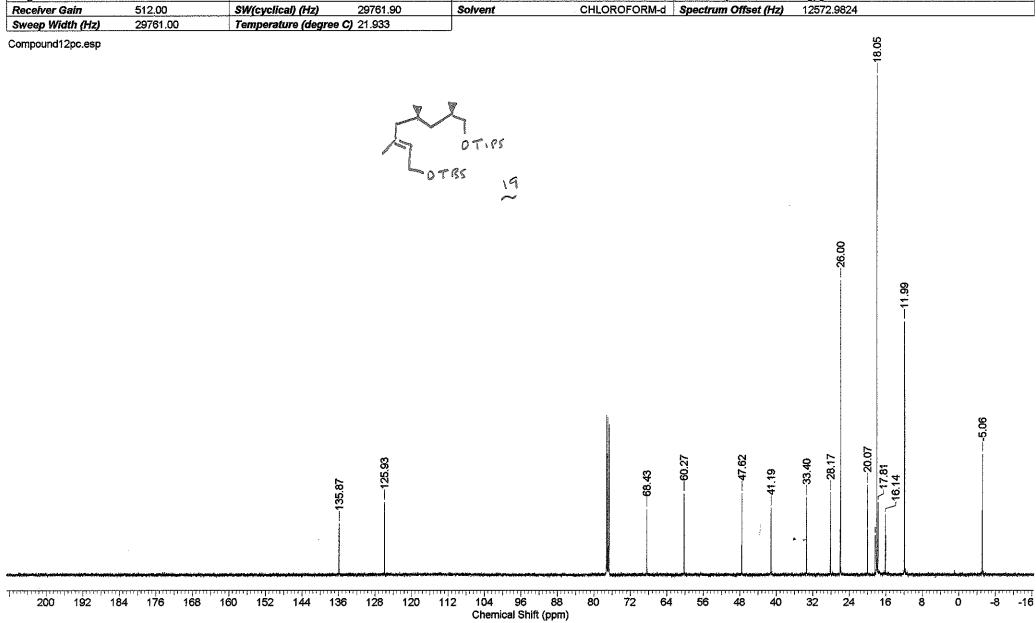
Acquisition Time (sec)	1.0835	Comment	MWVC053pc m	CARBON CDCl3 (e:\bruk400c	fata\2009\Nov} ejt 26	Date	26 Nov 2009 10:12:16
Date Stamp	26 Nov 2009 10	:12:16		File Name	I:\Chemistry\NMR\Y	ear 1\Data\Compound34\f	//VC053pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Puise Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11332.2383
Sweep Width (Hz)	30241.01	Temperature (degree	C) 20.500				



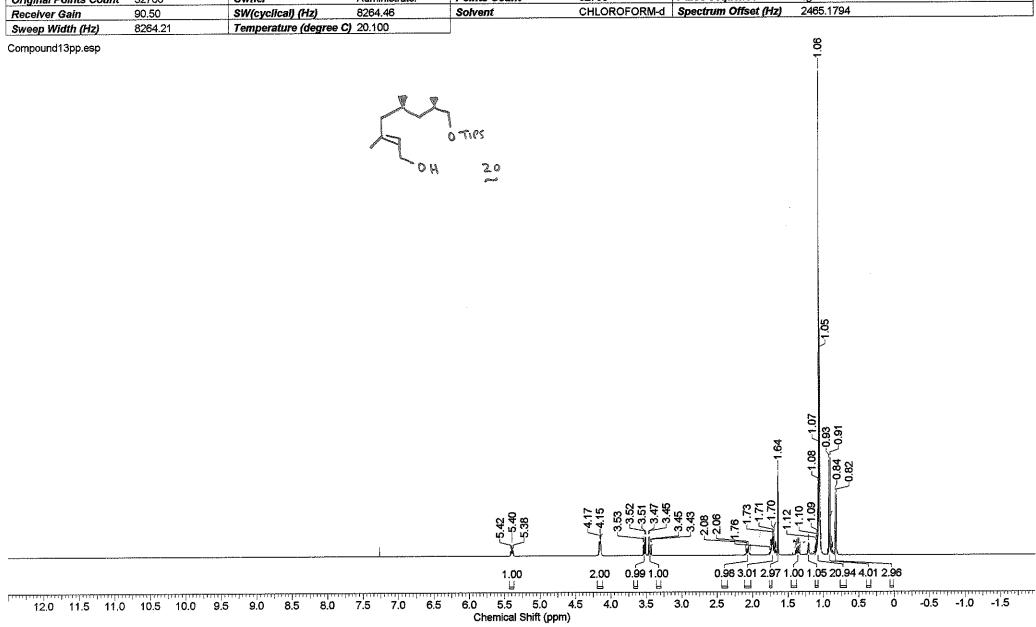
Acquisition Time (sec)	3.1719	Comment	MWE086pp mPR	OTON CDCl3 /opt/bruk500d	lata/2011/Mar ejt 55	Date	08 Mar 2011 11:22:40
Date Stamp	08 Mar 2011 11:2	2:40		File Name	F:\Chemistry\Year 3	data\NMR data\Data\Con	npound 12\MVVE082pp_000001r
Frequency (MHz)	500.13	Nucleus	1H	Number of Transients	16	Origin	spect
Original Points Count	32768	Owner	vnmr1	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	18.00	SW(cyclical) (Hz)	10330.58	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	3079.6616
A LITTUE OF L	40000 00	Towns our free de serve de	31 04 627				



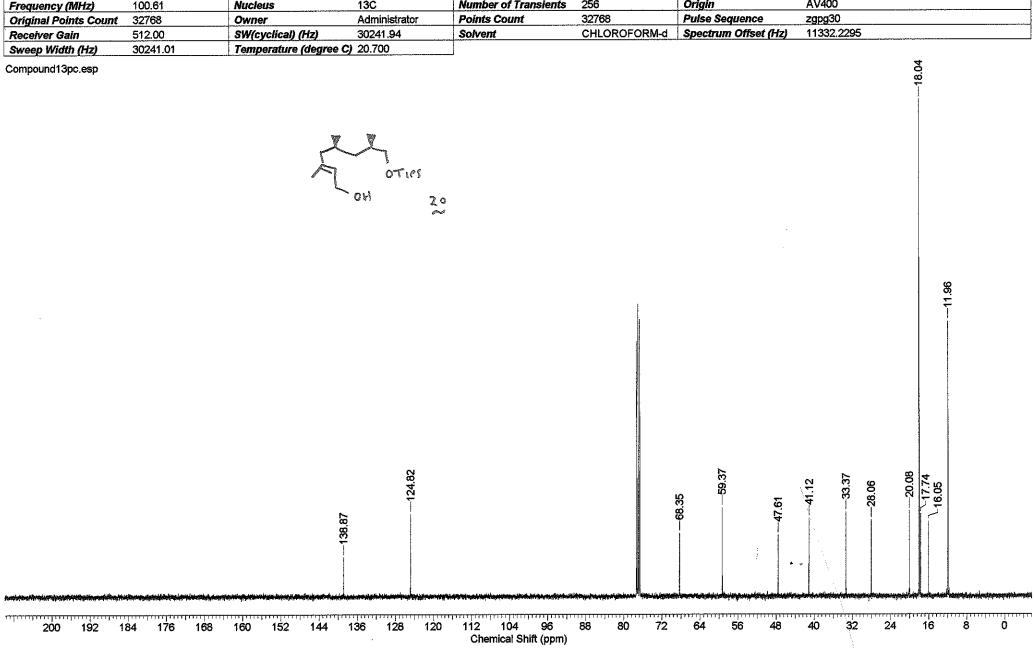
Acquisition Time (sec)	1.1010	Comment	MWE086pc mCARE	BON CDCl3 /opt/bruk500da	Date	08 Mar 2011 11:44:00	
Date Stamp	08 Mar 2011 11:44:	00		File Name	#Ie Name F:\Chemistry\Year 3 data\NMR data\Data\Compound 12\MWE082pc_000001r		
Frequency (MHz)	125.76	Nucleus	13C	Number of Transients	256	Origin	spect
Original Points Count	32768	Owner	vnmr1	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	29761.90	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	12572.9824
Susan Midth /Lini	20761.00	Tomporatura (dograd C	1 21 022			•	



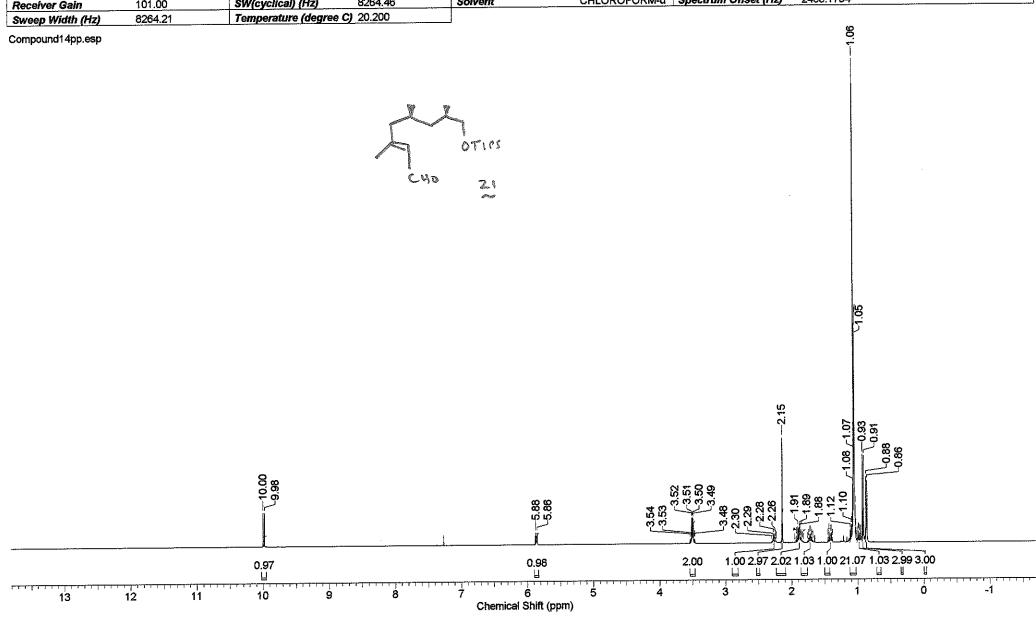
	and the second second							
Acquisition Time (sec)	3.9649	Comment	MWE087pp mPROTON CDCl3 {e:\bruk400data\2011\Mar} ejt 15			Date	10 Mar 2011 08:42:40	
Date Stamp	10 Mar 201	1 08:42:40		File Name	F:\Chemistry\Year 3	r 3 data\NMR data\Data\Compound 13\MWE087pp_000001r		
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400	
Original Points Count	32768	Owner	Administrator	Points Count	32768	Puise Sequence	zg30b	
D t O. in	00 F0	CM/oveling() (Uz)	9264.46	Solvent	CHLOROFORMA	Spectrum Offset (Hz)	2465 1794	



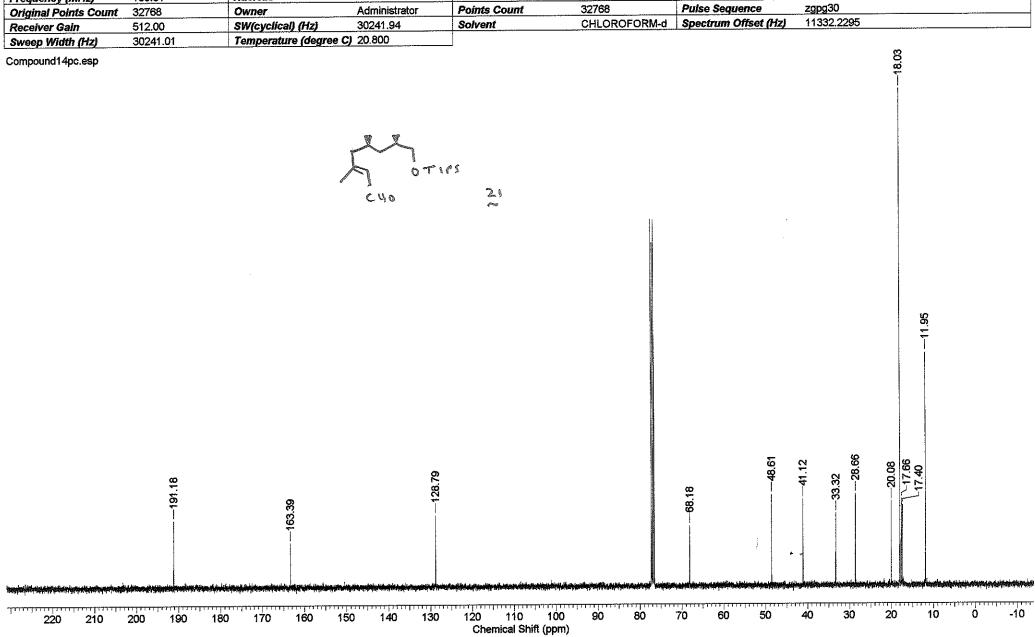
Acquisition Time (sec)	1.0835	Comment	MWE087pc mC	ARBON CDCl3 (e:\bruk400dat	a\2011\Mar} ejt 15	Date	10 Mar 2011 09:06:08
Date Stamp	10 Mar 2011 09:06	6:08		File Name	F:\Chemistry\Year 3	data\NMR data\Data\Comp	pound 13\MWE087pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11332.2295
Swoon Width (Hz)	302/1 01	Temperature (degree C)	20.700				



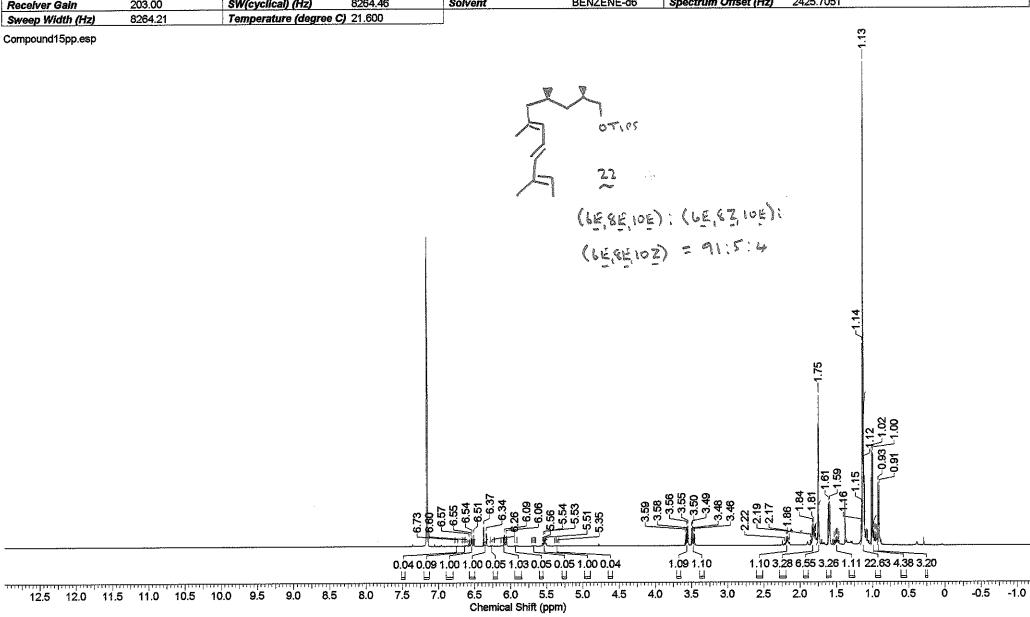
Acquisition Time (sec)	3.9649	Comment	MWE089pp mPROT	TON CDCI3 (e:\bruk400dat	a\2011\Mar} ejt 7	Date	11 Mar 2011 09:01:52
Date Stamp	11 Mar 2011 09:01:	52		File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 14\MWE089pp_000001r
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	101.00	SW(cyclical) (Hz)	8264.46	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2465.1794
Receiver Gain	101.00	To the second se					



Acquisition Time (sec)	1.0835	Comment	MWE089pc mCAF	RBON CDCl3 (e:\bruk400dat		Date	11 Mar 2011 09:25:20
Date Stamp	11 Mar 2011 09:25:2	20		File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 14\MWE089pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11332.2295
A	20241-01	Tomporatura (dograp C)	20.800				

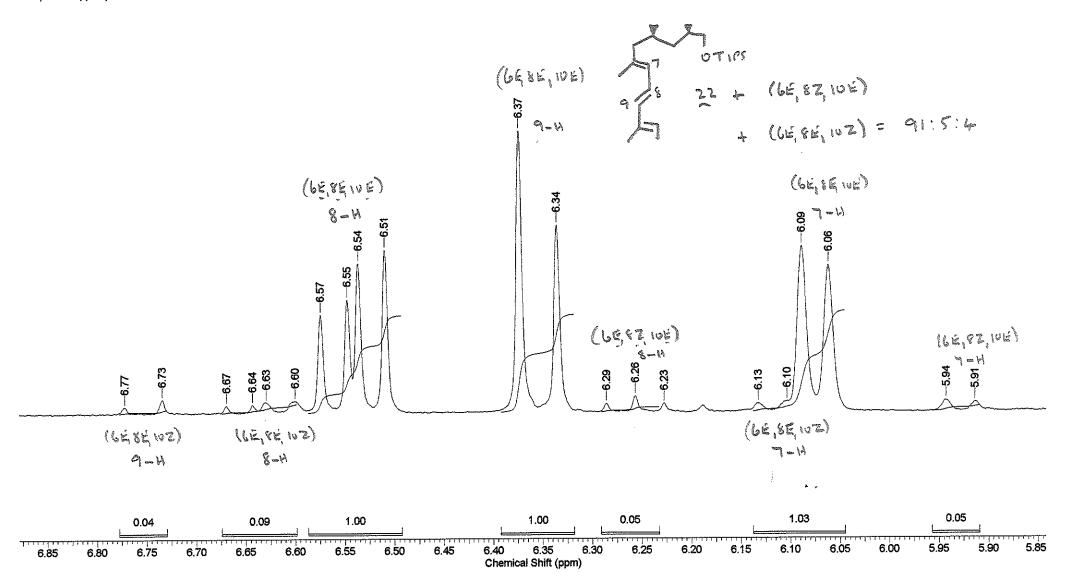


Acquisition Time (sec)	3.9649	Comment	MWF010pp mPROTON C6D6 {e:\bruk400data\2011\Apr} ejt 41			Date	14 Apr 2011 09:57:20
Date Stamp	14 Apr 2011 09:57	20		File Name F:\Chemistry\Year 3 data\NMR data\Data\Compound 15\MWF010pp_000001r			
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	203.00	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2425.7051
- 1000 400 500 1	0004.04	7 (da area o O	24 600				

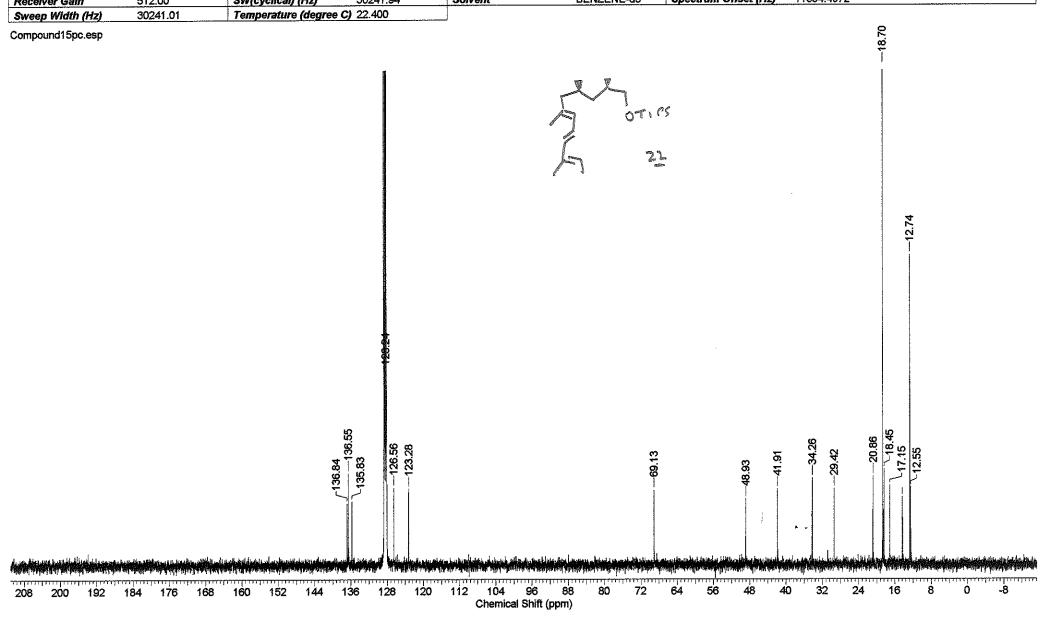


Acquisition Time (sec)	3,9649	Comment	Military of cobb still store of the comment of the			Date	14 Apr 2011 09:57:20	
Date Stamp	14 Apr 2011 09:57	:20		File Name	File Name F:\Chemistry\Year 3 data\NMR data\Data\Compound 15\MWF010pp_000001r			
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400	
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b	
Receiver Gain	203.00	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2425.7051	
Sween Width (Hz)	8264.21	Temperature (degree C	21.600					

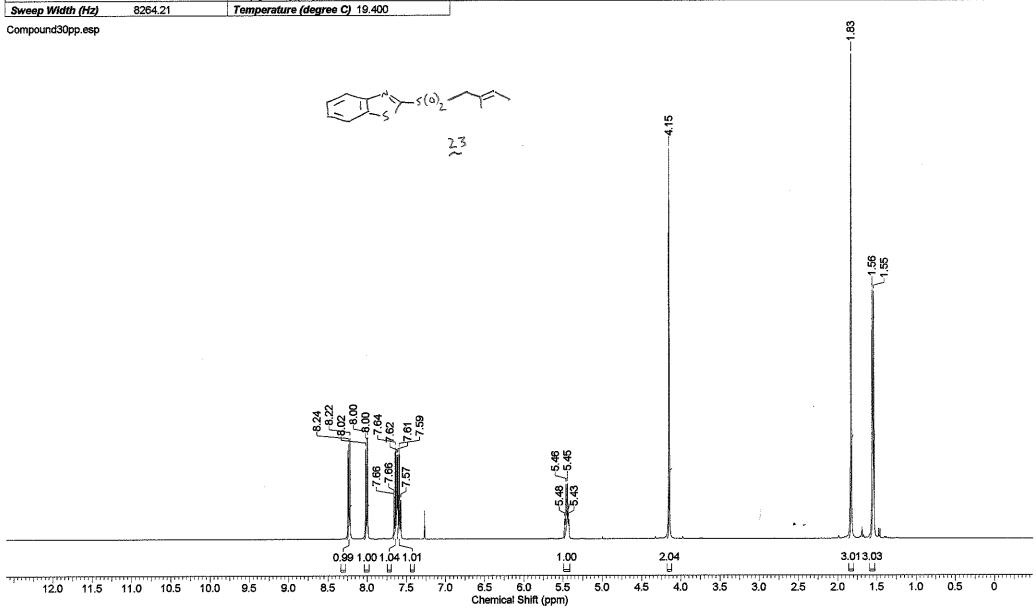
Compound15pp.esp



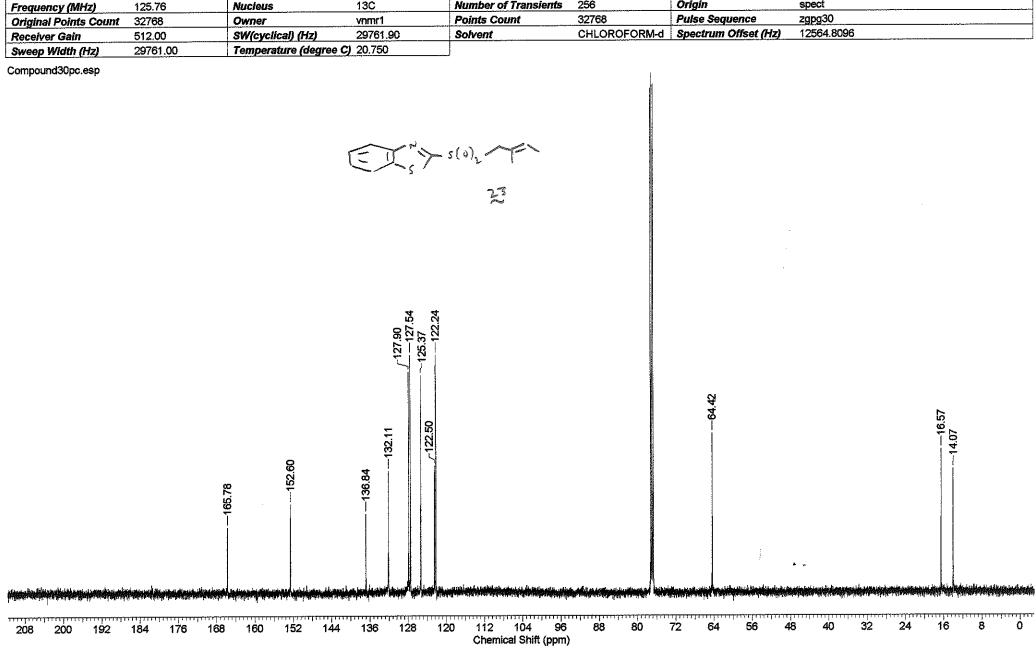
Acquisition Time (sec)	1.0835	Comment	mCARBON C6D6 {e:\bruk400data\2011\Apr} ejt 45			Date	14 Apr 2011 11:41:52
Date Stamp	14 Apr 2011 11:4	41:52		File Name	F:\Chemistry\Year 3 data\NMR data\Data\Compound 15\MWF010pc_000001r		
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11394.4072
Sween Width (U-)	30241.01	Temperature (degree )	CL 22.400				



Acquisition Time (sec)	3.9649	Comment	MWB066pp mPf	ROTON CDCl3 {e:\bruk400da	ta\2011\Feb} ejt 25	Date	01 Feb 2011 09:44:32	
Date Stamp	01 Feb 2011 09:44:	32		File Name	F:\Chemistry\Year 1 data\NMR data\Data\Compound30\MWB066pp_000001r			
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400	
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b	
Receiver Gain	128.00	SW(cyclical) (Hz)	8264.46	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2465.4316	
Sween Width (Hz)	8264.21	Temperature (degree C)	19 400					

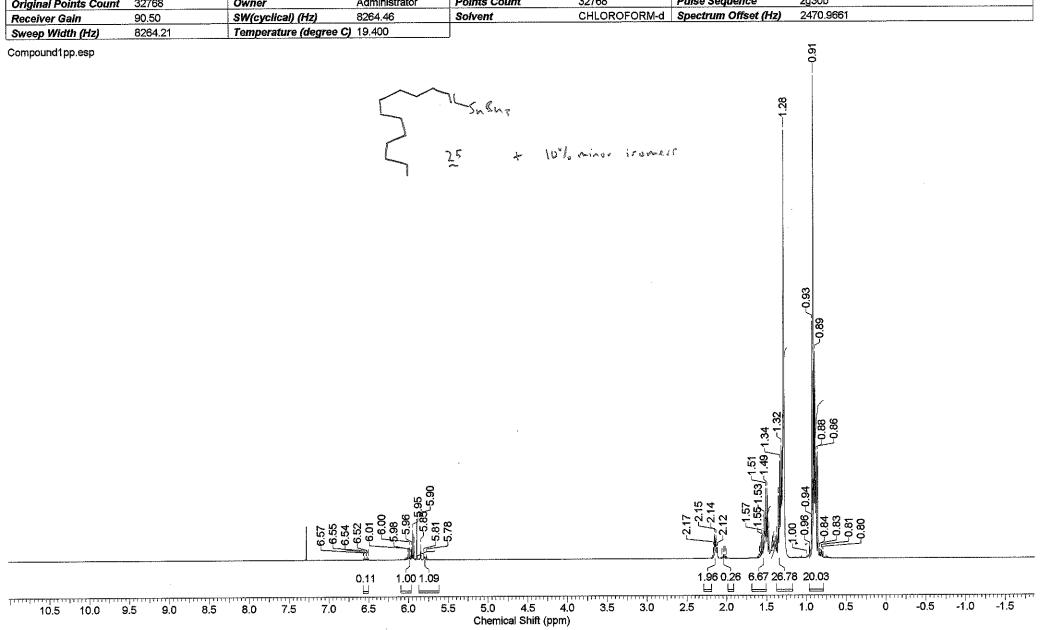


Acquisition Time (sec)	1,1010	Comment	MWC066pc mCARBON CDCl3 /opt/bruk500data/2011/Jan ejt 6			Date	01 Feb 2011 08:40:32
Date Stamp	01 Feb 2011 08:	40:32		File Name	F:\Chemistry\Year 1 data\NMR data\Data\Compound30\MWB066pc_000001r		
Frequency (MHz)	125.76	Nucieus	13C	Number of Transients	256	Origin	spect
Original Points Count	32768	Owner	vnm:1	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	29761.90	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	12564.8096
Sween Width (Hz)	29761.00	Temperature (degree	C) 20.750				



80

Acquisition Time (sec)	3.9649	Comment	MWC057pp mP	ROTON CDCl3 (e:\bruk400da	ta\2009\Dec} ejt 22	Date	04 Dec 2009 10:16:32	
Date Stamp	04 Dec 2009	10;16:32		File Name	F:\Chemistry\Year 2 data\NMR data\Data\Compound1\MWC057pp_000001r			
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400	
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b	
Receiver Gain	90.50	SW(cyclical) (Hz)	8264.46	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2470,9661	
Sucon Width (Hz)	8264.21	Tomporature (degree	C) 19.400					



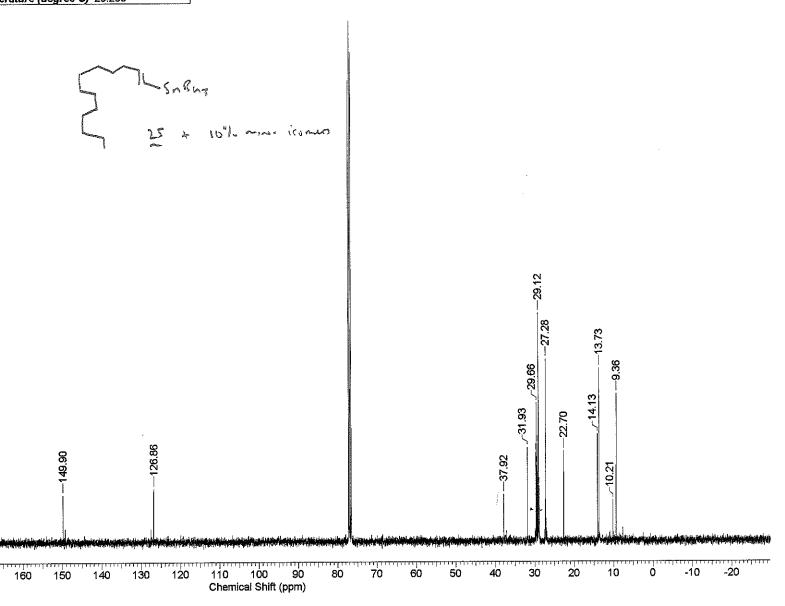
Acquisition Time (sec)	1.0835	Comment	MWC057pc mCA	RBON CDCl3 {e:\bruk400dat	a\2009\Dec} ejt 48	Date	04 Dec 2009 13:17:52	
Date Stamp	04 Dec 2009 13:	:17:52		File Name	File Name F:\Chemistry\Year 2 data\NMR data\Data\Compound1\MVVC057pc_000001r			
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400	
Original Points Count		Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30	
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11333.1523	
Sweep Width (Hz)	30241.01	Temperature (degree	C) 20.200					

Compound1pc.esp

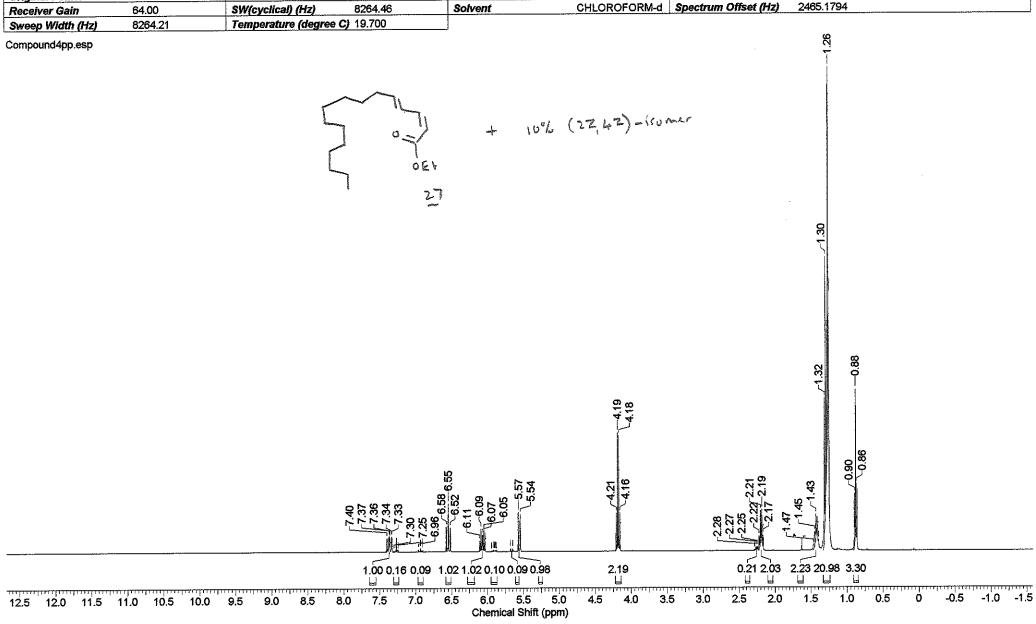
170

180

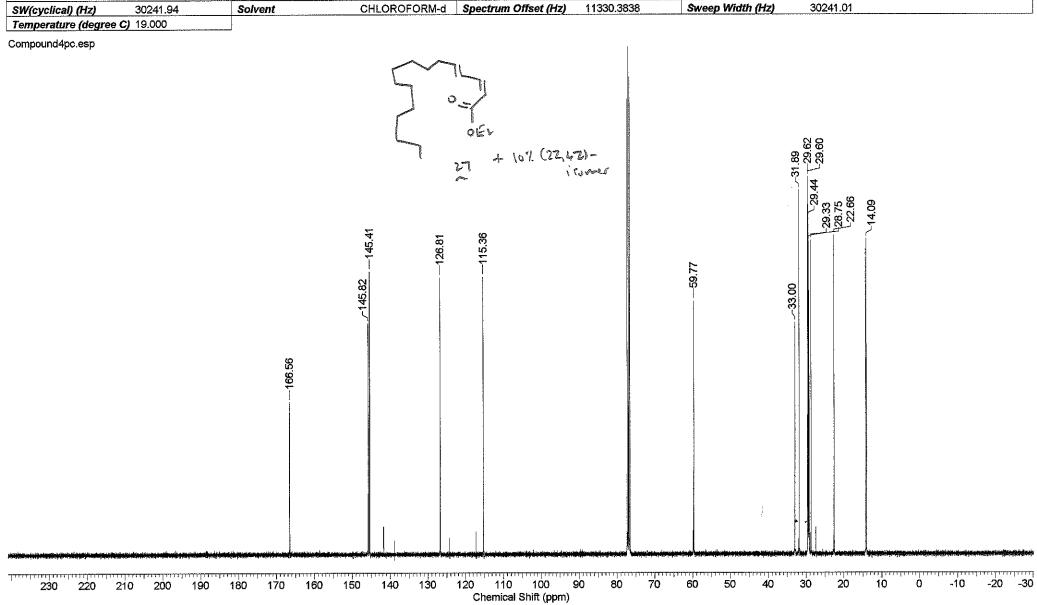
190



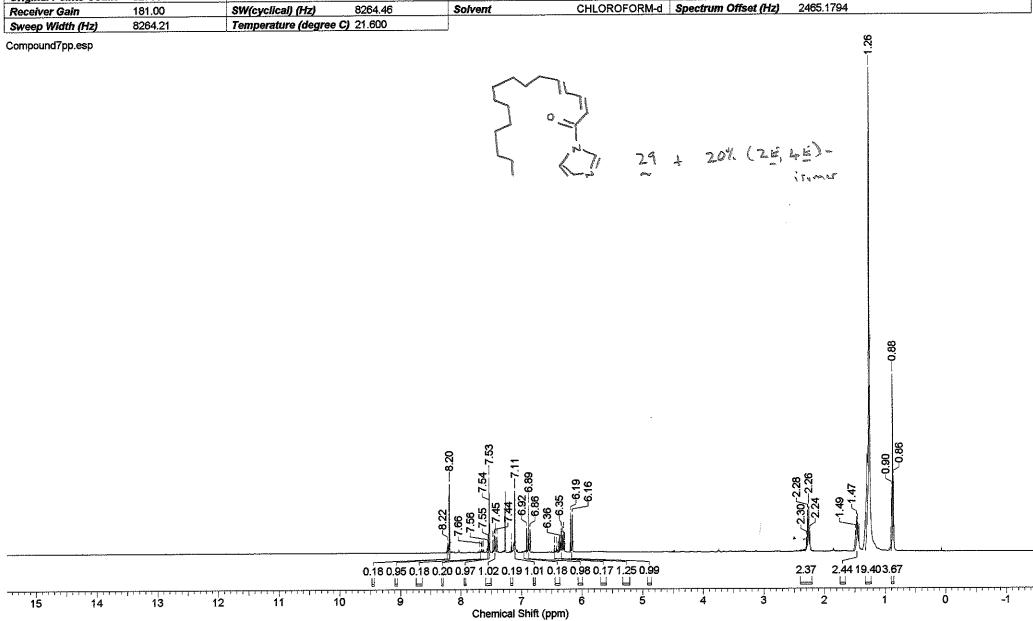
Acquisition Time (sec)	3,9649	Comment	MWC056app mP	ROTON CDCi3 (e:\bruk400d	ata\2009\Dec} ejt 51	Date	08 Dec 2009 08:06:24
	08 Dec 2009 08:06	3:24		File Name I:\Chemistry\Year 2 data\NMR data\Data\Compound4\MWC056pp_000001r			
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	64.00	SW(cyclical) (Hz)	8264.46	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2465.1794
Owner Wields (Un)	9064 24	Tomporatura (dograca C	1 10 700				



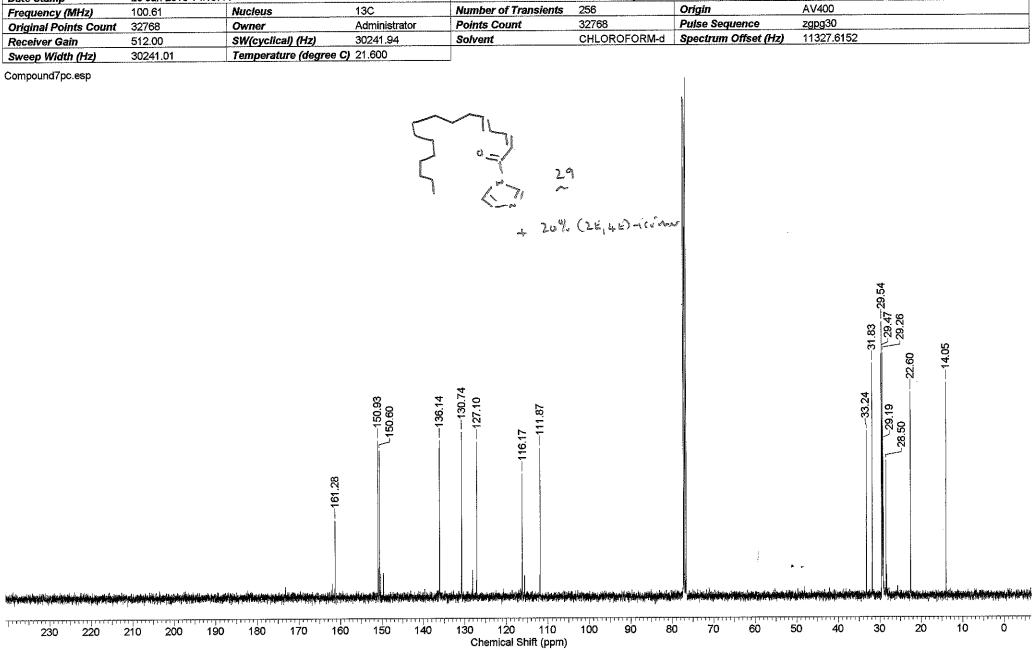
1.0835	Comment	MWC056pp mCARBONnight CDCl3 {e:\bruk400data\2010\Jan} ejt 21						
07 Jan 2010 17:3	3:52		Date Stamp	07 Jan 2010 17:33:52	2	<u>, , , , , , , , , , , , , , , , , , , </u>		
I:\Chemistry\Year	2 data\NMR data\Data\Compo	ound4\MVVC056pc_00		Frequency (MHz)	100.61			
13C	Number of Transients	512	Origin	AV400	Original Points Count	32768		
Administrator	Points Count	32768	Pulse Sequence	zgpg30	Receiver Gain	512.00		
30241.94	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11330.3838	Sweep Width (Hz)	30241.01		
	07 Jan 2010 17:3 I:\Chemistry\Year 13C Administrator	07 Jan 2010 17:33:52         I:\Chemistry\Year 2 data\\NMR data\\Data\Compo         13C       Number of Transients         Administrator       Points Count	07 Jan 2010 17:33:52         I:\Chemistry\Year 2 data\NMR data\Data\Compound4\MWC056pc_00         13C       Number of Transients       512         Administrator       Points Count       32768	07 Jan 2010 17:33:52         Date Stamp           I:\Chemistry\Year 2 data\NMR data\Data\Compound4\MWC056pc_000001r           13C         Number of Transients         512         Origin           Administrator         Points Count         32768         Pulse Sequence	07 Jan 2010 17:33:52         Date Stamp         07 Jan 2010 17:33:55           I:\Chemistry\Year 2 data\NMR data\Data\Compound4\MWC056pc_000001r           13C         Number of Transients         512         Origin         AV400           Administrator         Points Count         32768         Puise Sequence         zgpg30	O7 Jan 2010 17:33:52         Date Stamp         07 Jan 2010 17:33:52           E:\Chemistry\Year 2 data\\NMR data\Data\Compound4\MVC056pc         00001r         Frequency (MHz)           13C         Number of Transients         512         Origin         AV400         Original Points Count           Administrator         Points Count         32768         Pulse Sequence         zgpg30         Receiver Gain		



Acquisition Time (sec)	3.9649	Comment	MWC069pp mPR	OTON CDCl3 (e:\bruk400da	ta\2010\Jan} ejt 20	Date	22 Jan 2010 11:39:44
Date Stamp	22 Jan 2010 11:39	:44		File Name	re F:\Chemistry\Year 2 data\NMR data\Data\Compound7\MWC069pp_000001r		
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	181.00	SW(cyclical) (Hz)	8264.46	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2465.1794
Ourses Windsh (Ma)	9064 04	Tomporaturo (degrae C	21 600				

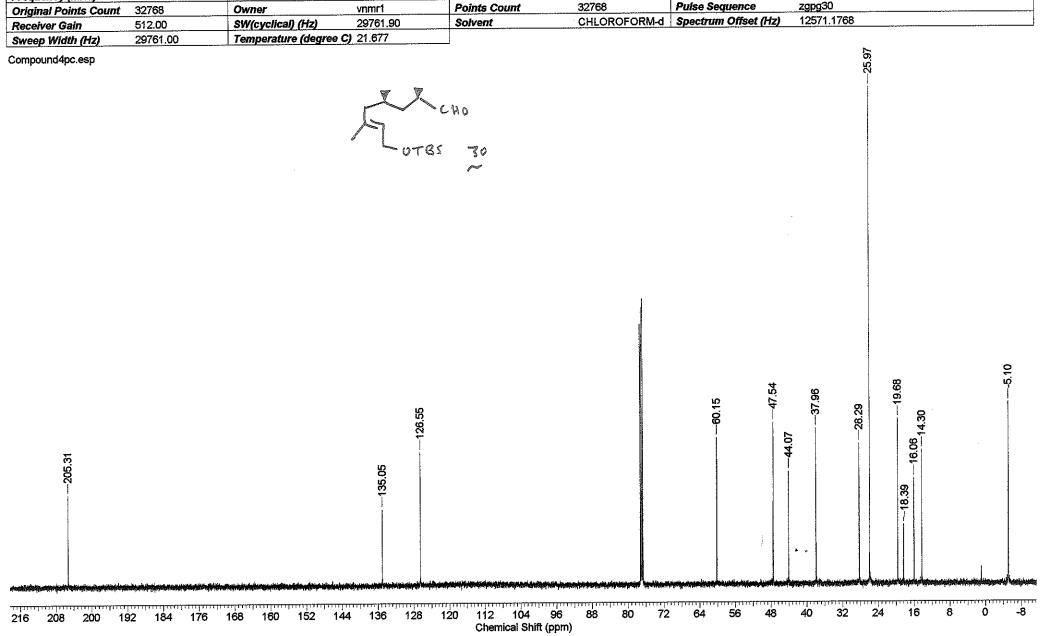


Acquisition Time (sec)	1.0835	Comment	MWC069pc mC	ARBON CDCI3 (e:\bruk400dat	Date	26 Jan 2010 14:19:44		
Date Stamp	26 Jan 2010 14:1	9:44		File Name	e Name F:\Chemistry\Year 2 data\NMR data\Data\Compound7\MWC069pc_000001r			
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400	
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30	
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11327.6152	
Sween Width (Hz)	30241 01	Temperature (degree C	21,600					

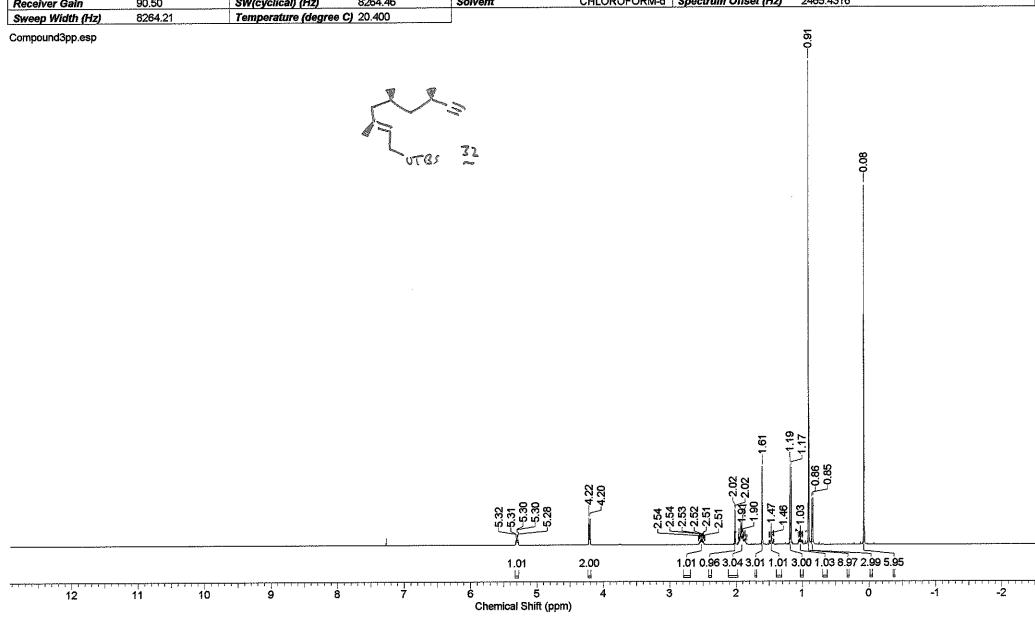


	3.1719	Comment	MWE019pp mPRC	OTON CDCl3 /opt/bruk500d	iata/2010/Oct ejt 41	Date 3 data\NMR data\Data\Con	12 Oct 2010 07:28:00 npound 4WWE019pp_000001r
Date Stamp	12 Oct 2010 07:28			File Name	16	Origin	spect
	500.13	Nucleus	1H	Number of Transients	32768	Pulse Sequence	zg30b
Original Points Count	32768	Owner	vnmr1	Points Count	CHLOROFORM-d		
Receiver Gain	57.00	SW(cyclical) (Hz)	10330.58	Solvent		1	
Spectrum Offset (Hz)	3079.9768	Sweep Width (Hz)	10330.26	Temperature (degree C	) 21.202		_
compound4pp.esp	3013.3130		OT85				-0.91
	75.0	999		-5.32 -5.30 -5.29			0.85
		0.95 <u></u>		1.01	2.05	0.99 1.04 1.00 2.04 3.01	
12	11 10	9 8	7	6 5 Chemical Shift (pp	4 m)	3 2	1 0 -1 -2

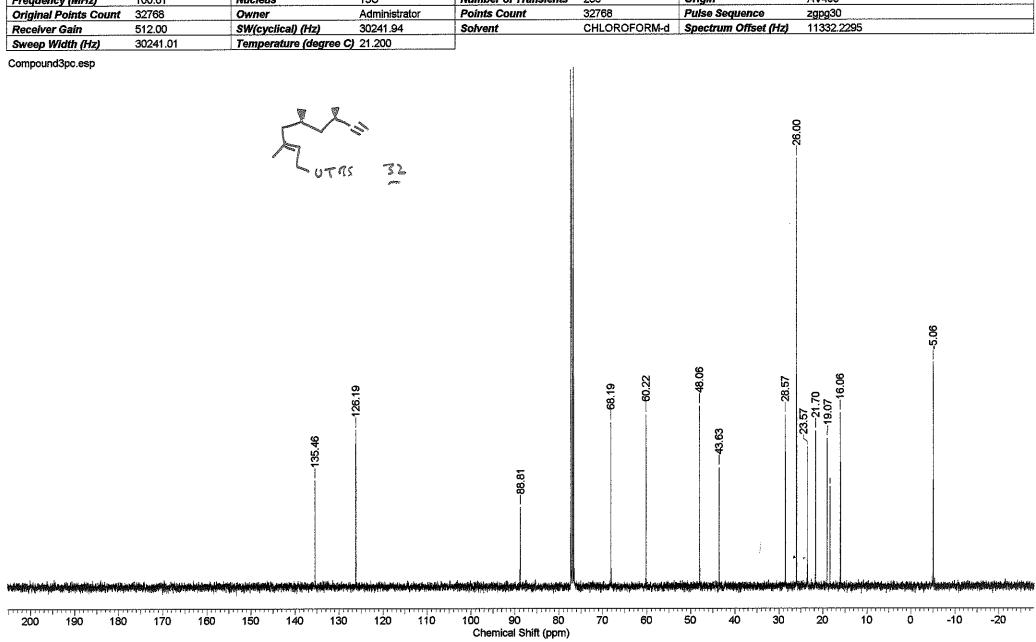
Acquisition Time (sec)	1.1010	Comment	MWE019pc mCAR	BON CDCl3 /opt/bruk500da	ata/2010/Oct ejt 7	Date	11 Oct 2010 13:47:44
Date Stamp	11 Oct 2010 13:47:	44		File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 4\MWE019pc_000001r
Frequency (MHz)	125.76	Nucleus	13C	Number of Transients	256	Origin	spect
Original Points Count	32768	Owner	vnmr1	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	29761.90	Soivent	CHLOROFORM-d	Spectrum Offset (Hz)	12571.1768
Swoon Width (Hz)	20761.00	Temperature (degree C)	21 677				



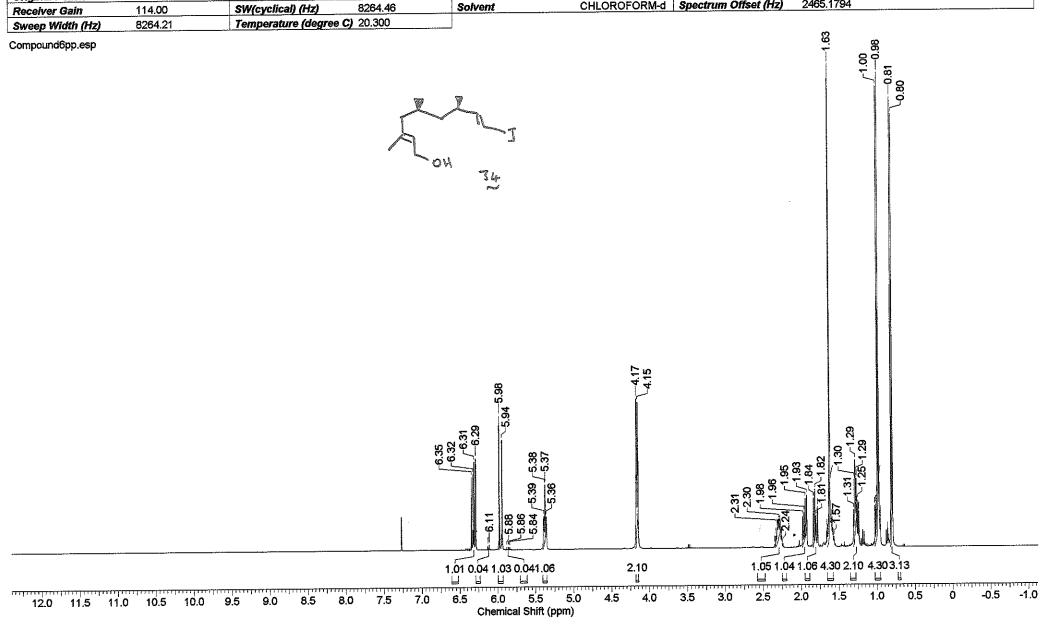
Acquisition Time (sec)	3.9649	Comment	MWE021pp mPRC	TON CDCl3 (e:\bruk400da	ta\2010\Oct} ejt 35	Date	14 Oct 2010 13:52:00
Date Stamp	14 Oct 2010 13:52:	00		File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 3\MVVE021pp_000001r
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	90.50	SW(cyclical) (Hz)	8264.46	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2465.4316
On an Interior (II)	9064 04	Tomporatura (dograd C	20.400				



Acquisition Time (sec)	1.0835	Comment	MWE021pc mCA	ARBON CDCl3 (e:\bruk400dat	a\2010\Oct} ejt 35	Date	14 Oct 2010 14:15:28	
Date Stamp	14 Oct 2010 1	4:15:28		File Name	File Name F:\Chemistry\Year 3 data\NMR data\Data\Compound 3\MWE021pc_000001r			
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400	
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30	
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11332.2295	
Sweep Width (Hz)	30241.01	Temperature (degree	C) 21.200					



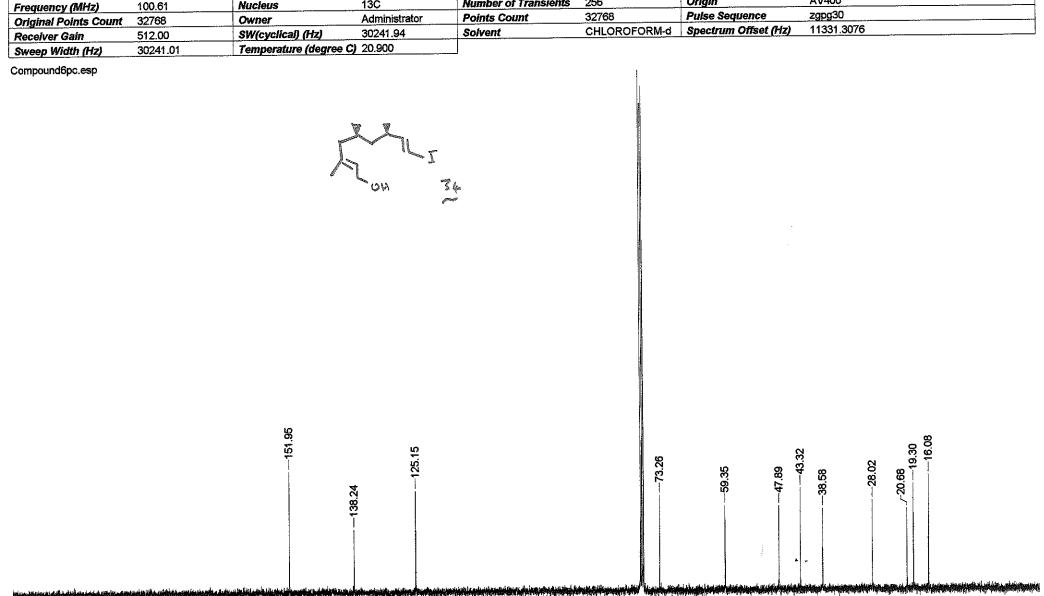
Acquisition Time (sec)	3 9649	Comment	MWE036pp mPRO	TON CDCI3 (e:\bruk400dat	a\2010\Nov} ejt 13	Date	17 Nov 2010 17:08:16
Date Stamp	17 Nov 2010 17:08:	16		File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 6\MWE036pp_000001r
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	114.00	SW(cyclical) (Hz)	8264.46	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2465.1794
***************************************			00.000	I .			



24 16 8

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Acquisition Time (sec)	1.0835	Comment	MWE036pc mCARE	30N CDCl3 {e:\bruk400data	a\2010\Nov} ejt 23	Date	17 Nov 2010 13:30:40
	17 Nov 2010 13:30:4	10		File Name	F:\Chemistry\Year 3	data\NMR data\Data\Comp	ound 6\MWE036pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11331.3076
Cuses Midth (Ha)	30241.01	Temperature (degree C)	20,900				



88 80

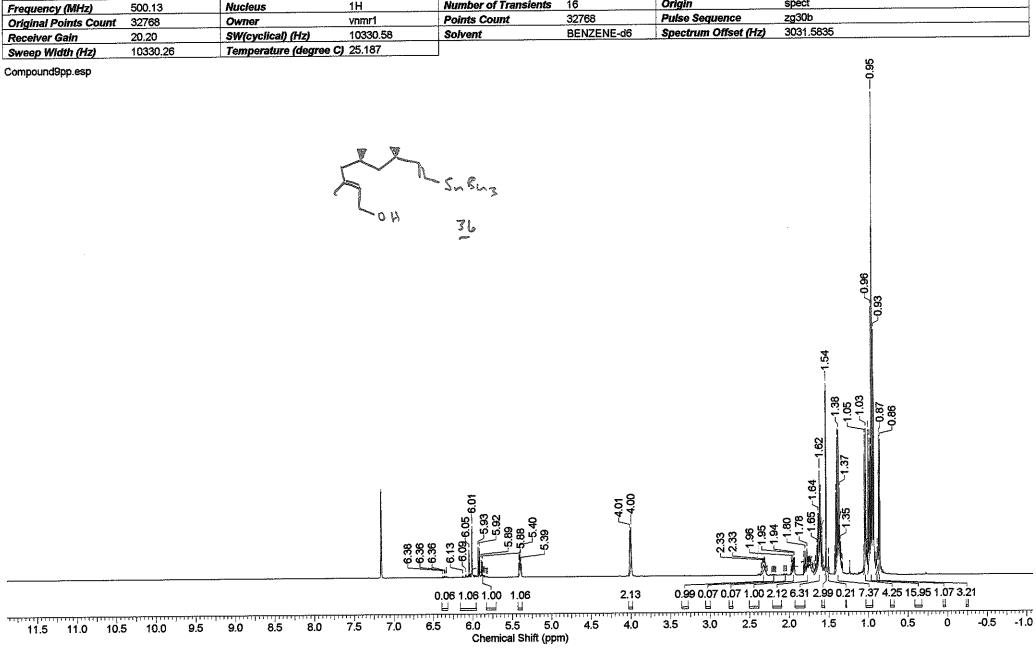
72

160 152 144 136 128 120 112 104 96 Chemical Shift (ppm)

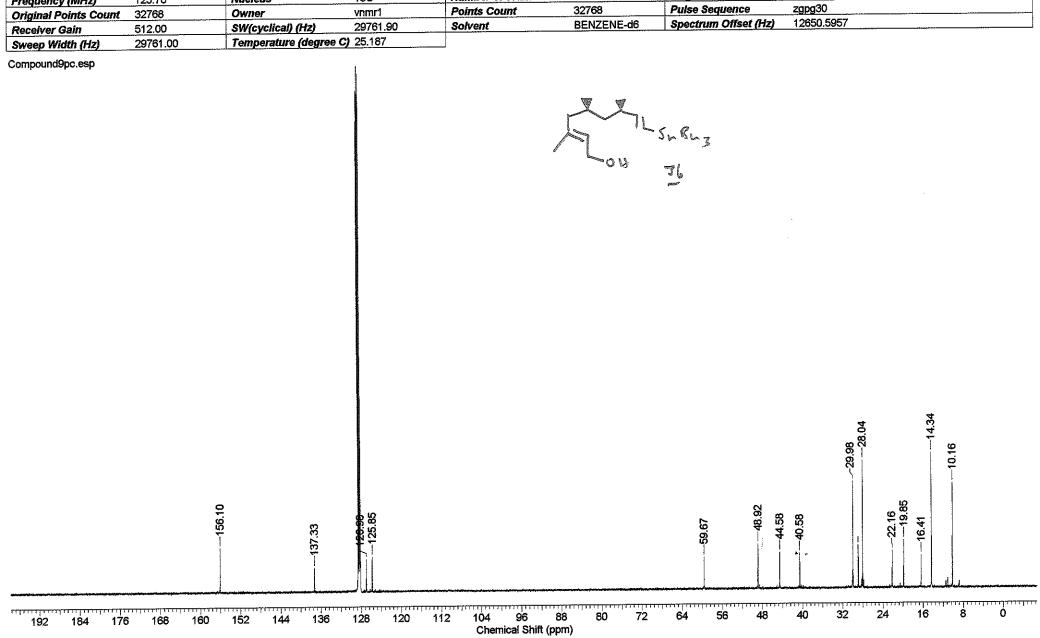
192 184 176

168

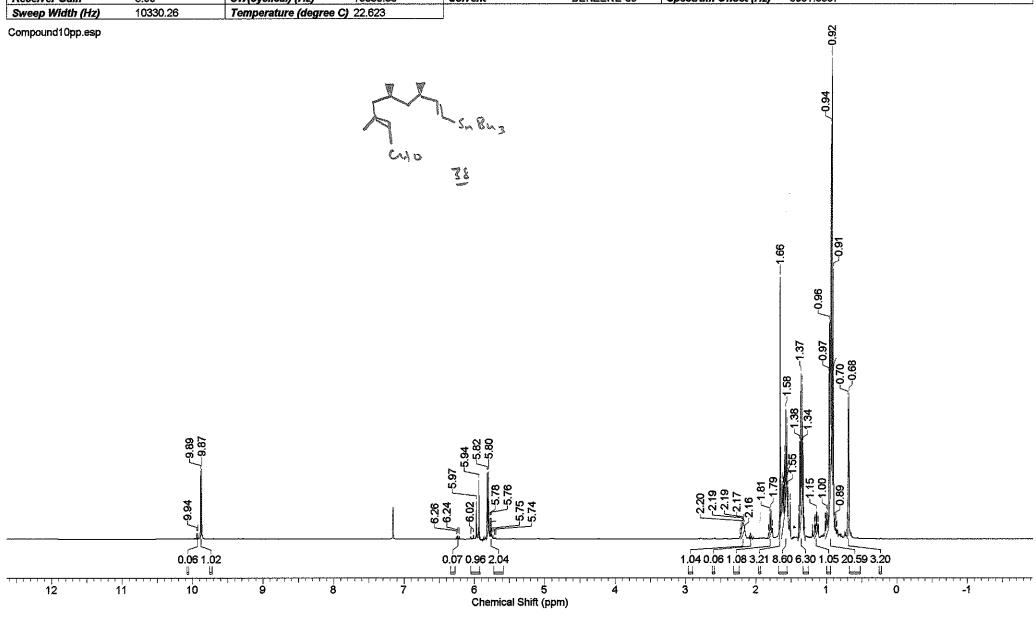
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Acquisition Time (sec)	3.1719	Comment	MWF023pp mPRC	TON C6D6 /opt/bruk500da		Date	26 Apr 2011 09:55:12
Date Stamp	26 Apr 2011 09:55:	12		File Name	F:\Chemistry\Year	3 data\NMR data\Data\Con	npound 9\MVVE057pp_000001r
Frequency (MHz)	500.13	Nucleus	1H	Number of Transients	16	Origin	spect
Original Points Count	32768	Owner	vnmr1	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	20.20	SW(cyclical) (Hz)	10330.58	Solvent	BENZENE-d6	Spectrum Offset (Hz)	3031.5835
Receiver Gairi	40000 00	Tamanantina (dagras Cl					



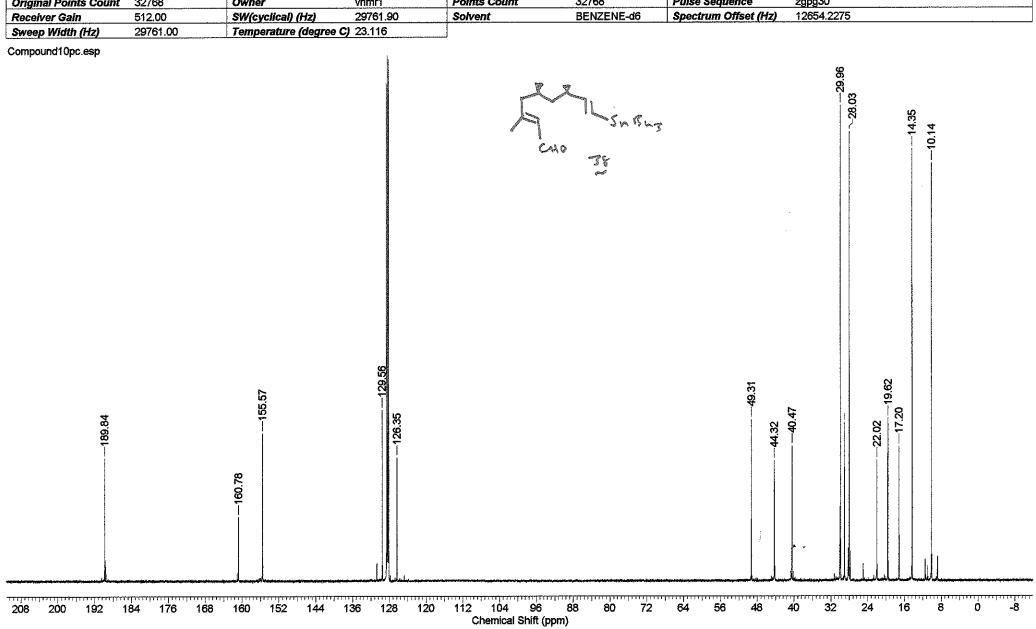
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Date Stamp	26 Apr 2011 10:08:	00		File Name	F:\Chemistry\Year 3 data\NMR data\Data\Compound 9\MWE057pc_000001r			
Frequency (MHz)	125.76	Nucleus	13C	Number of Transients	256	Origin	spect	
Original Points Count	32768	Owner	vnmr1	Points Count	32768	Pulse Sequence	zgpg30	
Receiver Gain	512.00	SW(cyclical) (Hz)	29761.90	Solvent	BENZENE-d6	Spectrum Offset (Hz)	12650.5957	
Swoon Width (Hz)	29761 00	Temperature (degree C	25.187					



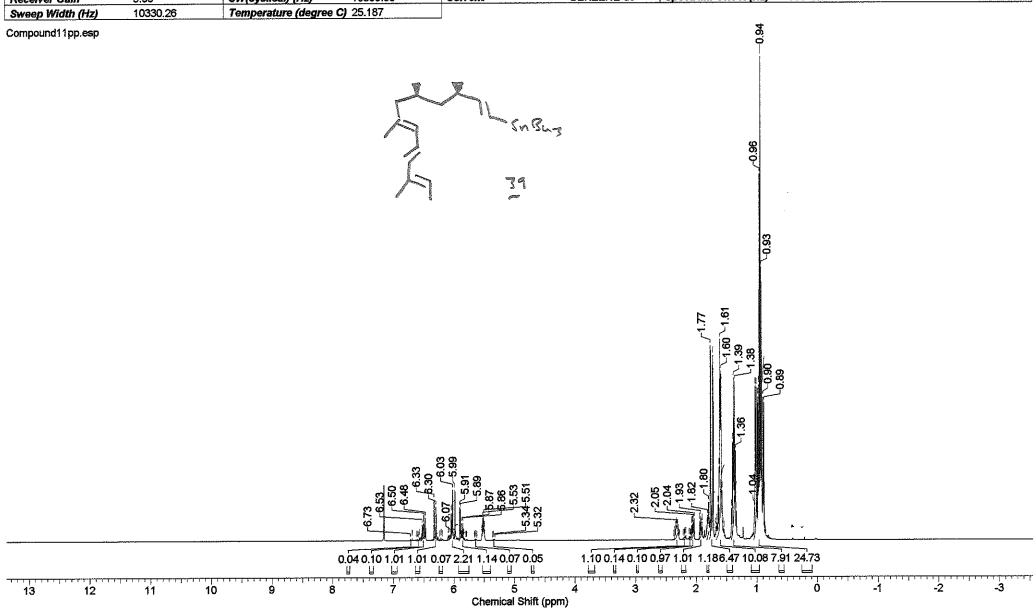
Acquisition Time (sec)	3.1719	Comment	MWF026pp mPROTON C6D6 /opt/bruk500data/2011/May ejt 3			Date	03 May 2011 09:44:32
Date Stamp	tamp 03 May 2011 09:44:32			File Name	F:\Chemistry\Year 3 data\NMR data\Data\Compound 10\MWE058pp_000001r		
Frequency (MHz)	500.13	Nucleus	1H	Number of Transients	16	Origin	spect
Original Points Count	32768	Owner	vnmr1	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	8.00	SW(cyclical) (Hz)	10330.58	Solvent	BENZENE-d6	Spectrum Offset (Hz)	3031.5837
	40000 00	<b>—</b> ( ( ( )	1 00 000				



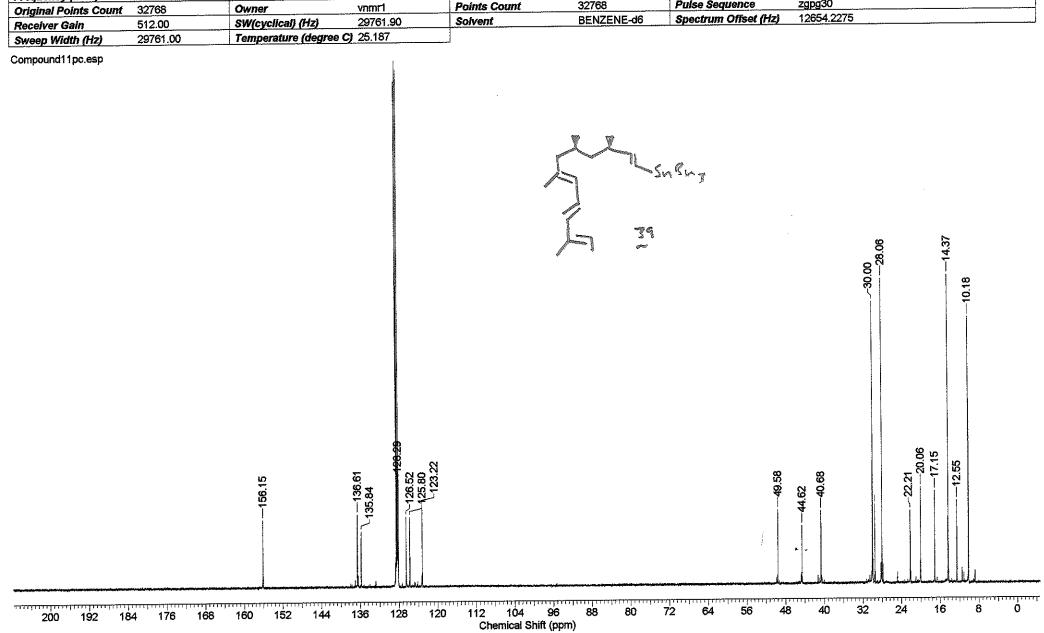
Acquisition Time (sec)	1.1010	Comment	MWF026pc mCARBON C6D6 /opt/bruk500data/2011/May ejt 3			Date	03 May 2011 09:57:20
Date Stamp	03 May 2011 09:	57:20		File Name	F:\Chemistry\Year 3 data\NMR data\Data\Compound 10\MWE058pc_000001r		
Frequency (MHz)	125.76	Nucleus	13C	Number of Transients	256	Origin	spect
Original Points Count	32768	Owner	vnmr1	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	29761.90	Solvent	BENZENE-d6	Spectrum Offset (Hz)	12654.2275
Swaan Width (Hz)	20761.00	Temperature (degree	C) 23 116				



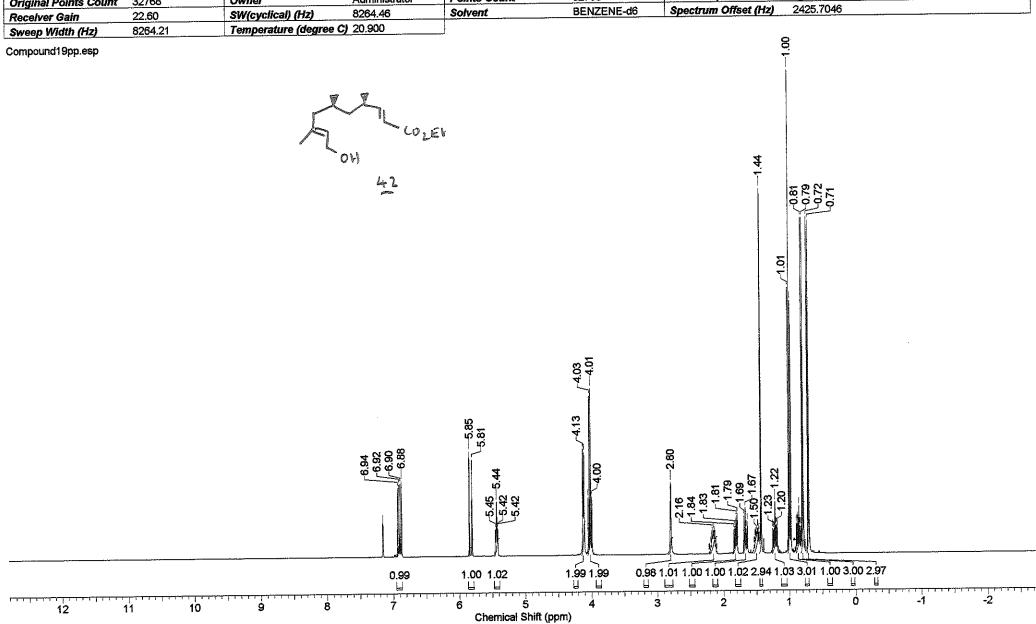
A	0.4740	0	MMA/EOCOnn mDDO	TON CEDE (ant/brukE00da	to/2011/May off 5	Date	10 May 2011 08:57:36
Acquisition Time (sec)	3.1719	Comment	MWF029pp mPRC	TON C6D6 /opt/bruk500da			
Date Stamp	10 May 2011 08:57	:36		File Name	F;\Chemistry\Year 3 data\NMR data\Data\Compound 11\MWF029pp_000001r		
Frequency (MHz)	500.13	Nucleus	1H	Number of Transients	16	Origin	spect
Original Points Count	32768	Owner	vnmr1	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	9.00	SW(cyclical) (Hz)	10330.58	Solvent	BENZENE-d6	Spectrum Offset (Hz)	3031,2683
			05 107				



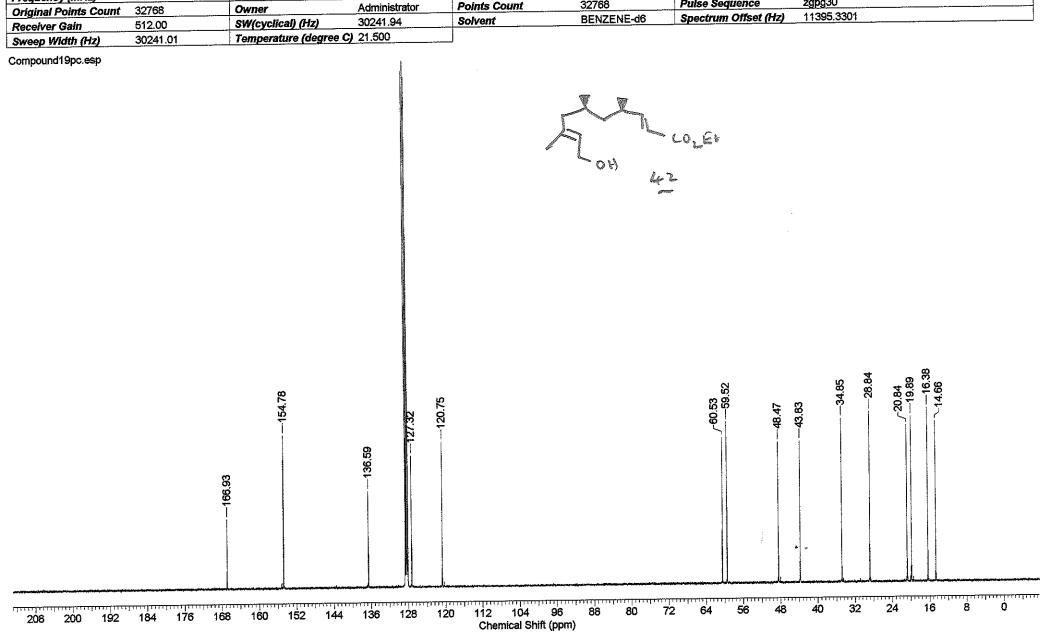
Acquisition Time (sec)	1.1010	Comment	MWF029pc mCAR	BON C6D6 /opt/bruk500da	ta/2011/May ejt 5	Date	10 May 2011 09:10:24
Date Stamp	10 May 2011 09:10			File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 11\MWF029pc_000001r
Frequency (MHz)	125.76	Nucleus	13C	Number of Transients	256	Origin	spect
Original Points Count	32768	Owner	vamr1	Points Count	32768	Pulse Sequence	zgpg30
	512.00	SW(cyclical) (Hz)	29761.90	Solvent	BENZENE-d6	Spectrum Offset (Hz)	12654.2275
Receiver Gain	00764.00	Tomporature (degree C					



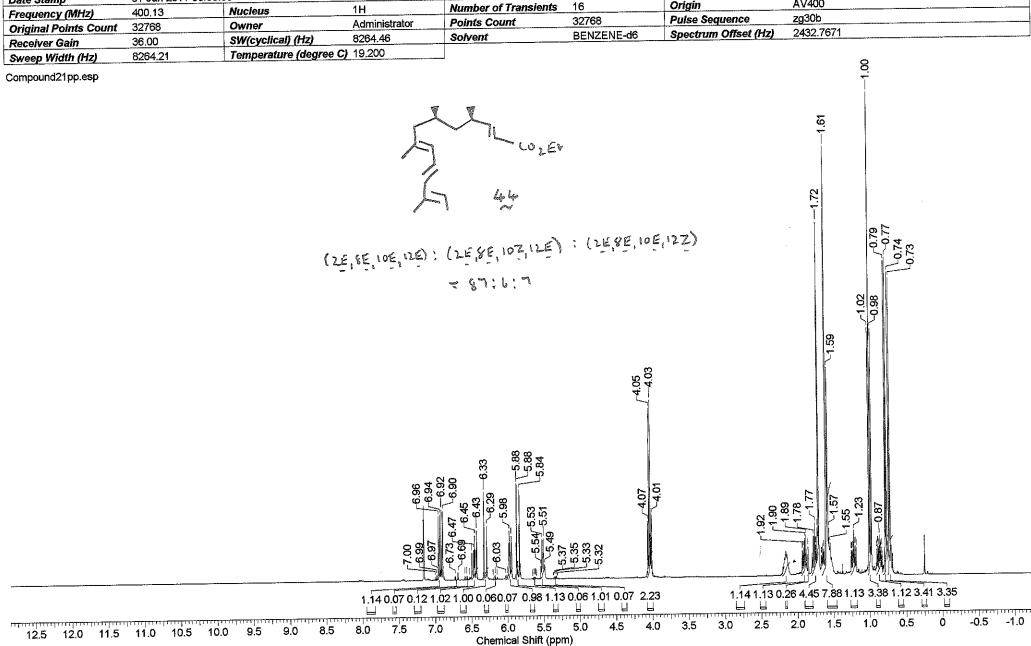
Acquisition Time (sec)	3.9649	Comment	MWF066pp mPRO	TON C6D6 (e:\bruk400data	1\2011\Jun} ejt 21	Date	30 Jun 2011 12:48:00
Date Stamp	30 Jun 2011 12:48:0	00		File Name	F:\Chemistry\Year	3 data\NMR data\Data\Com	npound 19\MWF066pp_000001r
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	22.60	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2425.7046
7.		=	20.000	1			



							30 Jun 2011 12:39:28
Acquisition Time (sec)	1.0835	Comment	MWF066pc mCARE	3ON C6D6 (e:\bruk400data	\2011\Jun} ejt 18	Date	
	30 Jun 2011 12:39:2	08	<u> </u>	File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 19\MWF066pc_000001r
Date Cump		· · · · · · · · · · · · · · · · · · ·	13C	Number of Transients	256	Origin	AV400
Frequency (MHz)	100.61	Nucleus	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· · · · · · · · · · · · · · · · · · ·	32768	Pulse Sequence	zgpg30
Original Points Count	32768	Owner	Administrator	Points Count		<u> </u>	11395.3301
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11333.3301
A Control Carlo	20241.01	Temperature (degree C	21 500	İ			

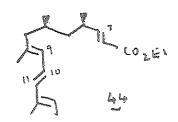


I was Time (and	3.9649	Comment	MWF048pp mPRO	TON C6D6 (e:\bruk400data	a\2011\May} ejt 36	Date	01 Jun 2011 06:38:56	
Acquisition Time (eds)	01 Jun 2011 06:38:			File Name	F:\Chemistry\Year 3	3 data\NMR data\Data\Com	pound 21\MWF048pp_000001r	
Date Stamp	400,13	Nucleus	1H	Number of Transients	16	Origin	AV400	
Frequency (MHz)	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b	
Original Points Count	36.00	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2432.7671	
Receiver Gain	30,00	GW(Cycholay (172)						

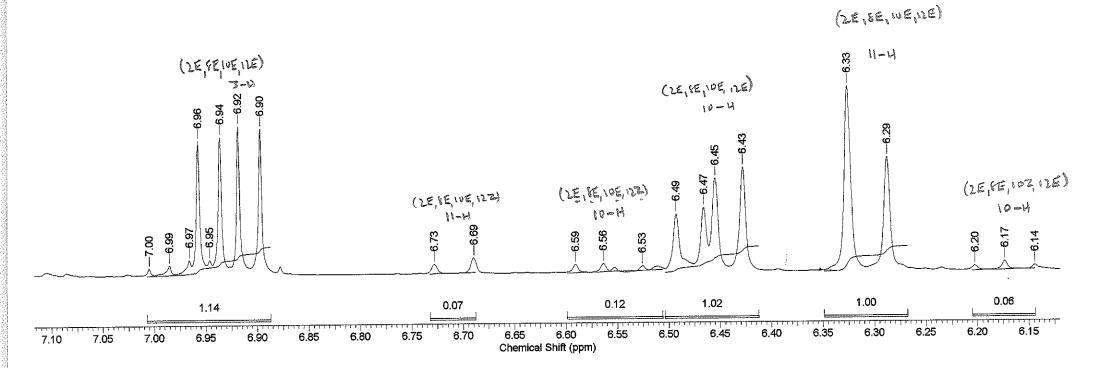


Acquisition Time (sec)	3.9649	Comment	MWF048pp mPRO	TON C6D6 (e:\bruk400data	a\2011\May} ejt 36	Date	01 Jun 2011 06:38:56
Date Stamp	01 Jun 2011 06:38:	· · · · · · · · · · · · · · · · · · ·		File Name	F:\Chemistry\Year 3 data\NMR data\Data\Compound 21\MWF048pp_000001r		
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	36.00	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2432.7671
Sweep Width (Hz)	8264.21	Temperature (degree C)	19.200				

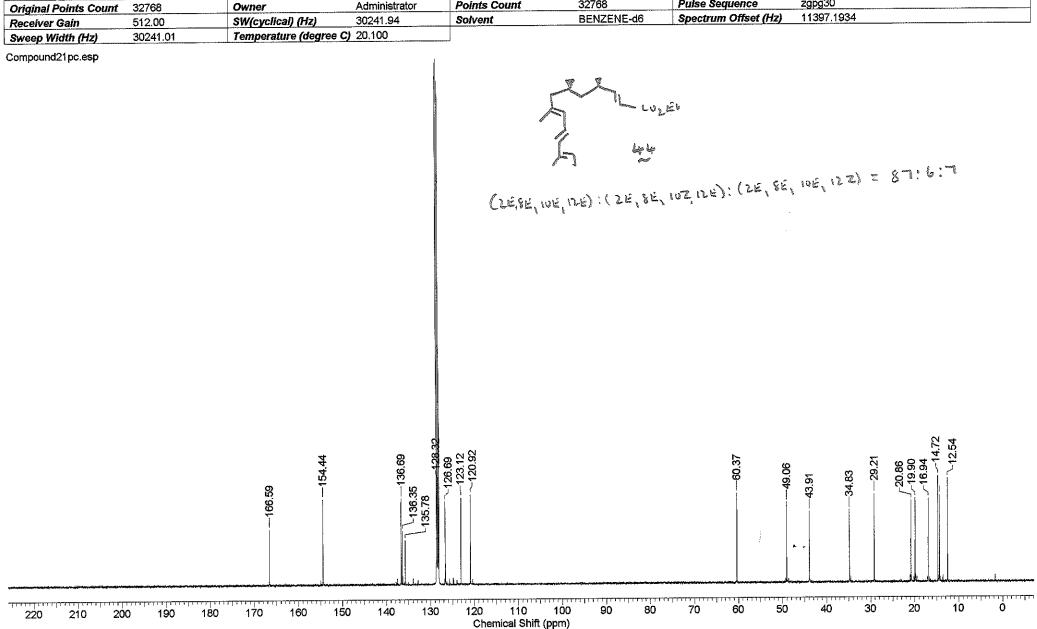
Compound21pp.esp



(ZE, SE, WE, DE): (ZE, SE, WZ, DE): (ZE, SE, WE, DZ)



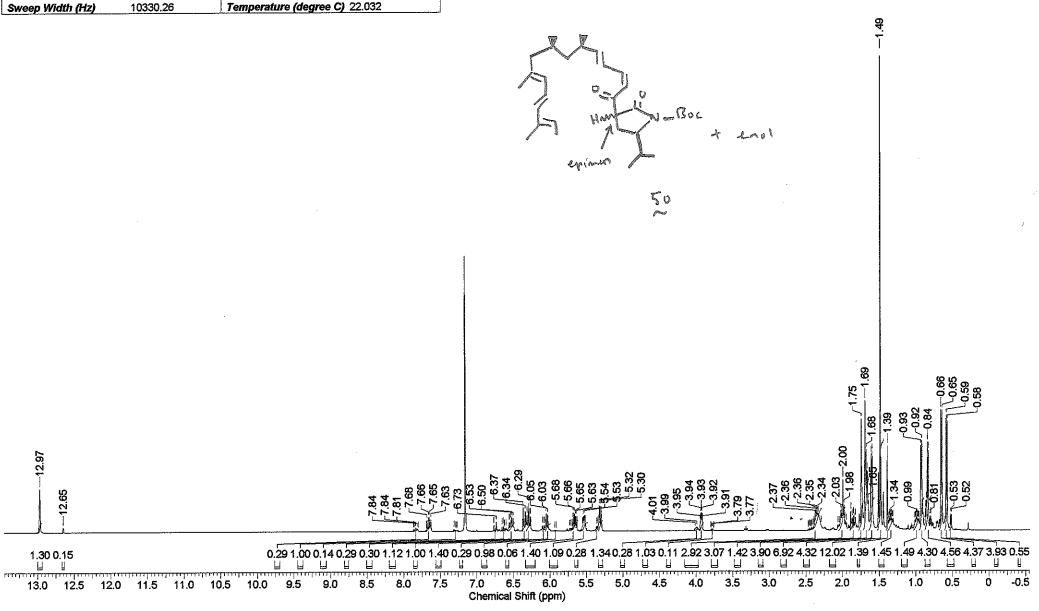
Acquisition Time (sec)	1.0835	Comment	MWF048pc mCA	ARBON C6D6 (e:\bruk400data	a\2011\May} ejt 36	Date	01 Jun 2011 07:10:56
Date Stamp	01 Jun 2011 07:10	0:56		File Name	F:\Chemistry\Year	3 data\NMR data\Data\Com	pound 21\MWF048pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11397.1934
Course Mildle Charles	20244 04	Tomporature (degree C					



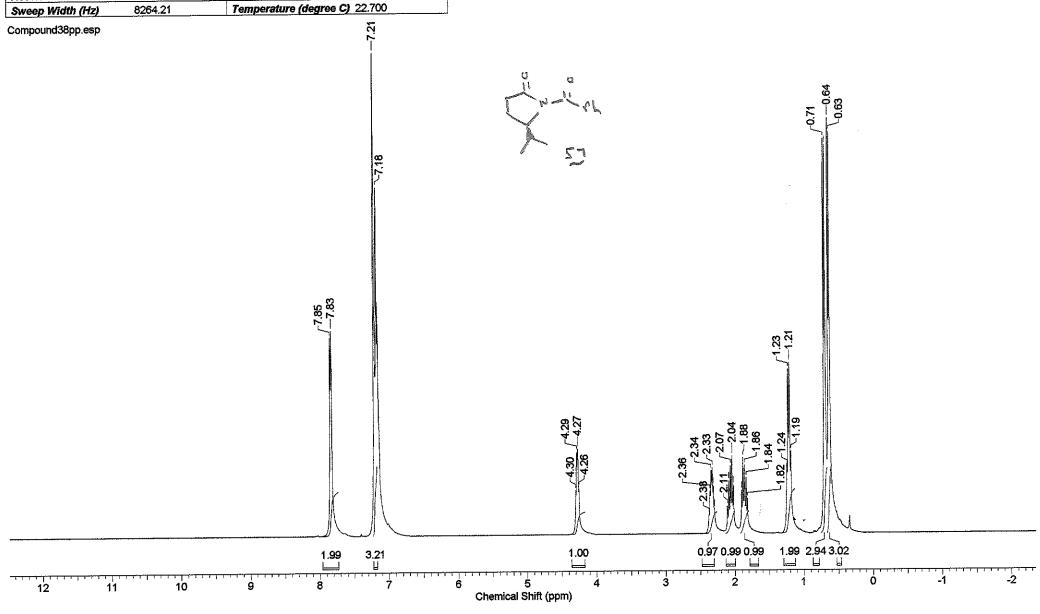
Acquisition Time (sec)	3.9649	Comment	MWG064pp mPRO	TON C6D6 {e:\bruk400dat	a\2012\Apr} ejt 18	Date	23 Apr 2012 08:51:12
Date Stamp	23 Apr 2012 08:51:			File Name	F:\Chemistry\Year 3		pound 25\MWH048pp_000001r
Frequency (MHz)	400.13	Nucleus	1 <b>H</b>	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	101.00	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2426.2092
Sweep Width (Hz)	8264.21	Temperature (degree C)	20.800				
Sweep Wath (rtz)	0204.21	Femperature (degree 5)				3.38	
		.7.7	23 0.19 0.20 1.05 2.4 7.5 7.0	6.36 6.21 6.28 6.21 6.28 6.21 6.28 6.21 6.28 6.31 6.20 6.36 6.31 6.30 6.36 6.31 6.30 6.36 6.31 6.30 6.36 6.31 6.30 6.36 6.31 6.30 6.36 6.31 6.30 6.37 6.30 6.30 6.30 6.38 6.31 6.30 6.30 6.30 6.30 6.30 6.30 6.30 6.30	0.99 0.20 3.66	2.2.7 2.2.7 3.6.6 1.2.8 1.2.8 1.2.9 1.2.9 1.2.9 1.2.9 1.2.9 1.2.9 1.3.9	1.5 1.0 0.5 0 -0.5 -1.0 -1

Acquisition Time (sec)	1 0835	Comment	MWG064pc mCAR	BON C6D6 (e:\bruk400data	\2012\Apr} ejt 18	Date	23 Apr 2012 09:12:32
Date Stamp	23 Apr 2012 09:12:3			File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	oound 25\MWH048pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11393.5010
Sweep Width (Hz)	30241.01	Temperature (degree C					
	30241.01	remperature (augrae	1	_			
Compound25pc.esp					10-2mm		
		166.92	——————————————————————————————————————			-50.99 -49.20	29.40
		180 170 160	150 140 130	) 120 110 100	90 80 7	0 60 50 40	30 20 10 0 -10 -20
240 230 220	210 200 190	00F 0\F 08F	100 140 130	Chemical Shift (ppm)			

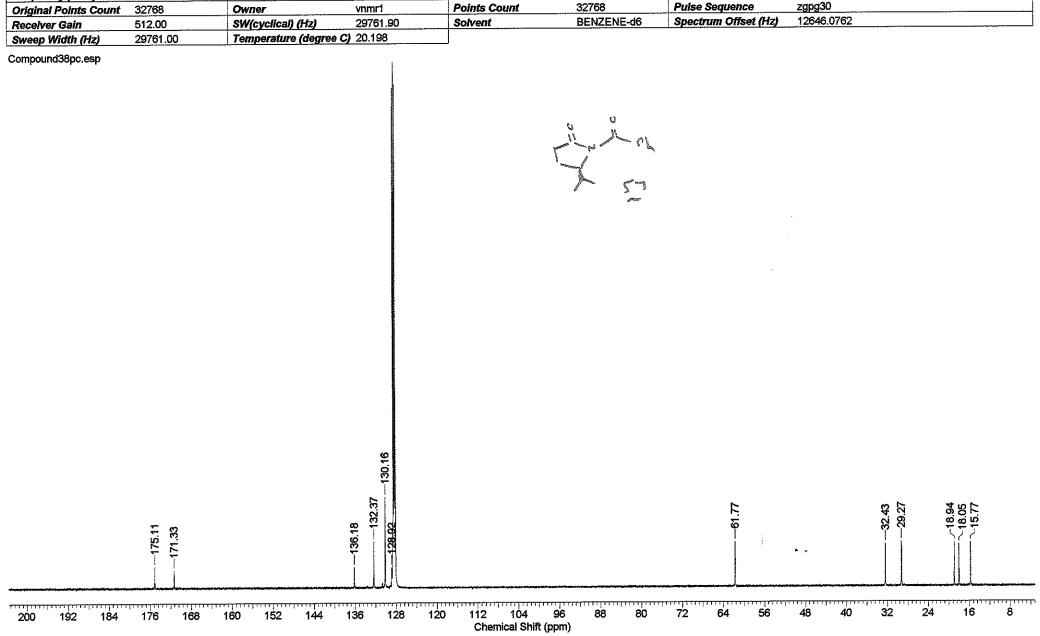
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Date Stamp	17 May 2011 16:06	:24		File Name	F:\Chemistry\Year 3 data\NMR data\Data\Compound 28\MWF036pp_000001r		
Frequency (MHz)	500.13	Nucleus	1H	Number of Transients	16	Origin	spect
Original Points Count	32768	Owner	vnmr1	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	50.80	SW(cyclical) (Hz)	10330.58	Solvent	BENZENE-d6	Spectrum Offset (Hz)	3031.5837
Carron Milette Miles	10220.26	Tomporaturo (dograe C	3 22 032				



Acquisition Time (sec)	3.9649	Comment	MWG053pp mPRO	TON C6D6 (e:\bruk400data	a\2012\Jan} ejt 53	Date	09 Jan 2012 16:57:36
Date Stamp	09 Jan 2012 16:57:				F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 38\MWG053pp_000001r
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count		Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	144.00	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2446.3857
Necester Can	0004.04	Towns and the Control C	22 700				



Acquisition Time (sec)	1.1010	Comment	MWG053pc m	CARBON C6D6 /opt/bruk500da	ata/2011/Nov ejt 15	Date	12 Nov 2011 12:18:08
Date Stamp	12 Nov 2011 12:	18:08		File Name	F:\Chemistry\Year	r 3 data\NMR data\Data\Con	npound 38\MWG053pc_000001r
Frequency (MHz)	125.76	Nucleus	13C	Number of Transients	256	Origin	spect
Original Points Count	32768	Owner	vnmr1	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	29761.90	Solvent	BENZENE-d6	Spectrum Offset (Hz)	12646.0762
Sween Width (Hz)	29761.00	Temperature (degree C	20.198				

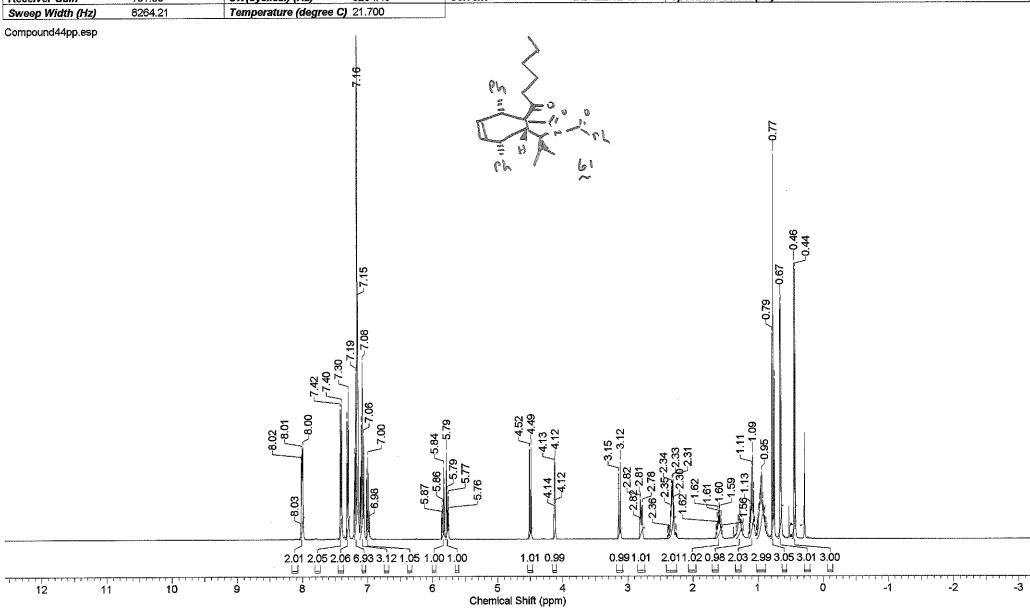


Acquisition Time (sec)	3.9649	Comment	MWG084pp mPRO	TON C6D6 (e:\bruk400dat	a\2011\Dec} ejt 30	Date	19 Dec 2011 12:03:12
Date Stamp	19 Dec 2011 12:03:			File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 42\MWG084pp_000001r
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768		Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	16.00	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2470.5981
Sweep Width (Hz)	8264.21	Temperature (degree C)					
Compound42pp.esp	020121	c)		-			0.83
		en man	2 1-12	4 days			ν
		- <b>e</b>	, 28				0.85
							-0.92 <sub>-0.91</sub>
				5 ←			1.64 1.59 3-1.25 1.27 1.0.73
	12.32		7.85 7.79 17.79	7.32 7.32 7.23 7.24 7.24 7.24 7.24 7.24 7.24	4.54 4.53 4.52 6.51		2.24 -2.03 -2.04 -2.03 -2.04 -1.68 -1.65 -1.56 -1.63 -1.50 -1.21 -1.21
	0.47 L_		3	3.06 4.83	1.03 (	0.50 0.53 0.50 1.05 0.46 0.	88 3.36 0.94 4.25 6.07 4.49 8.95
14 13	12	11 10	9 8	7 6 Chemical Shift (ppn		4 3	2 1 0 -

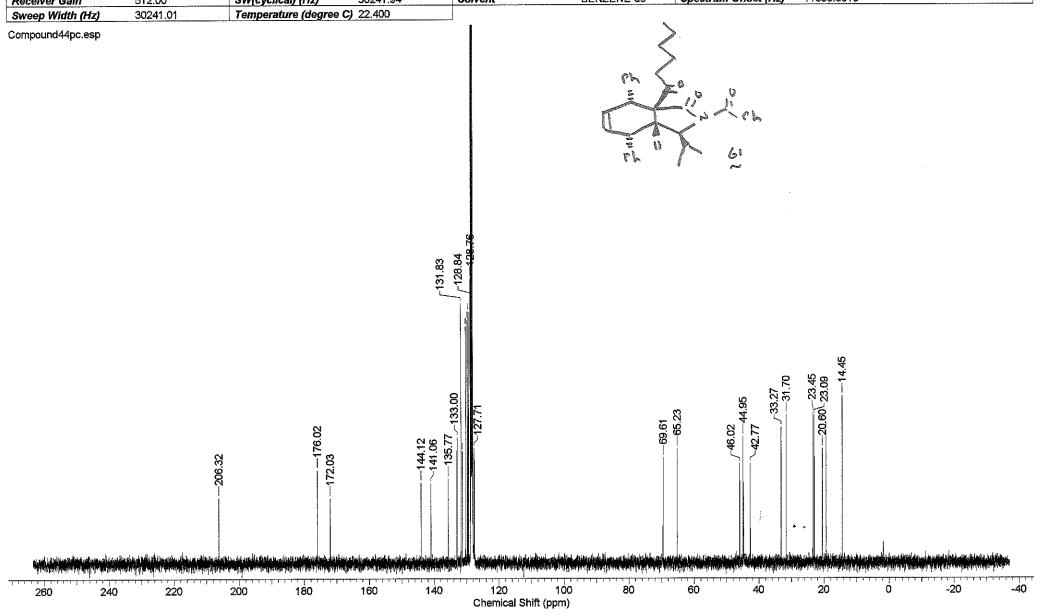
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Date Stamp	19 Dec 2011 12:26:4			File Name	F:\Chemistry\Year 3		oound 42\MWG084pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11393.4844
Receiver Galls	012.00	- ( ( ( )	00.600				

30241.01 Temperature (degree C) 20.600 Sweep Width (Hz) Compound42pc.esp -10 60 50 40 30 20 10 170 160 150 140 130 120 110 100 Chemical Shift (ppm) 90 80 Marchandan **70** 210 200 Ó 230 220 190 180

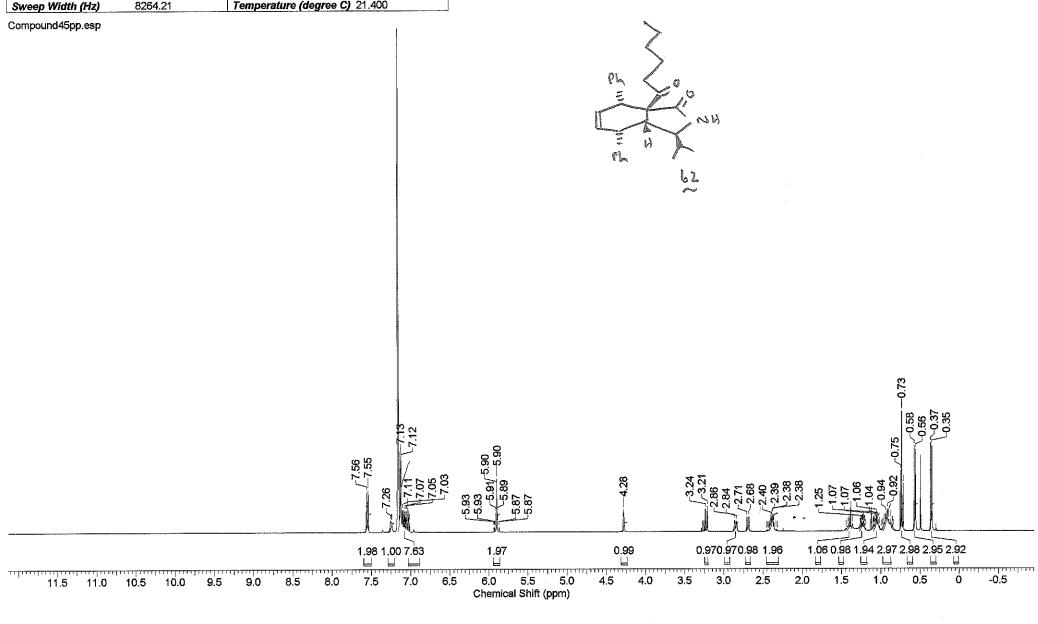
Acquisition Time (sec)	3.9649	Comment	MWG093pp mP	ROTON C6D6 (e:\bruk400da	ta\2012\Jan} ejt 56	Date	20 Jan 2012 10:54:56
Date Stamp	20 Jan 2012 10:5	54:56		File Name	F:\Chemistry\Year	3 data\NMR data\Data\Con	npound 44\MWG093pp_000001r
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	101.00	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2425.9570
Swoon Width (Uz)	9264 24	Tomporatura (degree C	1 21 700				



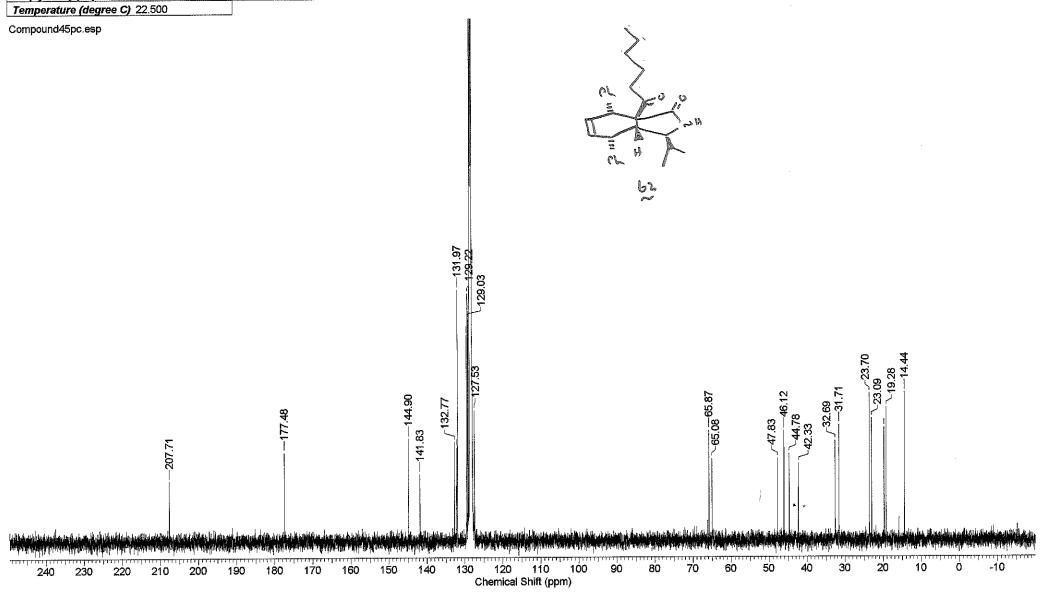
Acquisition Time (sec)	1.0835	Comment	MWG093pc mCAF	RBON C6D6 {e:\bruk400data	a\2012\Jan} ejt 56	Date	20 Jan 2012 11:18:24	
Date Stamp	20 Jan 2012 11:18:	24		File Name	F:\Chemistry\Year	ear 3 data\NMR data\Data\Compound 44\MWG093pc_000001r		
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400	
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30	
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11393.5010	
- 100 201 00 1	00044 04	Tarran Calaman C	1 22 400					



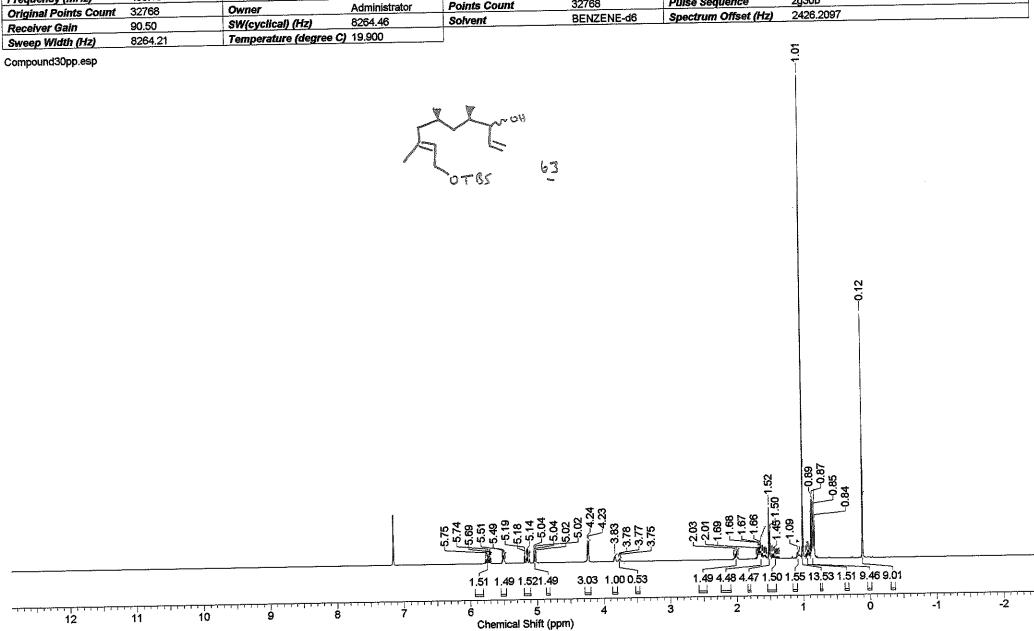
Acquisition Time (sec)	3.9649	Comment	MWG098pp mP	ROTON C6D6 (e:\bruk400da	ta\2012\Jan} ejt 53	Date	23 Jan 2012 18:03:44
Date Stamp	23 Jan 2012 1	18:03:44		File Name	F:\Chemistry\Year 3 data\NMR data\Data\Compound 45\MWH018pp_000001r		
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	256.00	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2426.2097
O	0064.04	Tamanavatura (da araa	CL 24 400				



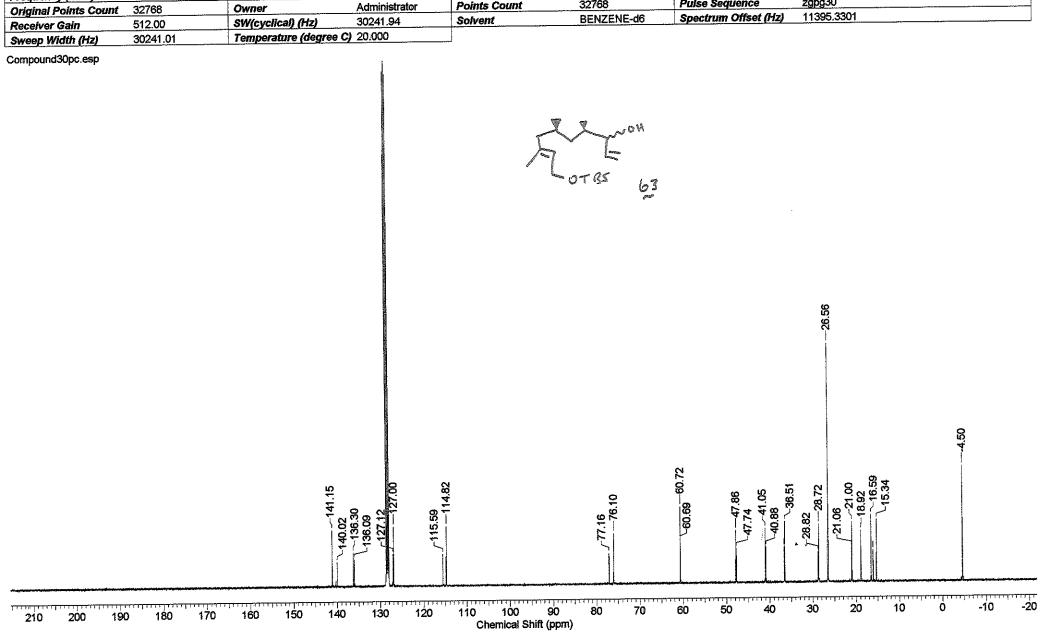
Acquisition Time (sec)	1.0835	Comment	MWH018pc mCA	RBONnight C6D6 {e:\bruk40	0data\2012\Mar} ejt 28		
Date	04 Mar 2012 05:2	2:08		Date Stamp	04 Mar 2012 05:22:08	3	
File Name	F:\Chemistrv\Year	r 3 data\NMR data\Data\Comp	ound 45\MWH018p	c_000001r		Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	3072	Origin	AV400	Original Points Count	32768
	Administrator	Points Count	32768	Pulse Sequence	zgpg30	Receiver Gain	512.00
SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11393.4844	Sweep Width (Hz)	30241.01



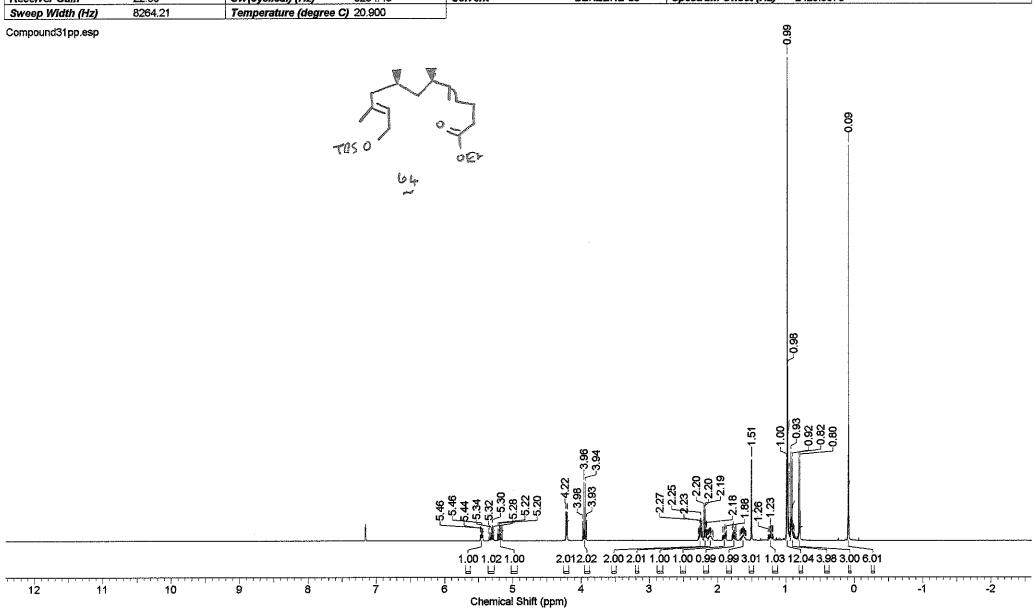
		O-manuf	MM/G005nn mPRO	TON C6D6 (e:\bruk400data	\2011\Oct} ejt 37	Date	30 Oct 2011 13:20:00	ı
Acquisiasis sinse (acc)	3.9649		иму Сосорр или то	File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 30\MWG005pp_000001r	ı
Date Stamp	30 Oct 2011 13:20:0	Nucleus	1H	Number of Transients	16	Origin	AV400	i
Frequency (MHz)	400.13	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b	l
Original Points Count	32768	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2426.2097	F
 Pereiver Gain	90.50	Seetchengal tris						



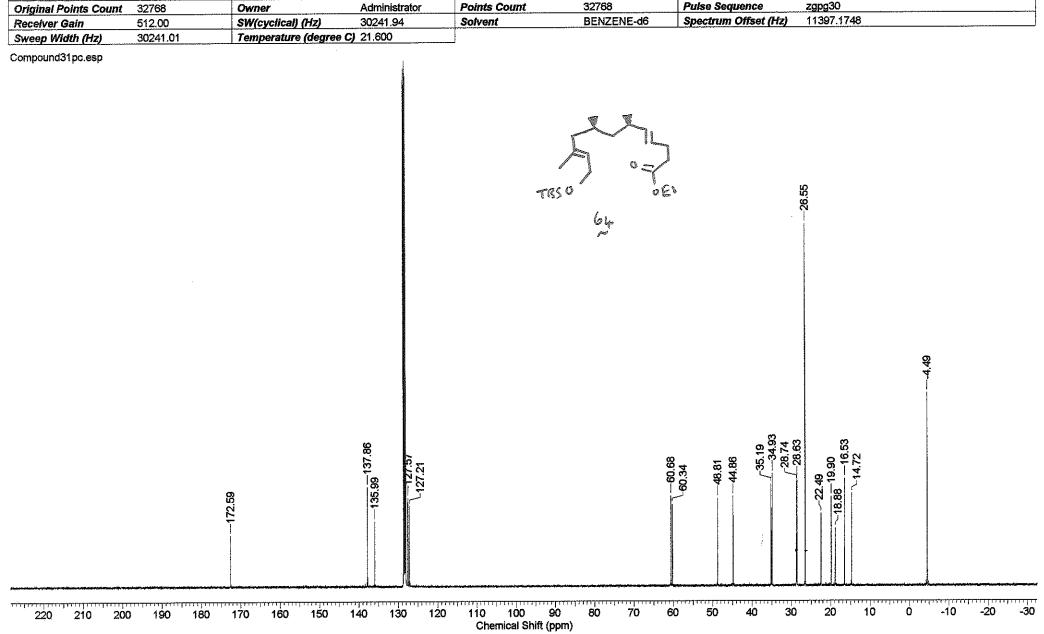
Acquisition Time (sec)	1.0835	Comment	MWG005pc mCARE	BON C6D6 (e:\bruk400data	\2011\Sep} ejt 15	Date	27 Sep 2011 08:12:48
Date Stamp	27 Sep 2011 08:12:4	L		File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 30\MWG005pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Puise Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11395.3301
Mecelyal Call	012.00		1 00 000	1			



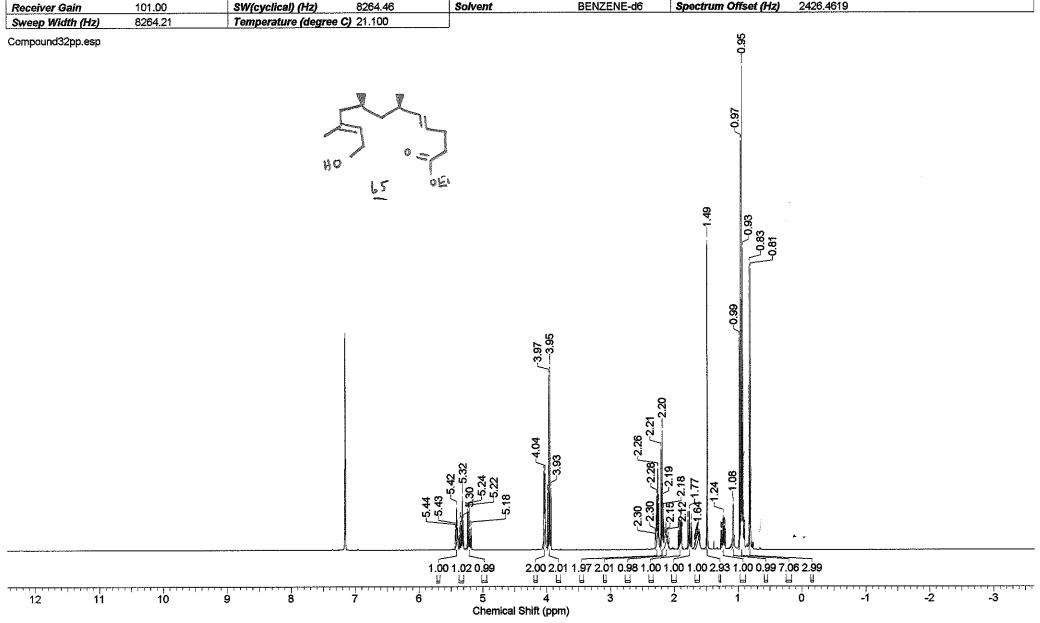
						,	
Acquisition Time (sec)	3.9649	Comment	MWG006pp mPRC	TON C6D6 {e:\bruk400dat	a\2011\Sep} ejt 53	Date	01 Oct 2011 19:44:00
Date Stamp	01 Oct 2011 19:44:	00		File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 31\MVVG006pp_000001r
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	22.60	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2425.9573
A 148 44 01-1	2004.04	T (-1 0)	00.000				



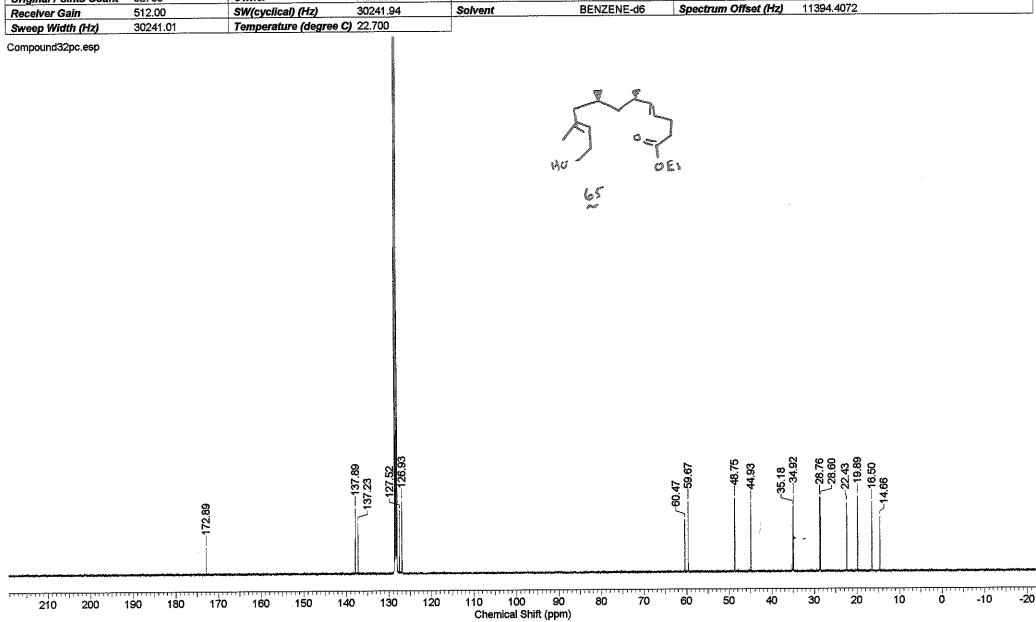
Acquisition Time (sec)	1.0835	Comment	MWG006pc mC/	ARBON C6D6 (e:\bruk400dat	a\2011\Sep} ejt 53	Date	01 Oct 2011 20:07:28
Date Stamp	01 Oct 2011 20	0:07:28		File Name	F:\Chemistry\Yea	r 3 data\NMR data\Data\Com	pound 31\MWG006pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11397.1748
Swoon Width (Hz)	30241.01	Temperature (degree	Cl 21 600		•		



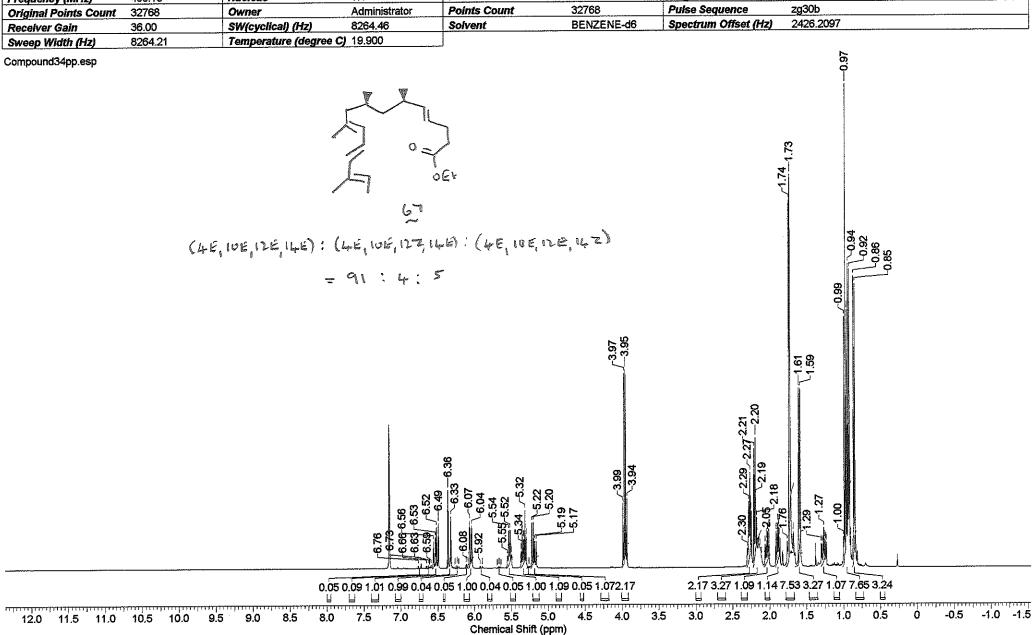
Acquisition Time (sec)	3.9649	Comment	MWG009pp mPRC	TON C6D6 {e:\bruk400dat	a\2011\Dec} ejt 16	Date	08 Dec 2011 14:53:52
Date Stamp	08 Dec 2011 14:53	:52		File Name	F:\Chemistry\Year 3	3 data\NMR data\Data\Com	pound 32\MWG009pp_000001r
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	101.00	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2426.4619
Ourse Mistight // Jan	9064 04	Tomporatura (dograd C	1 24 400				



Acquisition Time (sec)	1,0835	Comment	MWG009pc mCAR	BON C6D6 (e:\bruk400data		Date	10 Oct 2011 07:10:56
Date Stamp	10 Oct 2011 07:10:	56		File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 32\MWG009pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11394.4072
A LIGHT OUT	20244.04	Tomporatura (dogram	22 700				

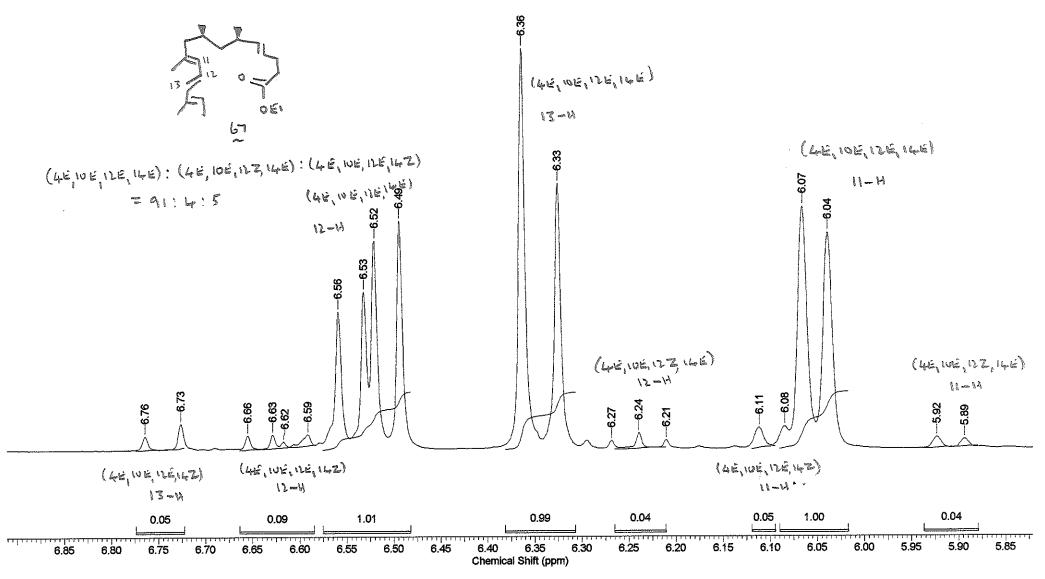


Acquisition Time (sec)	3.9649	Comment	MWG055pp mP	ROTON C6D6 (e:\bruk400da	ta\2011\Nov} ejt 3	Date	08 Nov 2011 15:21:36
Date Stamp	08 Nov 2011 15:21	:36	-	File Name	F:\Chemistry\Year	3 data\NMR data\Data\Con	npound 34\MVVG055pp_000001r
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	36.00	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2426.2097
O	8064.04	Tamporatura (dogras Cl	10.000				



Acquisition Time (sec)	3.9649	Comment	MWG055pp mi	PROTON C6D6 (e:\bruk400da	ta\2011\Nov} ejt 3	Date	08 Nov 2011 15:21:36
Date Stamp	08 Nov 2011 1	5:21:36		File Name	F:\Chemistry\Year	3 data\NMR data\Data\Con	npound 34\MWG055pp_000001r
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	36,00	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2426.2097
Sween Width (Hz)	8264 21	Temperature (degree C)	19.900				

Compound34pp.esp

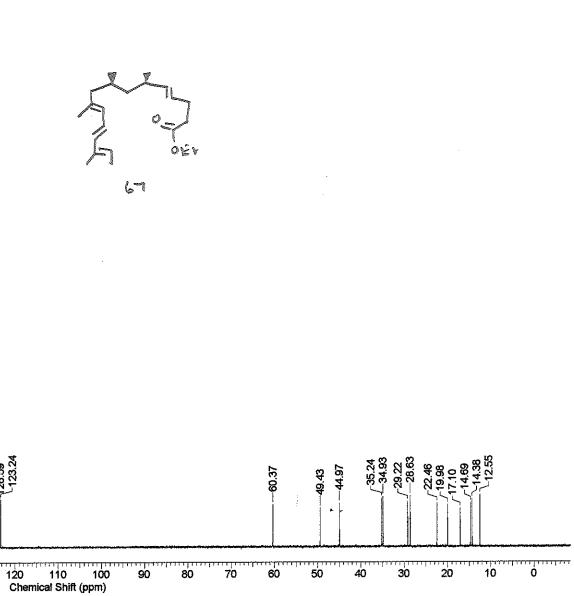


Acquisition Time (sec)	1.0835	Comment	MW/G055pc mC/	ARBON C6D6 (e:\bruk400data	a\2011\Nov} ejt 3	Date	08 Nov 2011 15:45:04
Date Stamp	08 Nov 2011 15	45:04		File Name	F:\Chemistry\Year	3 data\NMR data\Data\Com	pound 34\MWG055pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11394.4072
Sweep Width (Hz)	30241.01	Temperature (degree	<b>C)</b> 20.600				

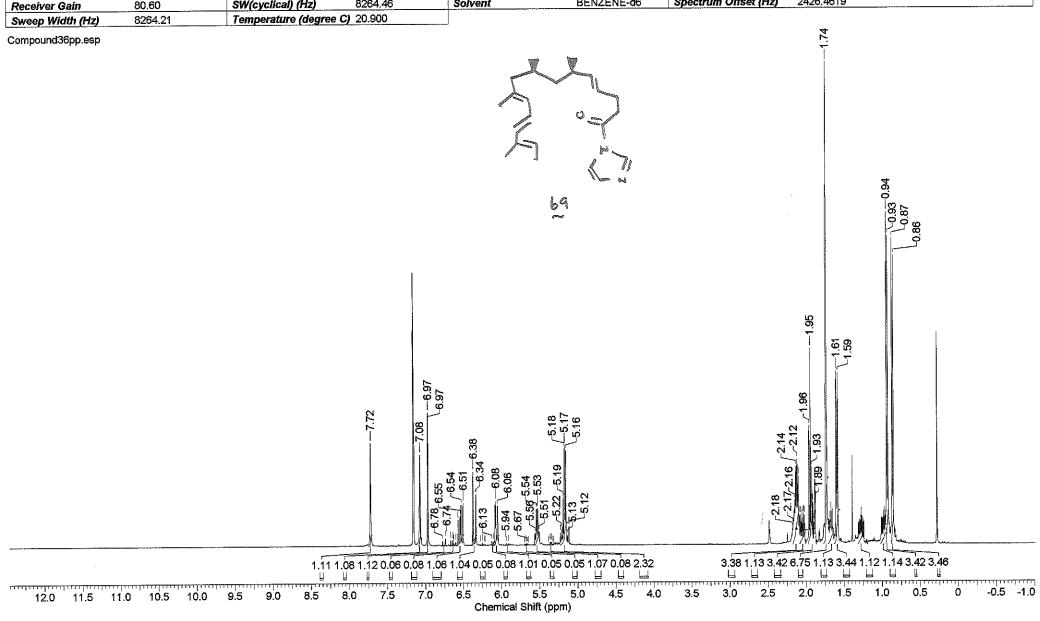
150 140 130

Compound34pc.esp

220 210 200 190 180 170 160

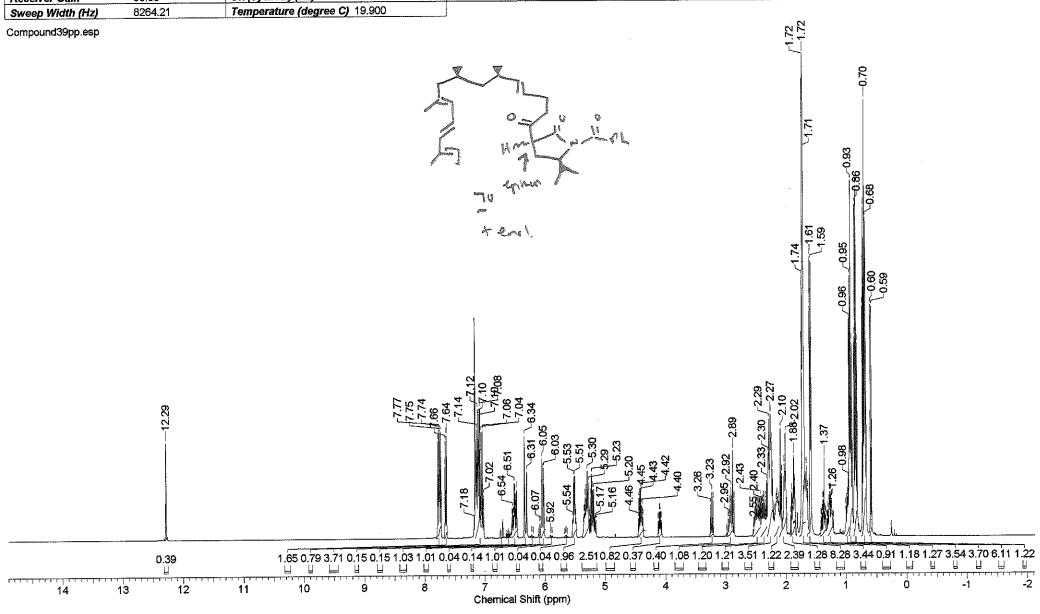


Acquisition Time (sec)	3.9649	Comment	MWG078pp mPi	ROTON C6D6 {e:\bruk400dat		Date	08 Dec 2011 09:12:32
Date Stamp	08 Dec 2011 09	9:12:32		File Name	F:\Chemistry\Year	3 data\NMR data\Data\Con	npound 36\MWG078pp_000001r
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	80.60	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2426.4619
Sweep Width (Hz)	8264.21	Temperature (degree	<b>C)</b> 20.900				
Compound36pp.esp							4.

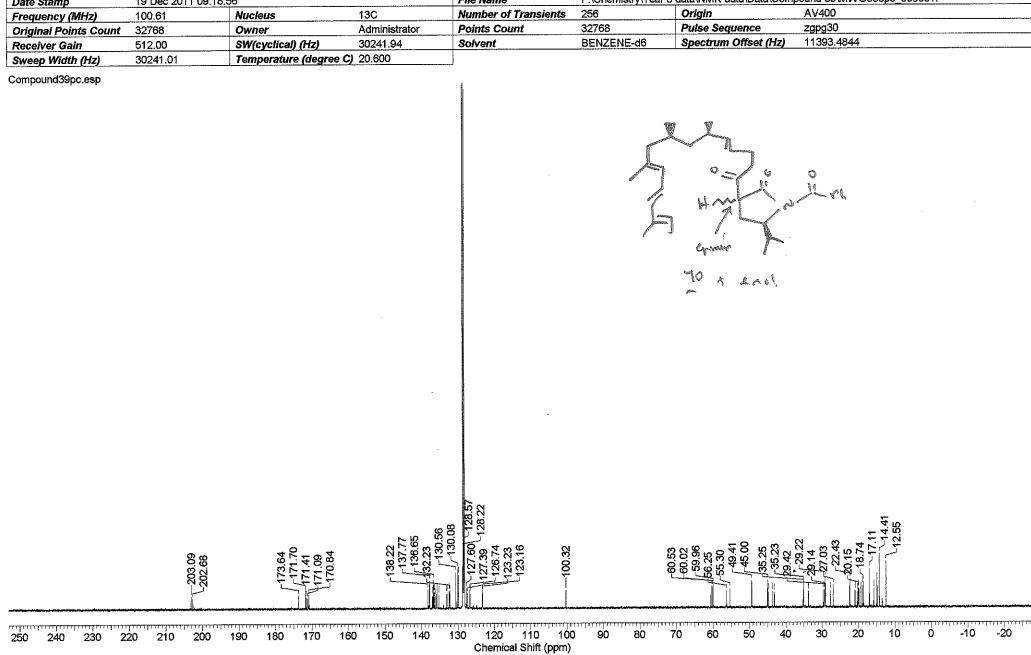


Acquisition Time (sec)	1.0835	Comment	MWG078pc mCAI	RBON C6D6 {e:\bruk400data	a\2011\Dec} ejt 37	Date	08 Dec 2011 09:36:00
Date Stamp	08 Dec 2011 09:36:0			File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 36\MWG078pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11393.5020
Sweep Width (Hz)	30241.01	Temperature (degree C					
Compound36pc.esp							
Compound36pc.esp							
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			36.7	126.43 23.15			35.28 5.09 20.05 5.09 1.38 1.38
			6.4	123		44 87	
			77.	[ ] N			28.32
			134 7	116.22		49.36	
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<u>and he merical mentilan sala dan dan katakan bertakan dan dan dan dan dan dan dan dan dan d</u>	translational and translations	<u> alamatian Eusenania (n. 1888)</u>	أسستنسست		90 80	70 60 50	40 30 20 10 0 -10
230 220 210	200 190 1	80 170 160	150 140 13	0 120 110 100 Chemical Shift (npm)	90 00	10 00 50	
				Chemical Shift (ppm)			

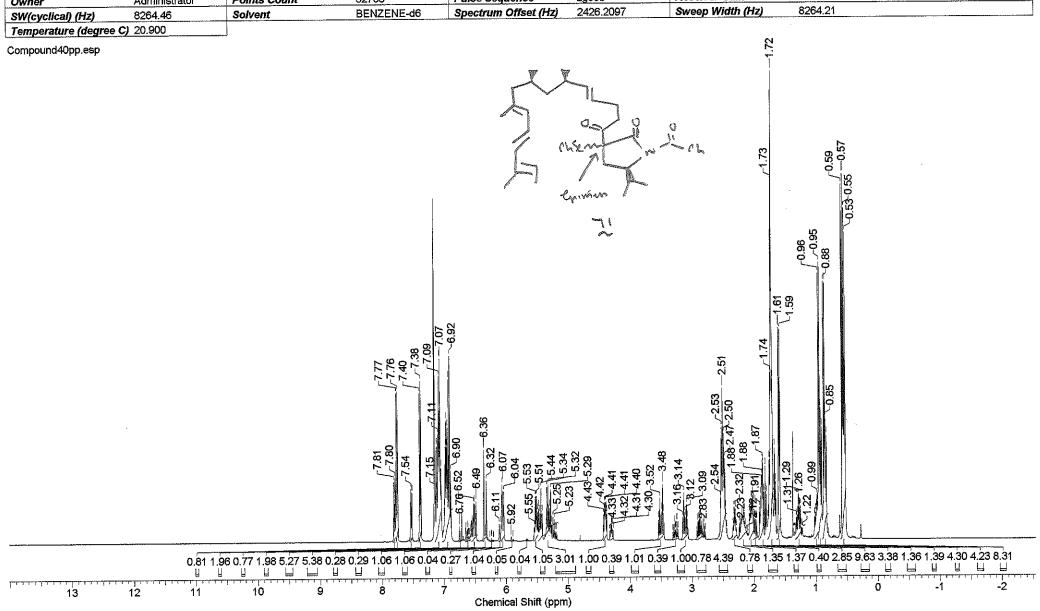
Acquisition Time (sec)	3,9649	Comment	MWG086pp mPR0	OTON C6D6 {e:\bruk400dat	a\2011\Dec} ejt 6	Date	19 Dec 2011 08:55:28
Date Stamp	19 Dec 2011 08:55	28		File Name	F:\Chemistry\Year	3 data\NMR data\Data\Con	npound 39\M\V\G086pp_000001r
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	16	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b
Receiver Gain	36.00	SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2426.2092
Owner 14/2-14/2- (Link)	9264 24	Tomporaturo (degree C	1 10 000				



Acquisition Time (sec)	1.0835	Comment	MWG086pc mCAR	BON C6D6 {e:\bruk400data	a\2011\Dec} ejt 6	Date	19 Dec 2011 09:18:56
Date Stamp	19 Dec 2011 09:18	:56		File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 39\MVVG086pc_000001r
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	256	Origin	AV400
Original Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
Receiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11393.4844
Q	20044-04	Tamparatura (dagras C	1 20 600				

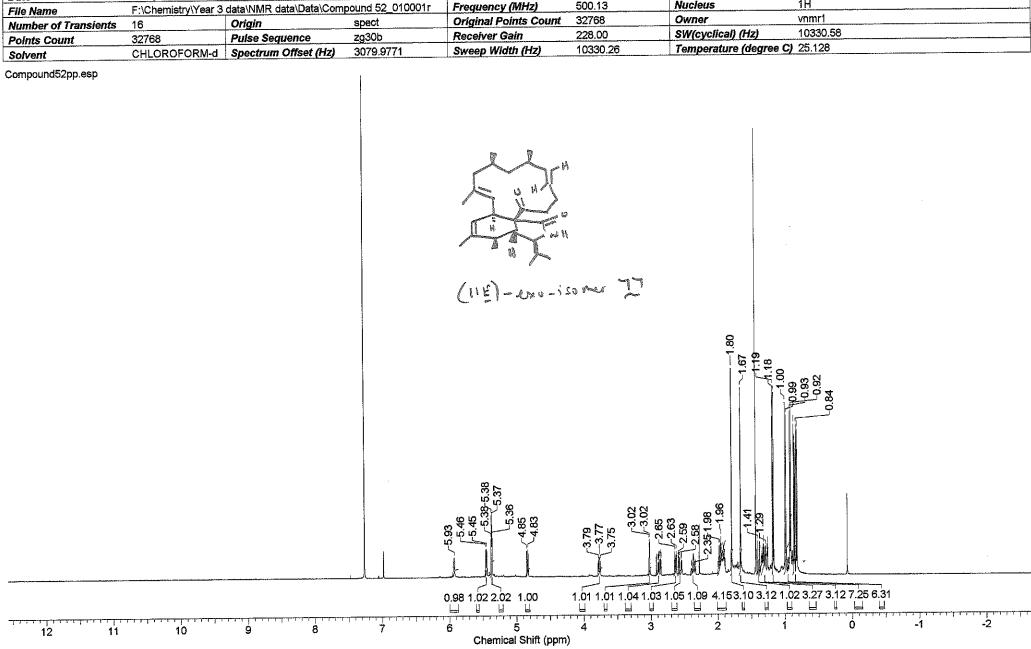


Acquisition Time (sec)	3.9649	Comment	MWH047pp mPRC	TONnight C6D6 {e;\bruk40	00data\2012\Apr} ejt 5		
Date	07 Apr 2012 04:54:	24		Date Stamp	07 Apr 2012 04:54:2	4	
File Name	F:\Chemistry\Year 3	data\NMR data\Data\Com	oound 40\MWH047pp	o_000001r		Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	16	Origin	AV400	Original Points Count	32768
Owner	Administrator	Points Count	32768	Pulse Sequence	zg30b	Receiver Gain	40.30
SW(cyclical) (Hz)	8264.46	Solvent	BENZENE-d6	Spectrum Offset (Hz)	2426.2097	Sweep Width (Hz)	8264.21

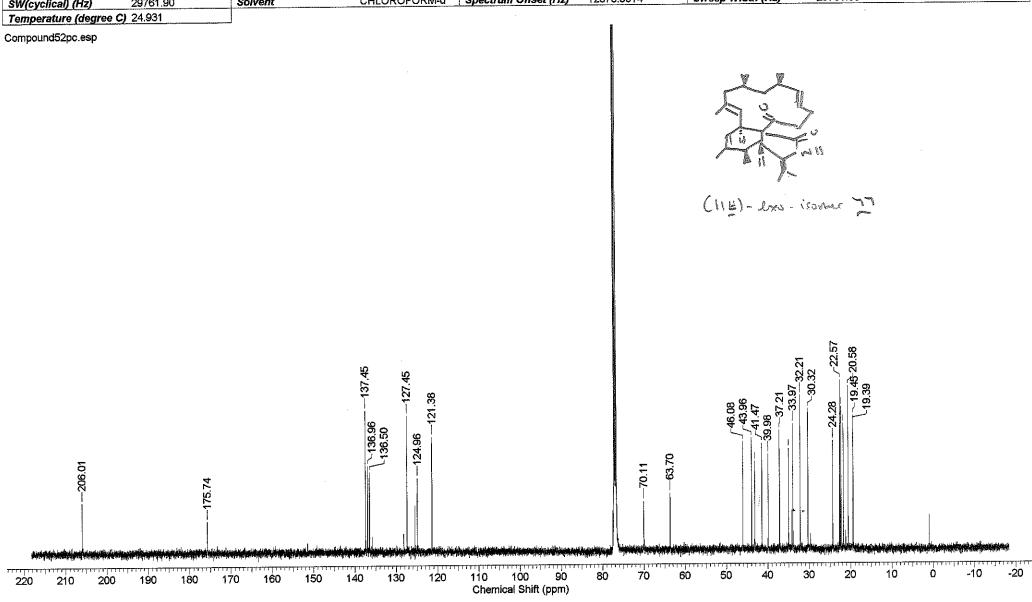


quisition Time (sec)	1.0835	Comment	MWH047pc mCAR	BONnight C6D6 {e:\bruk400	0data\2012\Apr} ejt 5	Date	07 Apr 2012 05:56:16
te Stamp	07 Apr 2012 05:56:1	6		File Name			oound 40WWH047pc_000001r
equency (MHz)	100.61	Nucleus	13C	Number of Transients	1024	Origin	AV400
iginal Points Count	32768	Owner	Administrator	Points Count	32768	Pulse Sequence	zgpg30
ceiver Gain	512.00	SW(cyclical) (Hz)	30241.94	Solvent	BENZENE-d6	Spectrum Offset (Hz)	11393.4844
eep Width (Hz)	30241.01	Temperature (degree C)	21.700				
npound40pc.esp			138.20 130.50 		January Springer	Jon of the state o	
	200.35201.73	7171.74 F171.61 -171.39 171.48	135.82-133.03 135.82-133.03	123.30	-61.9160.86	49.38 ————————————————————————————————————	
240 220	200	180 160	140	120 100 Chemical Shift (ppm)	80 60	40	20 0 -20

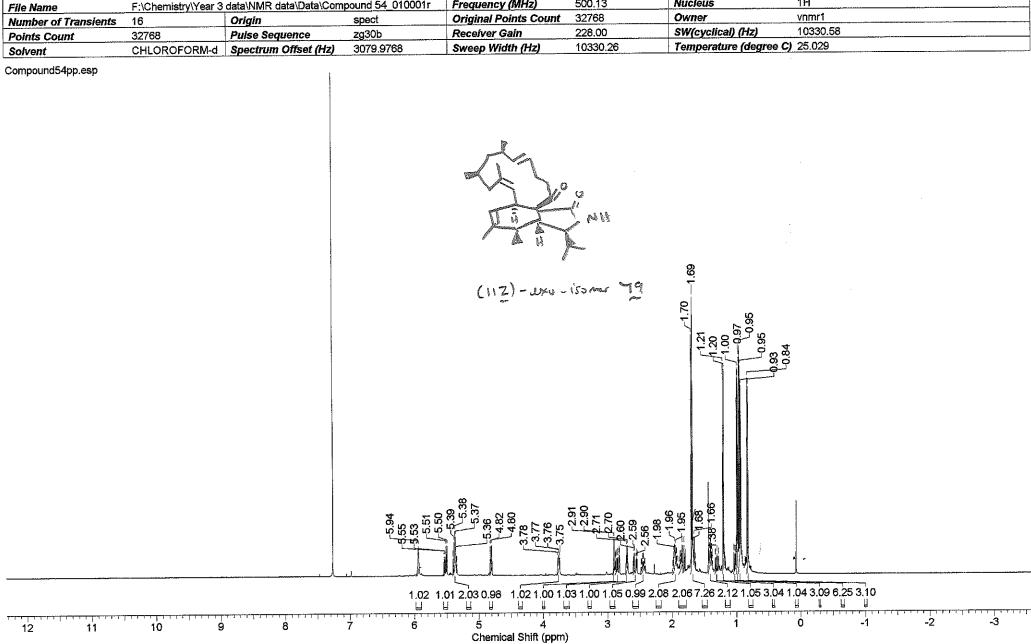
								100
Acquisition Time (sec)	3.1719	Comment	Mark Willis MWH06	64PPB mPROTON CDC13	opt/bruk500data/20	012/Apr vnmr1 56		 $\dashv$
Date	25 Apr 2012 07:45:0	)4		Date Stamp	25 Apr 2012 07:4	15:04		
	F:\Chemistry\Year 3	data\NMR data\Data\Com	pound 52 010001r	Frequency (MHz)	500.13	Nucleus	<u>1H</u>	 
Number of Transients		Origin	spect	Original Points Count	32768	Owner	vnmr1	
	32768	Pulse Sequence	zg30b	Receiver Gain	228.00	SW(cyclical) (Hz)	10330.58	 
Points Count	CHLOROFORM-d	Spectrum Offset (Hz)	3079.9771	Sweep Width (Hz)	10330.26	Temperature (degree	C) 25.128	
SOMENT	CHLUKUFUKIVI-U	DUCCHOIN CHOCK (112)	0010.0111	W1100D 1110m 1-1-7				



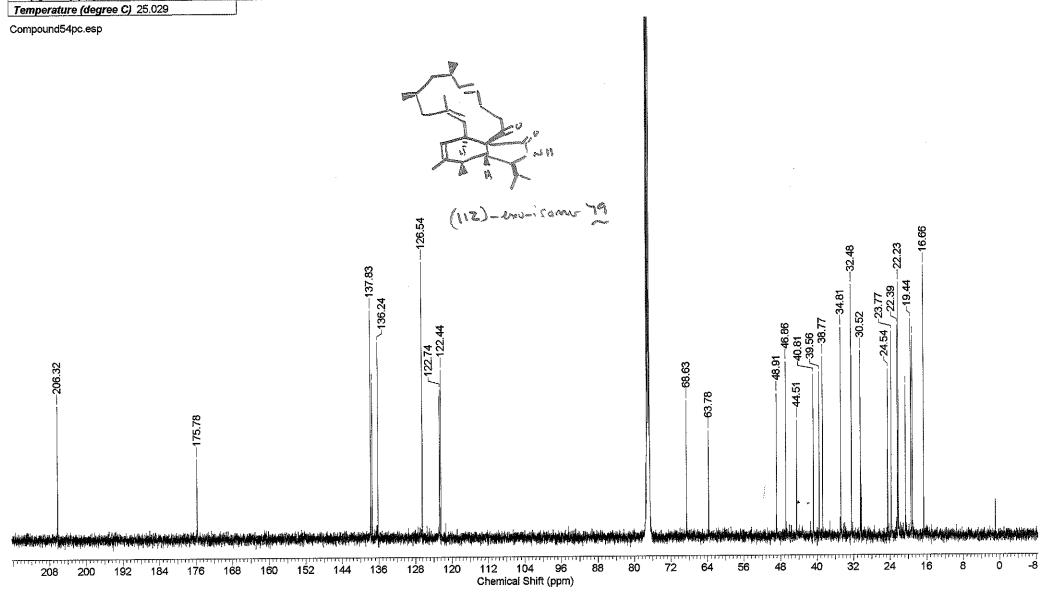
Acquisition Time (sec)	1.1010	Comment	Mark Willis MWH064	4PPB mCARBON CDCI3 /c	pt/bruk500data/2012/Ap	or vnmr1 56	
	26 Apr 2012 04:28:48			Date Stamp	26 Apr 2012 04:28:48		
		lata\NMR data\Data\Compo	und 52\MWH064pcb	000001r		Frequency (MHz)	125.76
	13C	Number of Transients	18432	Origin	spect	Original Points Count	32768
Nucleus		Points Count	32768	Pulse Sequence	zgpg30	Receiver Gain	512.00
Owner	vnmr1		<del></del>	Spectrum Offset (Hz)	12573.9014	Sweep Width (Hz)	29761.00
SW(cyclical) (Hz)	29761.90	Solvent	CHLOROFORM-d	Spectrum Onset (riz)	12373.3014	Orreep Tridas (1.12)	20701100



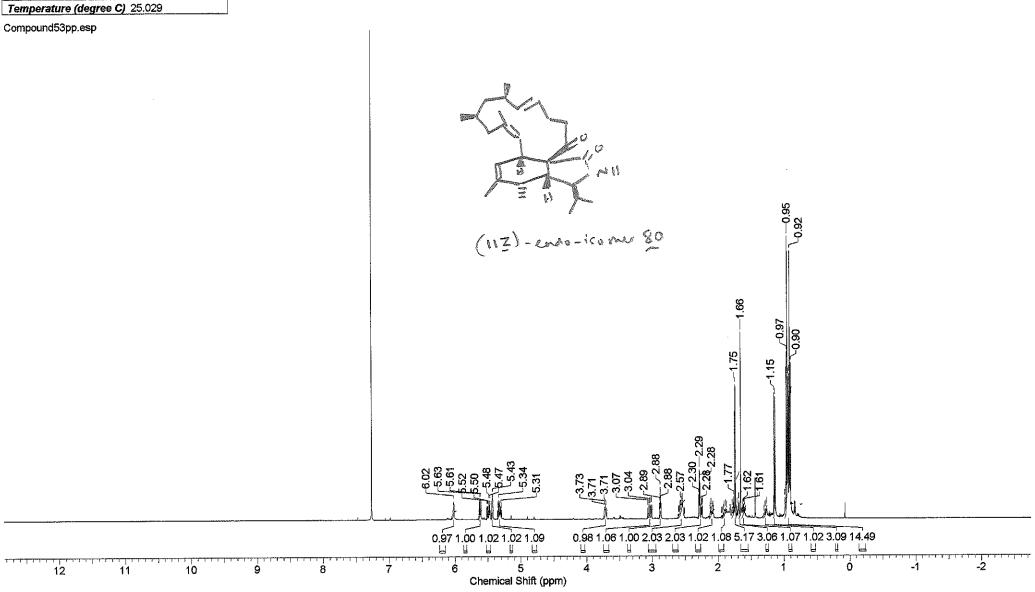
Acquisition Time (sec)	3.1719	Comment	Mark willis MWH0	66ppb mPROTON CDCl3 /	opt/bruk500data/20	012/Apr vnmr1 18		
Date	27 Apr 2012 08:55:2	28		Date Stamp	27 Apr 2012 08:	55:28		
	F:\Chemistrv\Year 3	data\NMR data\Data\Com	pound 54 010001r	Frequency (MHz)	500.13	Nucleus	1H	
Number of Transients	16	Origin	spect	Original Points Count	32768	Owner	vnmr1	
Points Count	32768	Pulse Sequence	zg30b	Receiver Gain	228.00	SW(cyclical) (Hz)	10330.58	
Solvent		Spectrum Offset (Hz)	3079.9768	Sweep Width (Hz)	10330.26	Temperature (degree	C) 25.029	



Acquisition Time (sec)	1.1010	Comment	Mark willis MWH066	ppb mCARBON CDCl3 /o	pt/bruk500data/2012/Ap	r vnmr1 18	
Date	27 Apr 2012 10:18:40	)		Date Stamp	27 Apr 2012 10:18:40		
	F:\Chemistry\Year 3 c	lata\NMR data\Data\Compo	ound 54\MWH066pcb	000001r		Frequency (MHz)	125.76
Nucleus		Number of Transients		Origin	spect	Original Points Count	32768
Owner	vnmr1	Points Count	32768	Pulse Sequence	zgpg30	Receiver Gain	512.00
SW(cyclical) (Hz)	29761.90	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	12572.9922	Sweep Width (Hz)	29761.00
SWICYCINCAL (112)	20101.00						



Acquisition Time (sec)	3.1719	Comment	Mark willis MWH06	6ppt mPROTON CDCl3 /o	pt/bruk500data/2012/Ap	or vnmr1 19	
Date	28 Apr 2012 06:06	5:56		Date Stamp	28 Apr 2012 06:06:50	5	
File Name	F:\Chemistry\Year	3 data\NMR data\Data\Comp	ound 53\MWH066ppt	000001r		Frequency (MHz)	500.13
Nucleus	1H	Number of Transients		Origin	spect	Original Points Count	32768
Owner	vnmr1	Points Count	32768	Pulse Sequence	zg30b	Receiver Gain	256.00
SW(cyclical) (Hz)	10330.58	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	3079.9768	Sweep Width (Hz)	10330.26



Acquisition Time (sec)	1.1010	Comment Mark willis MWH066ppt mCARBON CDCl3 /opt/bruk500data/2012/Apr vnmr1 19						
Date	28 Apr 2012 22:51:44	4	Date Stamp		28 Apr 2012 22:51:44			
File Name	F:\Chemistry\Year 3 o	lata\NMR data\Data\Comp	ound 53\MWH066pct_	000001r		Frequency (MHz)	125.76	
Nucleus	13C	Number of Transients	18432	Origin	spect	Original Points Count	32768	
Owner	vnmr1	Points Count	32768	Pulse Sequence	zgpg30	Receiver Gain	512.00	
SW(cyclical) (Hz)	29761.90	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	12572.9824	Sweep Width (Hz)	29761.00	
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