

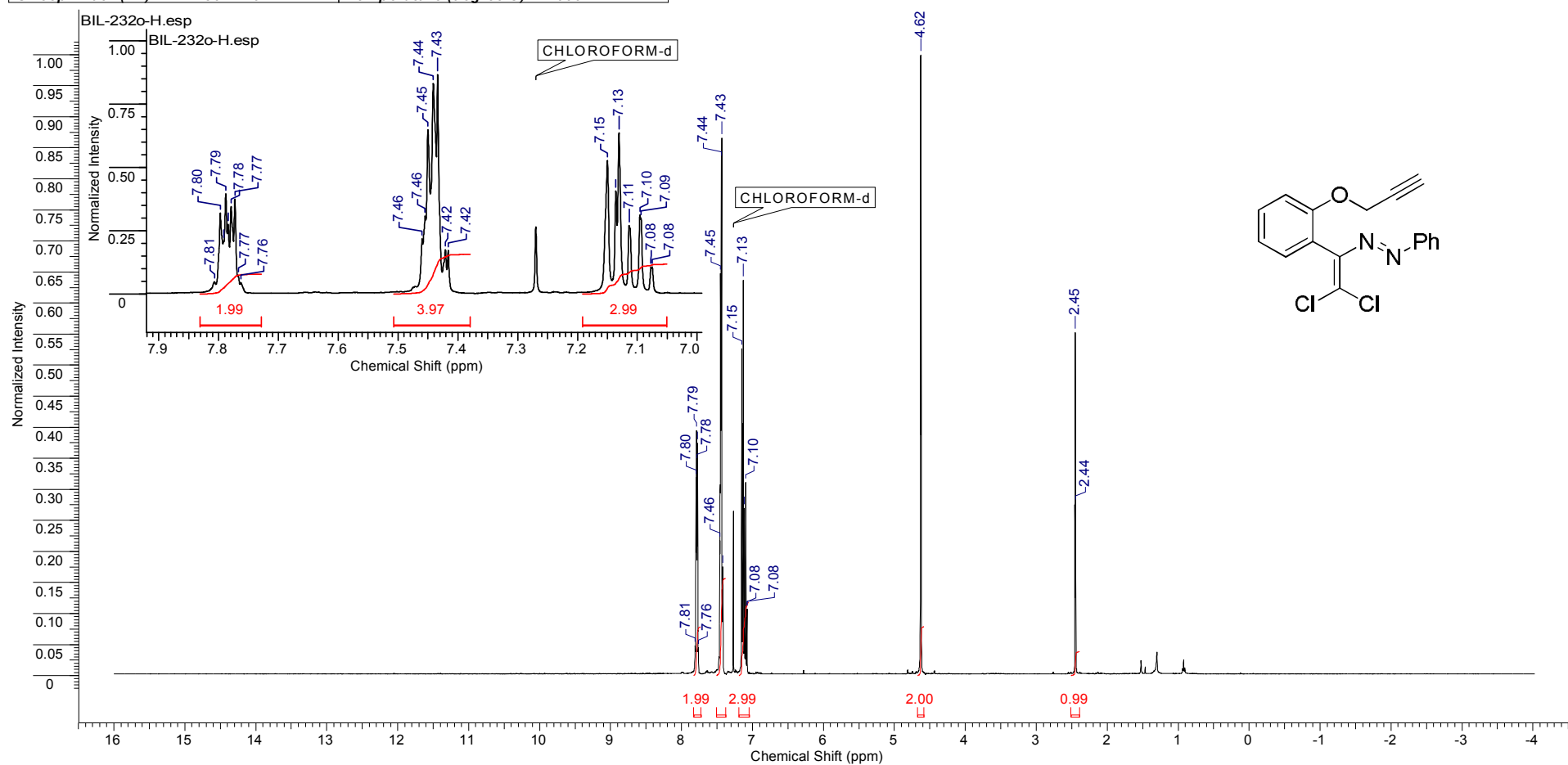
Supplementary information

Synthesis and spectral study of new family of 2,5-diaryltriazoles having restricted rotation of 5-aryl substituent

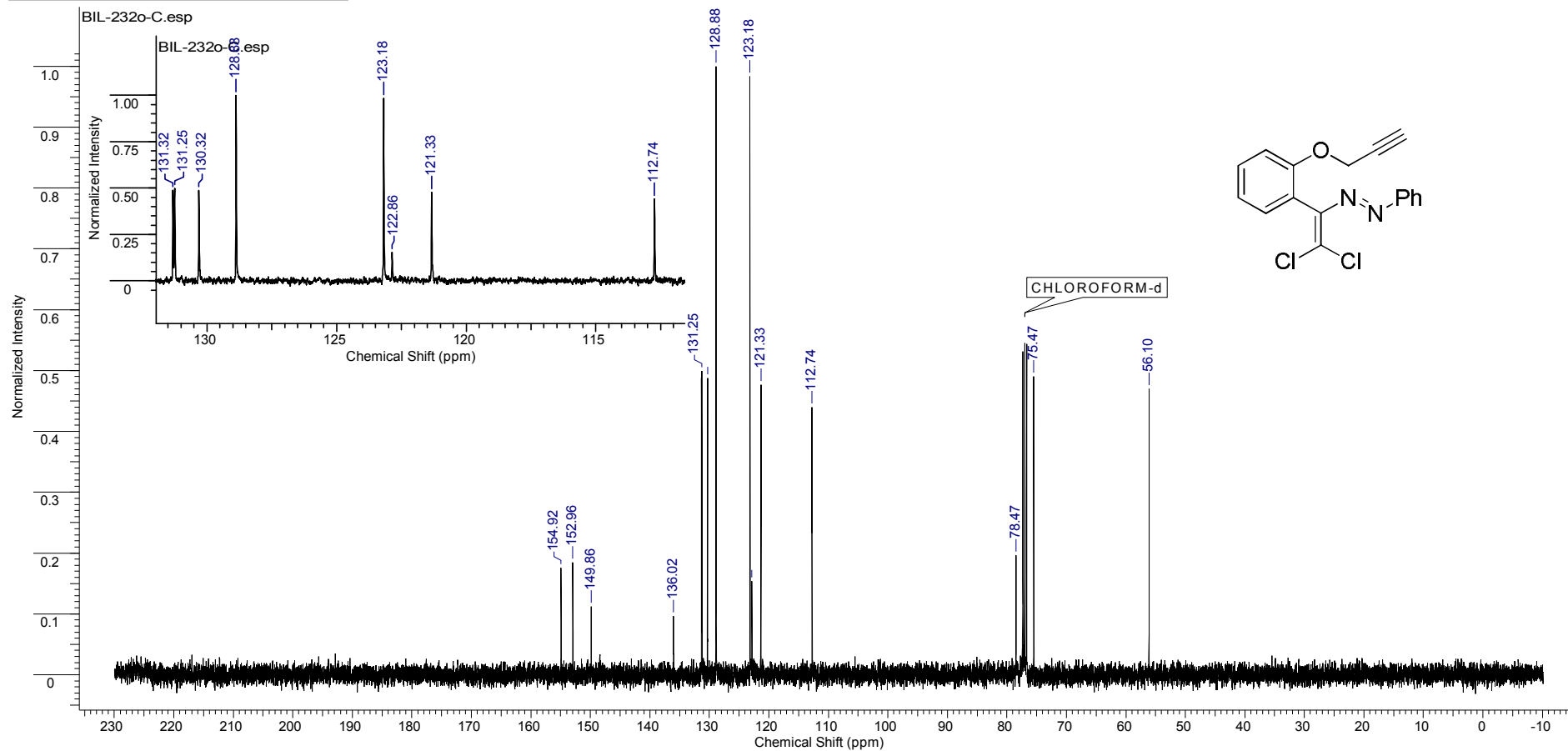
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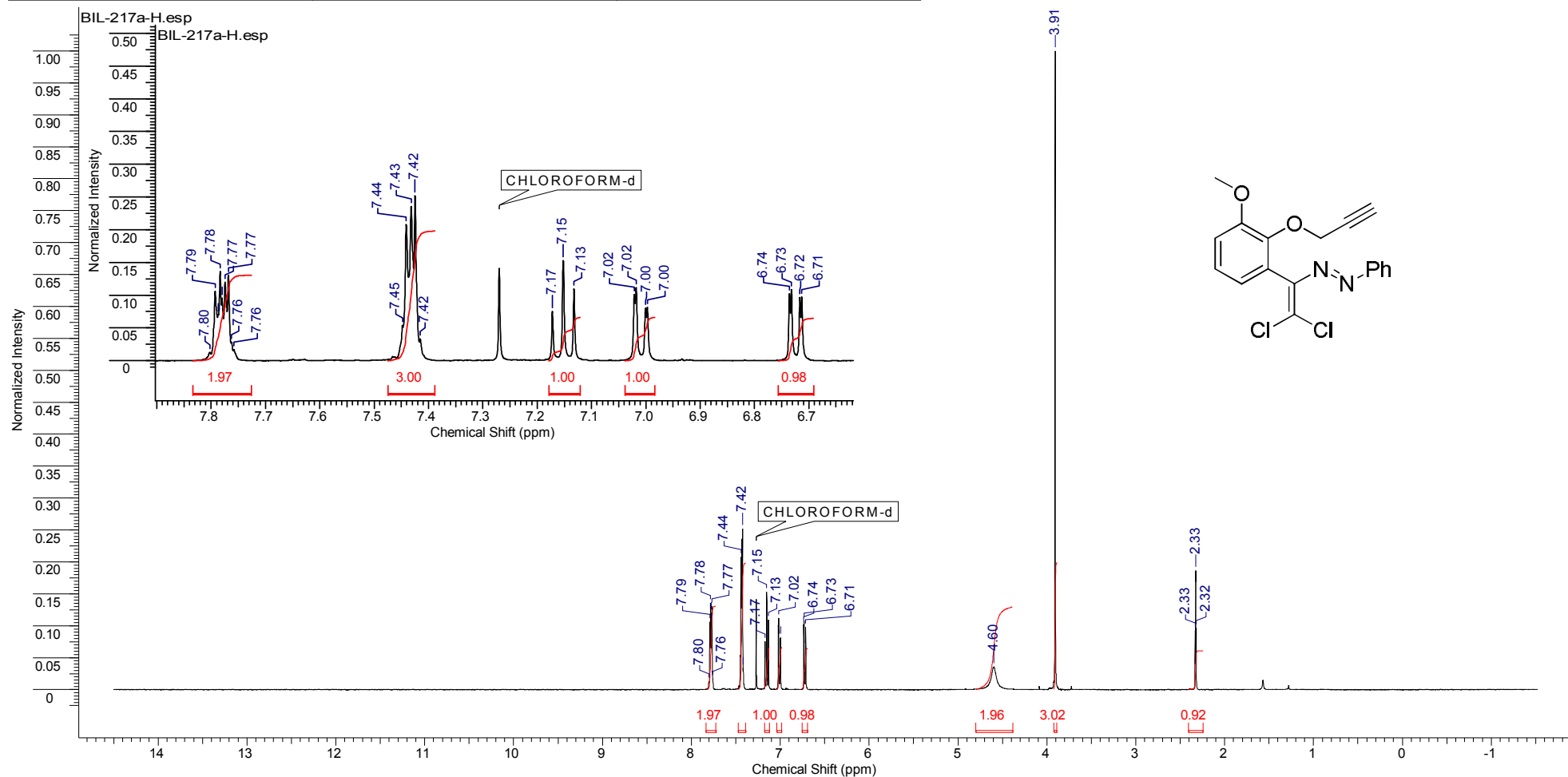
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Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	114.00
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.8254

¹H NMR spectrum of **2a** (400.1 MHz, CDCl₃)

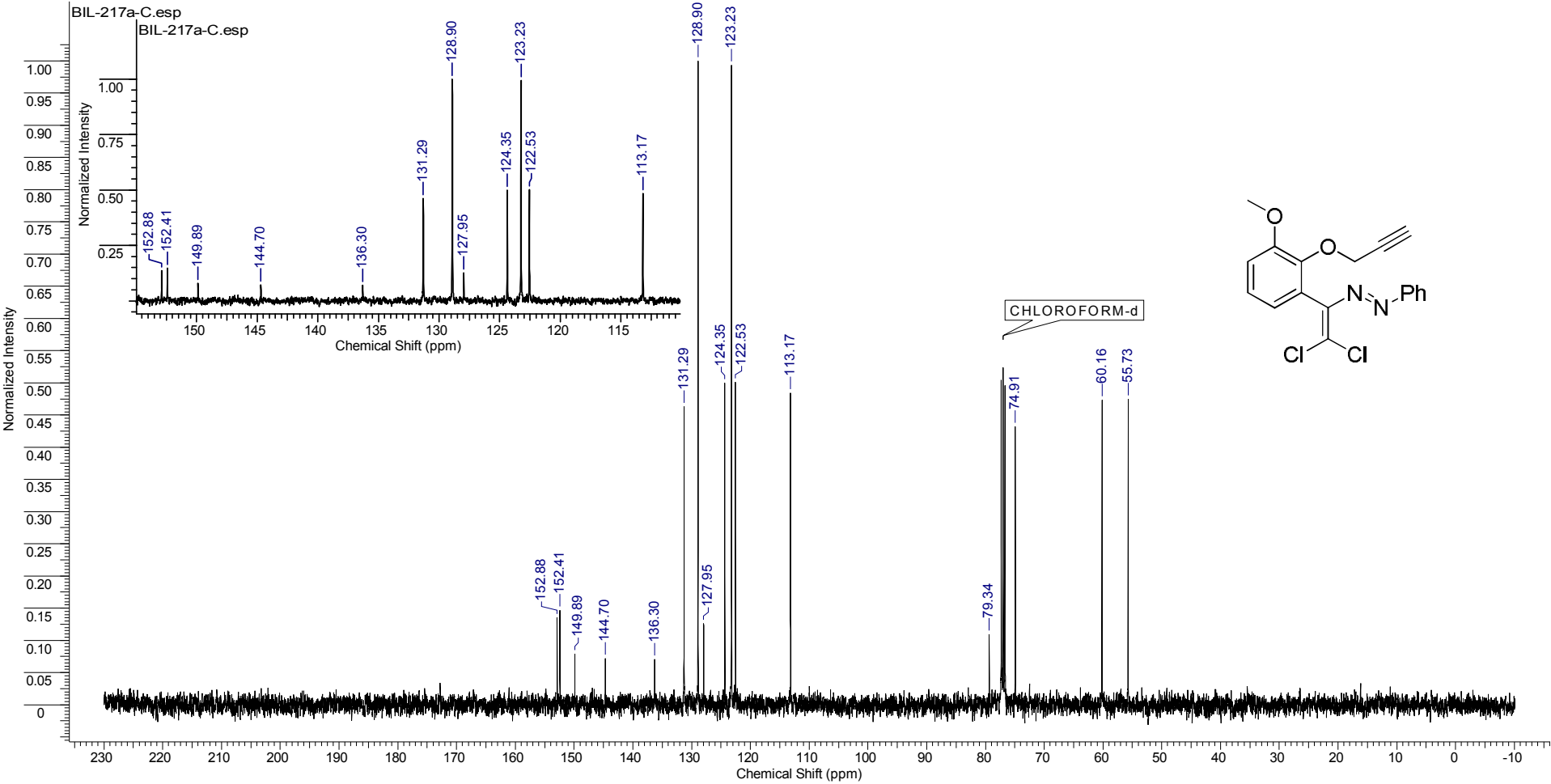
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	01 Feb 2019 13:05:04
Date Stamp	01 Feb 2019 13:05:04				
File Name					
Nucleus	¹³ C	Number of Transients	93	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11059.6152
Temperature (degree C)	27.000			Frequency (MHz)	100.61
				Original Points Count	16384
				Receiver Gain	13004.00
				Sweep Width (Hz)	24154.41

¹³C NMR spectrum of **2a** (100.6 MHz, CDCl₃)

Acquisition Time (sec)	2.5559	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	08 Jun 2018 12:18:08
Date Stamp	08 Jun 2018 12:18:08	File Name		Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Points Count	65536	Pulse Sequence	zg30	Receiver Gain	161.30
Spectrum Offset (Hz)	2595.7979	Sweep Width (Hz)	6410.16	SW(cyclical) (Hz)	6410.26
		Temperature (degree C)	27.000	Solvent	CHLOROFORM-d

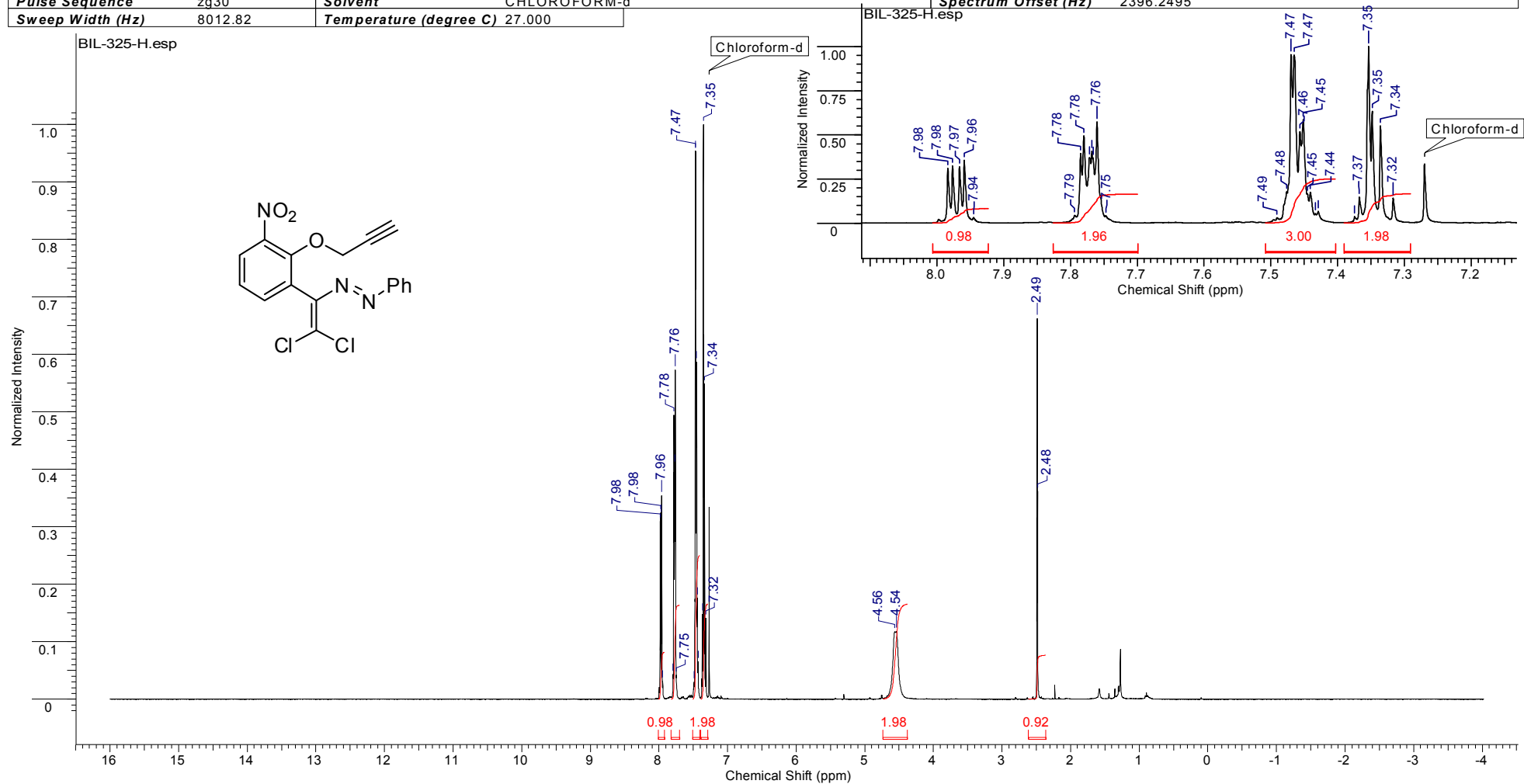
¹H NMR spectrum of **2b** (400.1 MHz, CDCl₃)

Acquisition Time (sec)	0.4999	Comment	5 mm BBO BB-1H/D Z3918/0123			Date	07 Jun 2018 09:46:40		
Date Stamp	07 Jun 2018 09:46:40			File Name			Frequency (MHz)		100.61
Nucleus	13C	Number of Transients	262	Origin	spect	Original Points Count	12076	Owner	root
Points Count	65536	Pulse Sequence	zgpg30	Receiver Gain	13004.00	SW(cyclical) (Hz)	24154.59		
Solvent	CHLOROFORM-d			Spectrum Offset (Hz)	11061.1816	Sweep Width (Hz)	24154.22	Temperature (degree C)	27.000

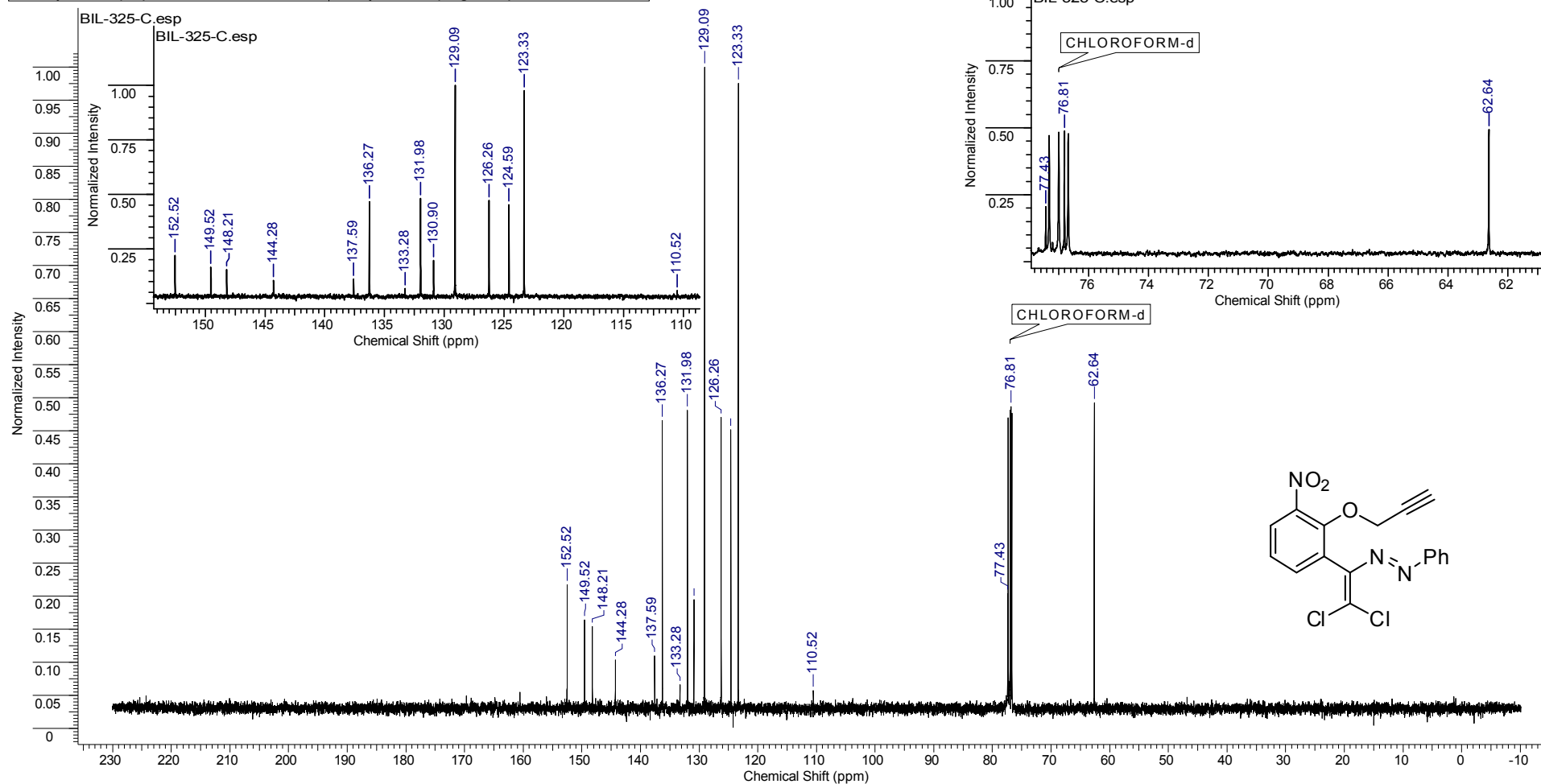


¹³C NMR spectrum of **2b** (100.6 MHz, CDCl₃)

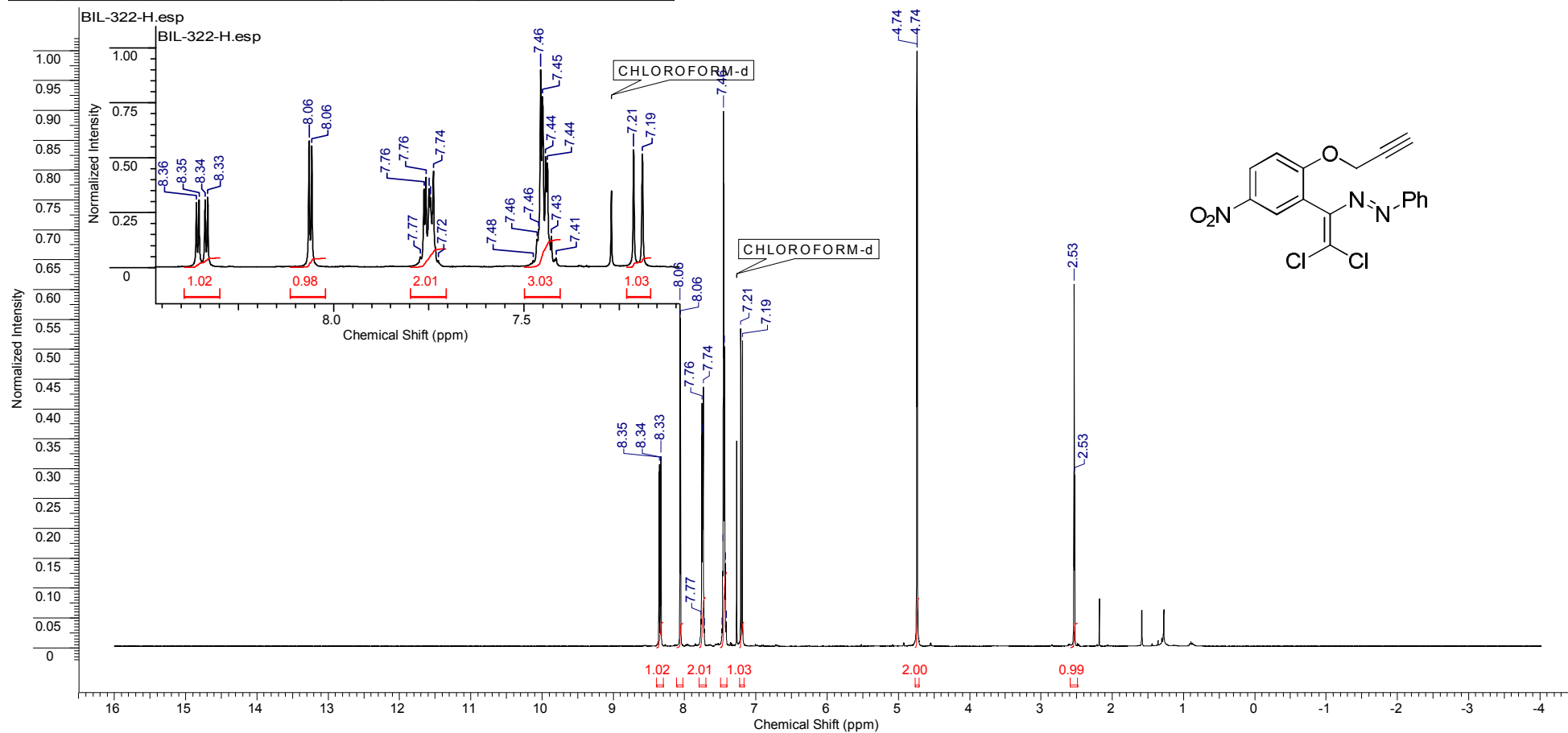
Acquisition Time (sec)	4.0894	Comment	Imported from UXMNR.	Date	21 Feb 2019 11:44:08
File Name				Frequency (MHz)	400.13
Nucleus	¹ H	Number of Transients	4	Points Count	131072
Pulse Sequence	zg30	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2396.2495
Sweep Width (Hz)	8012.82	Temperature (degree C)	27.000		

¹H NMR spectrum of **2c** (400.1 MHz, CDCl₃)

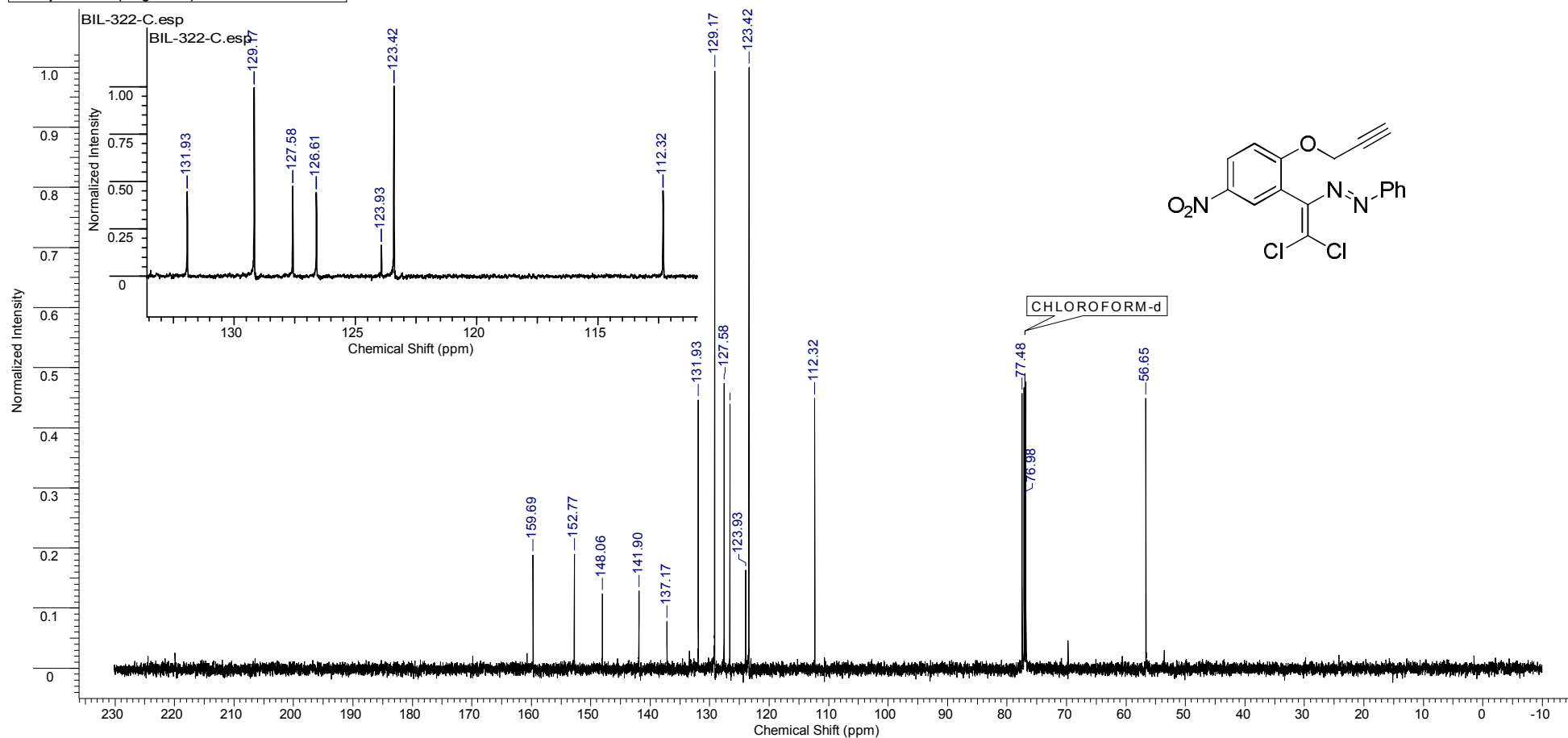
Acquisition Time (sec)	0.6783	Comment	Imported from UXNMR.	Date	21 Feb 2019 11:50:38
File Name				Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	143	Points Count	131072
Pulse Sequence	zgpg30	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11060.7461
Sweep Width (Hz)	24154.59	Temperature (degree C)	27.000		

¹³C NMR spectrum of **2c** (100.6 MHz, CDCl₃)

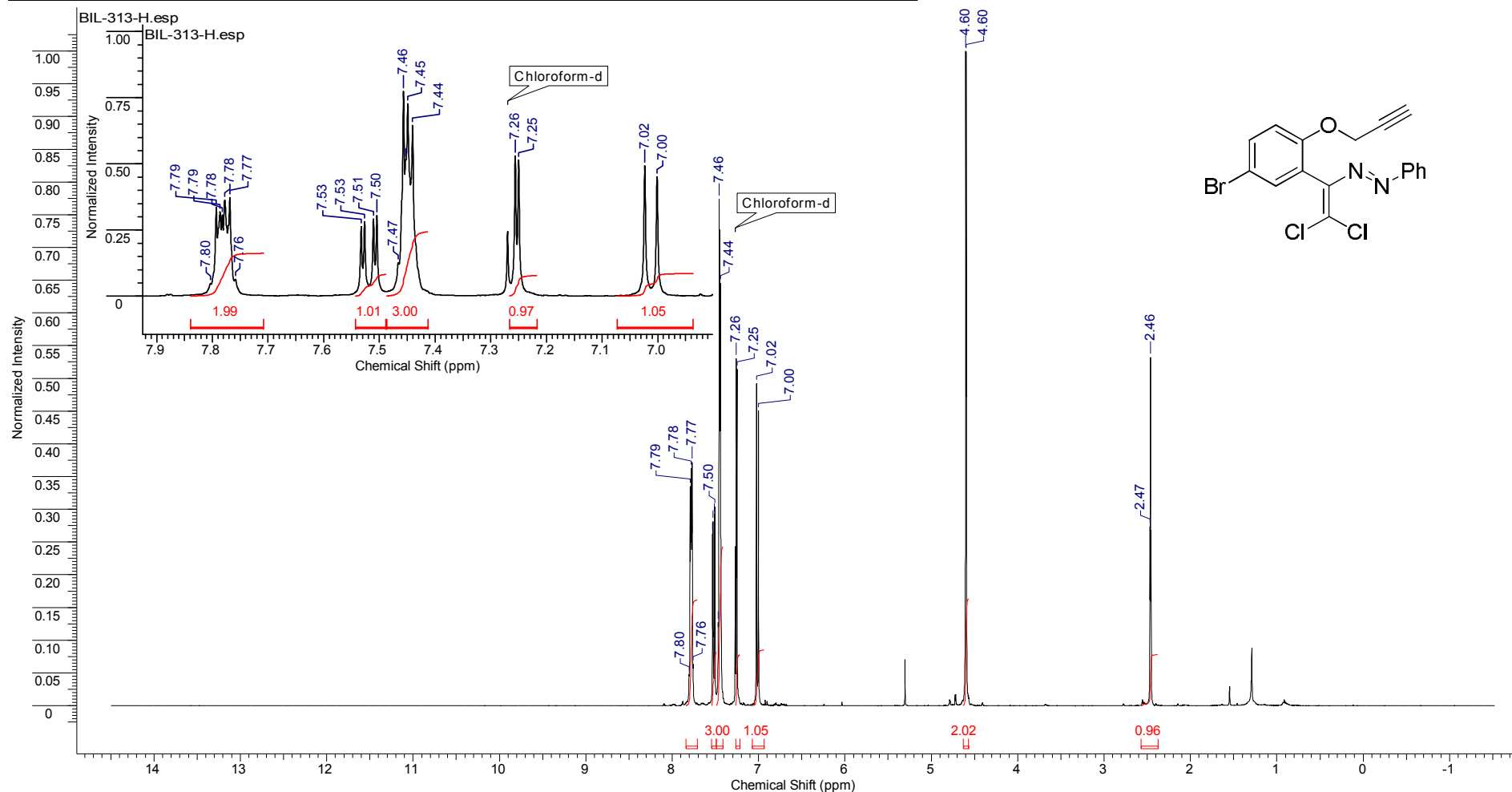
Acquisition Time (sec)	4.0894	Comment	5 mm Dual 13C/1H Z3756/0200	Date	19 Feb 2019 11:46:08
Date Stamp	19 Feb 2019 11:46:08				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	6	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zq30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	114.00
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2396.6816

¹H NMR spectrum of **2d** (400.1 MHz, CDCl₃)

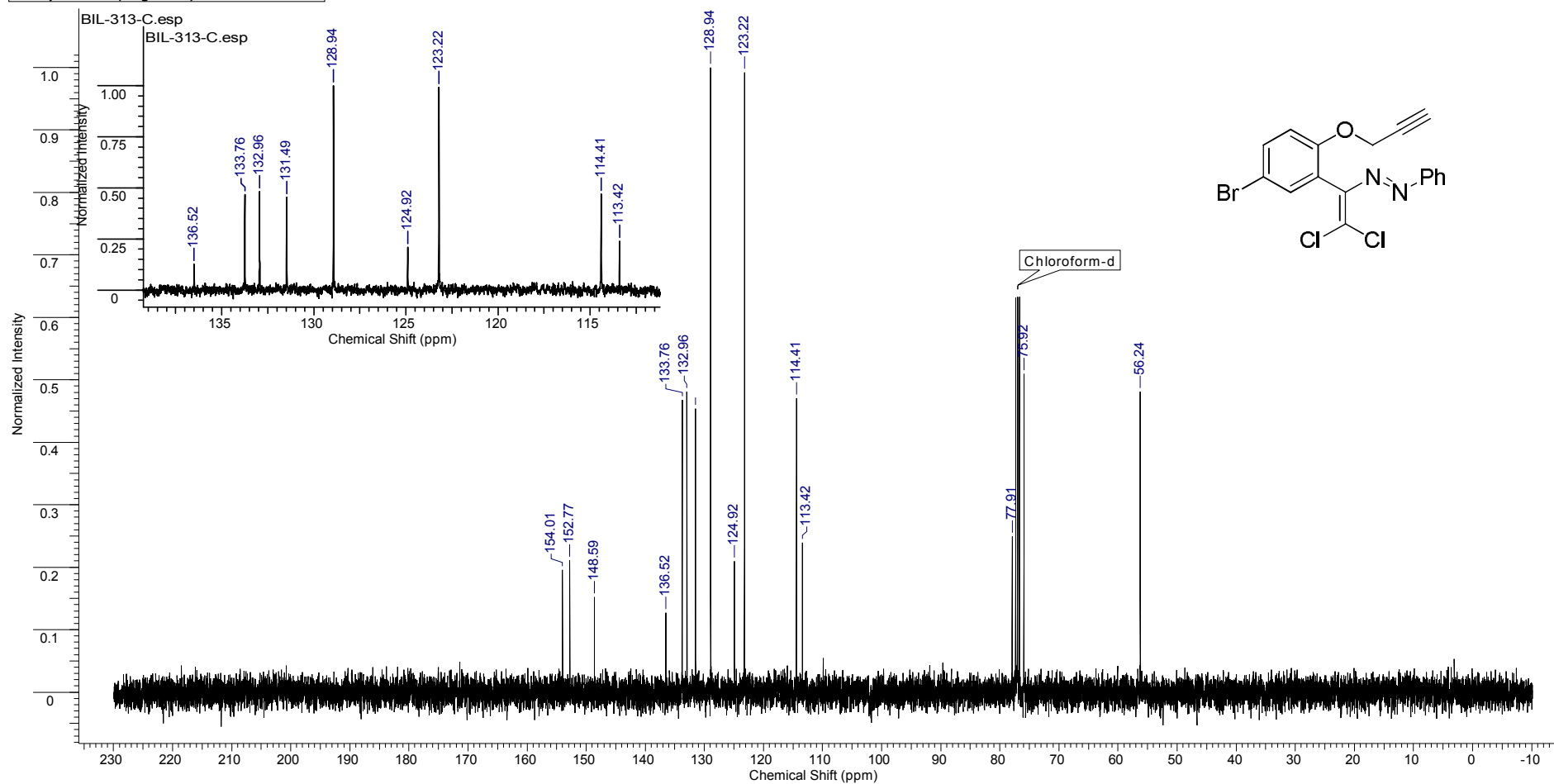
Acquisition Time (sec)	0.6783	Comment	5 mm Dual 13C/1H Z3756/0200	Date	19 Feb 2019 11:46:08
Date Stamp	19 Feb 2019 11:46:08				
File Name				Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	97	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	14596.50
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11077.1221
				Sweep Width (Hz)	24154.41

¹³C NMR spectrum of **2d** (100.6 MHz, CDCl₃)

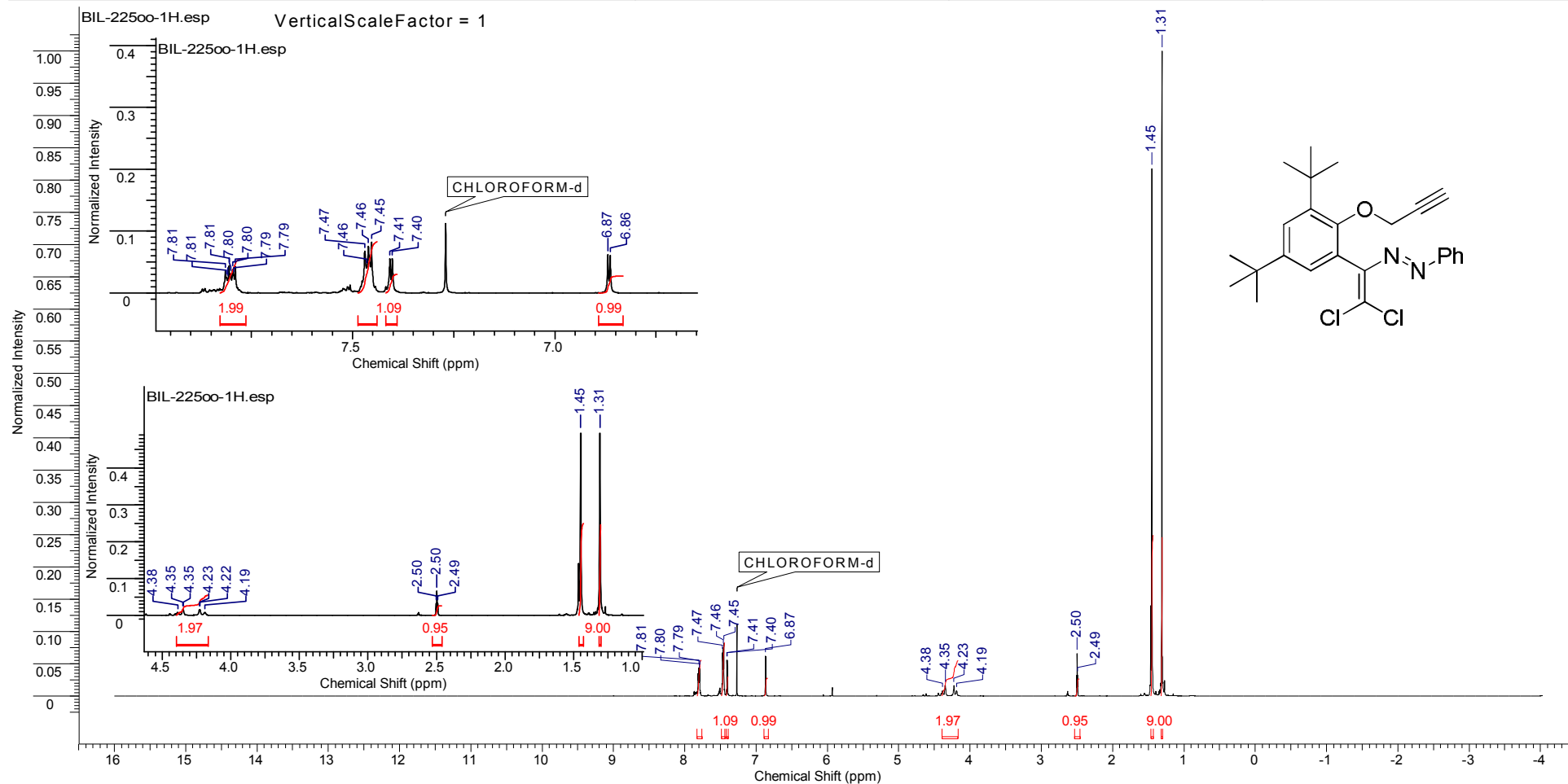
Acquisition Time (sec) 2.5559		Comment Imported from UXNMR.		Date 28 Jan 2019 15:39:06	
File Name				Frequency (MHz) 400.13	Nucleus 1H
Number of Transients 4		Original Points Count 16384	Points Count 65536	Pulse Sequence zg30	Solvent DMSO-d6
Spectrum Offset (Hz) 2595.9883		Sweep Width (Hz) 6410.26	Temperature (degree C) 27.000		

¹H NMR spectrum of **2e** (400.1 MHz, CDCl₃)

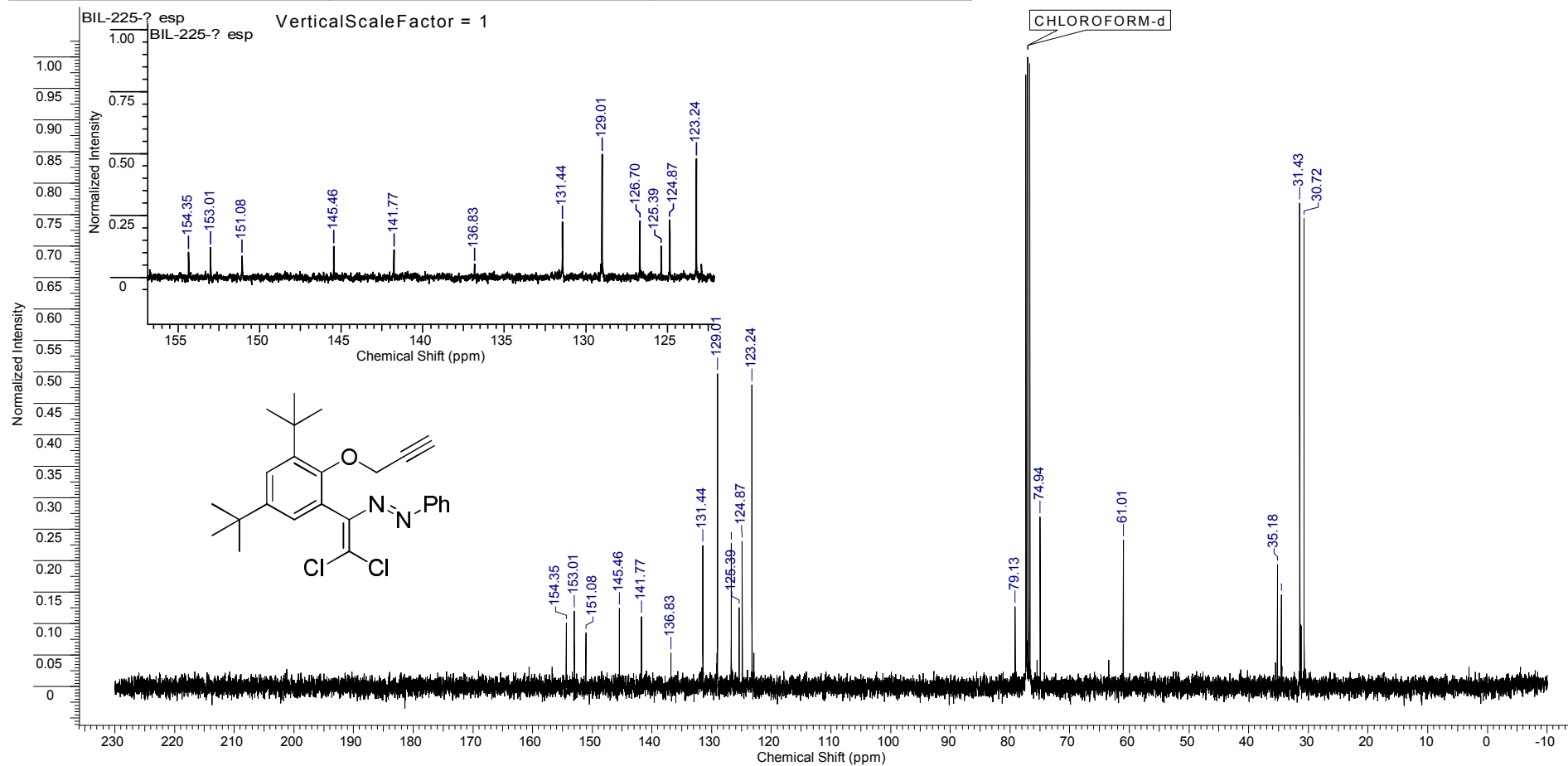
Acquisition Time (sec)	0.6783	Comment	Imported from UXMNR.	Date	28 Jan 2019 15:40:56
File Name				Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	23	Original Points Count	16384
Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Spectrum Offset (Hz)	11058.7188
Temperature (degree C)	27.000			Points Count	131072
				Sweep Width (Hz)	24154.59

¹³C NMR spectrum of **2e** (100.6 MHz, CDCl₃)

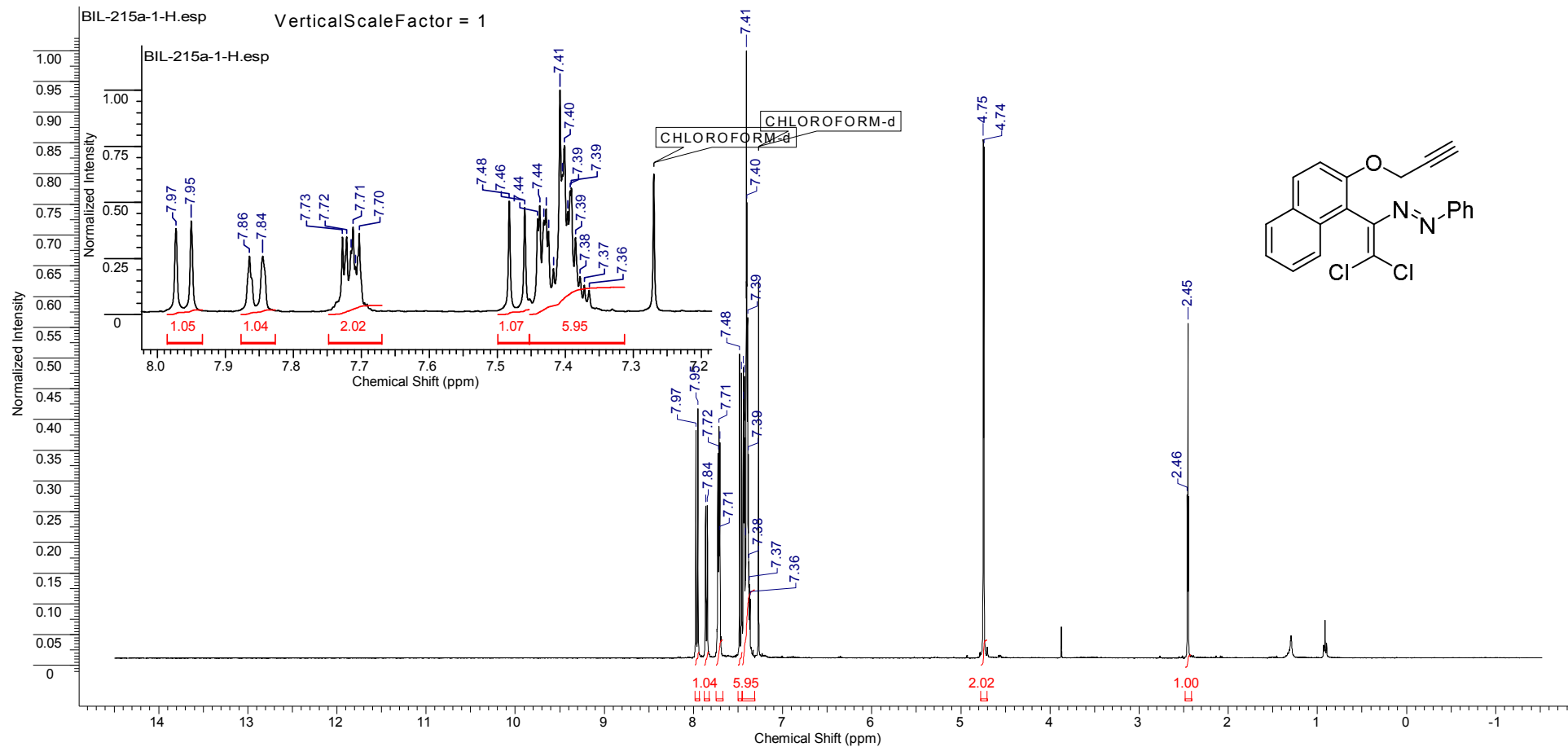
Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	30 Apr 2019 12:39:28
Date Stamp	30 Apr 2019 12:39:28	File Name			
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	4
Owner	root	Points Count	131072	Pulse Sequence	zg30
Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2395.7644	Receiver Gain	128.00
		Sweep Width (Hz)	8012.76	Original Points Count	32768
				SW(cyclical) (Hz)	8012.82
				Temperature (degree C)	27.000

¹H NMR spectrum of **2f** (400.1 MHz, CDCl₃)

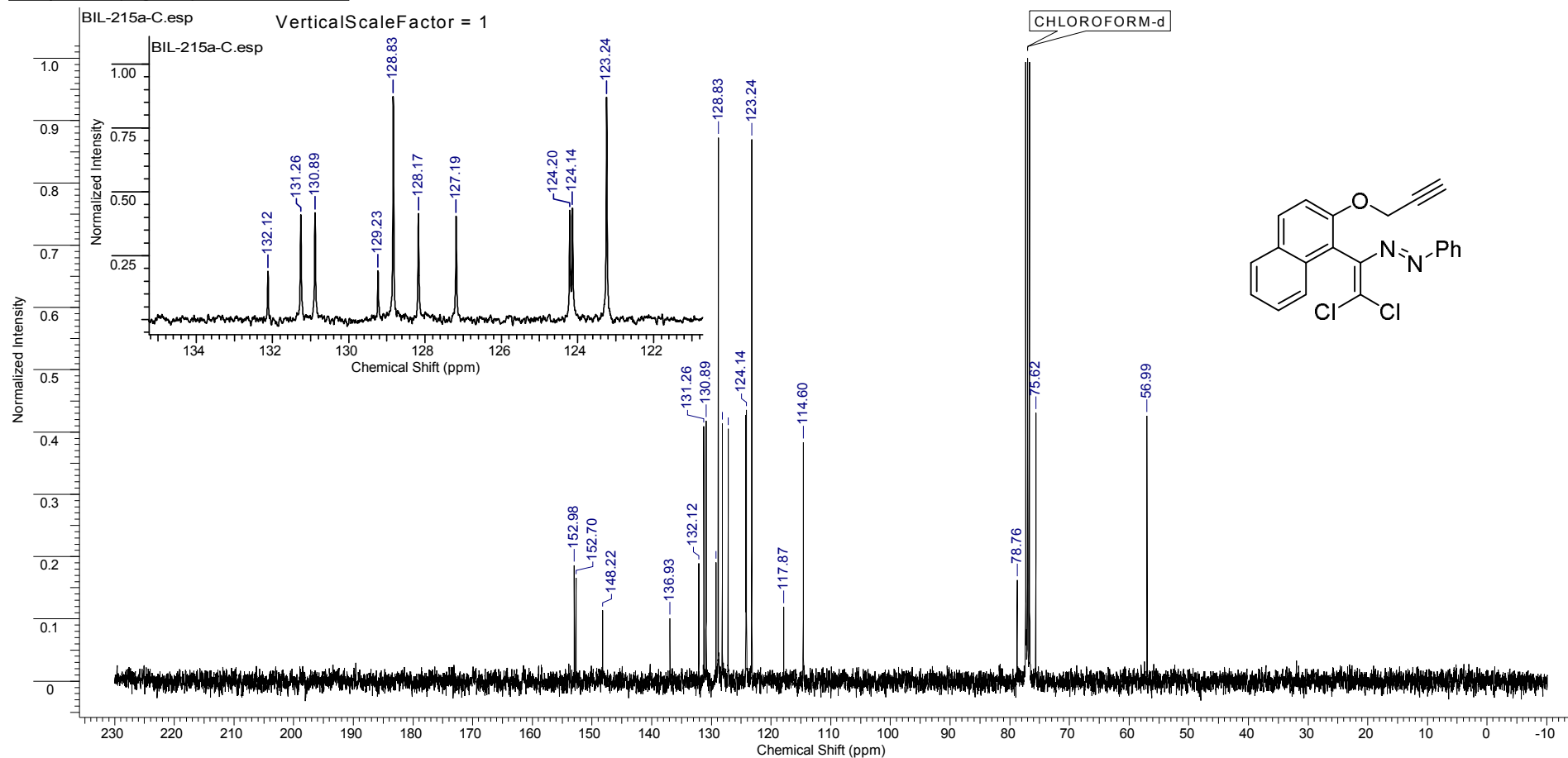
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	30 Apr 2019 12:39:28
Date Stamp	30 Apr 2019 12:39:28	File Name			
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	145
Original Points Count	16384	Owner	root	Points Count	131072
Receiver Gain	13004.00	SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d
Spectrum Offset (Hz)	11063.6699	Sweep Width (Hz)	24154.41	Temperature (degree C)	27.000

¹³C NMR spectrum of **2f** (100.6 MHz, CDCl₃)

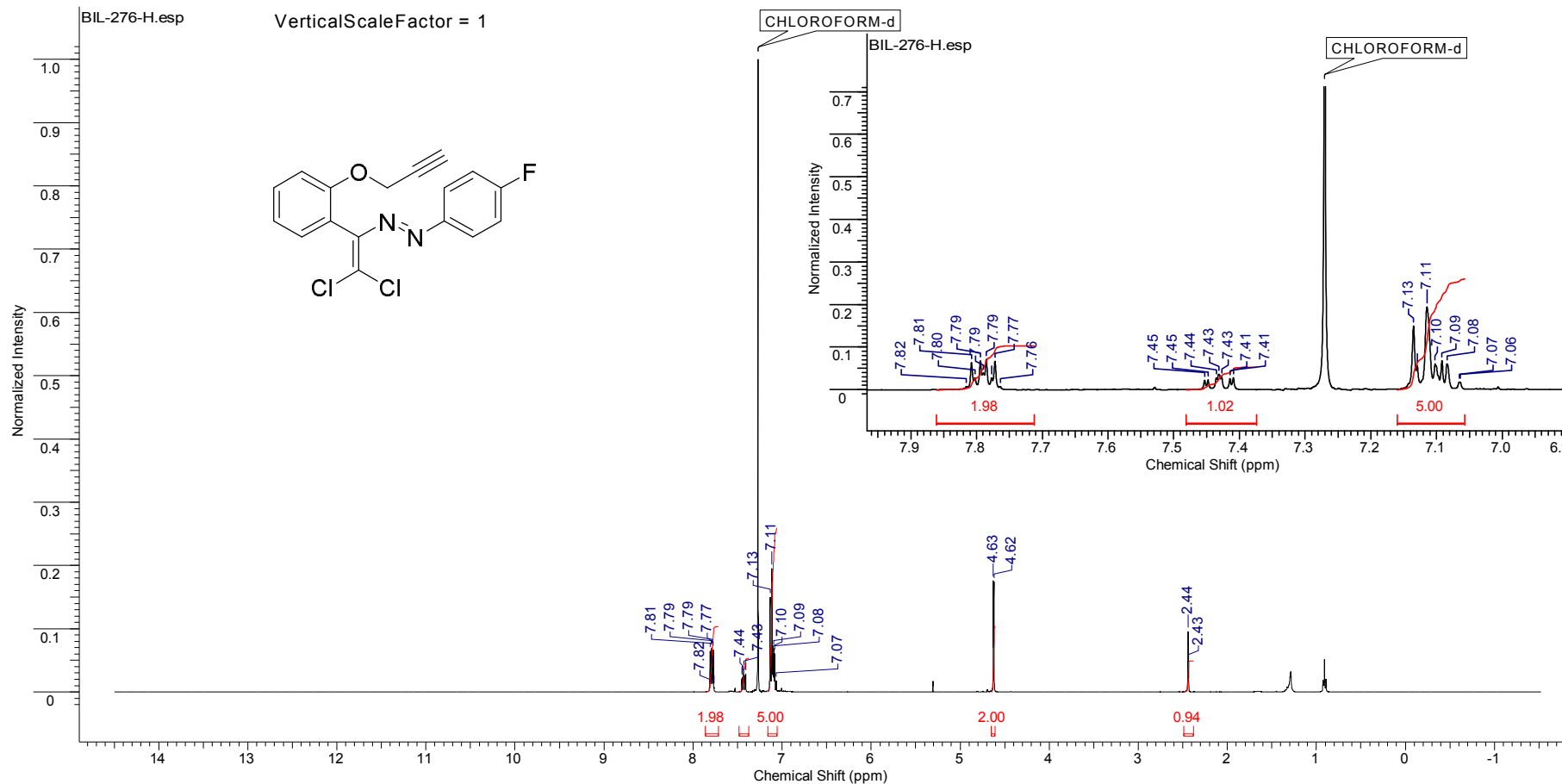
Acquisition Time (sec)	2.5559	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	22 Oct 2018 13:02:56
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File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	65536	Pulse Sequence	zg30
SW(cyclical) (Hz)	6410.26	Solvent	CHLOROFORM-d	Receiver Gain	181.00
Sweep Width (Hz)	6410.16	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2595.7979

¹H NMR spectrum of **2g** (400.1 MHz, CDCl₃)

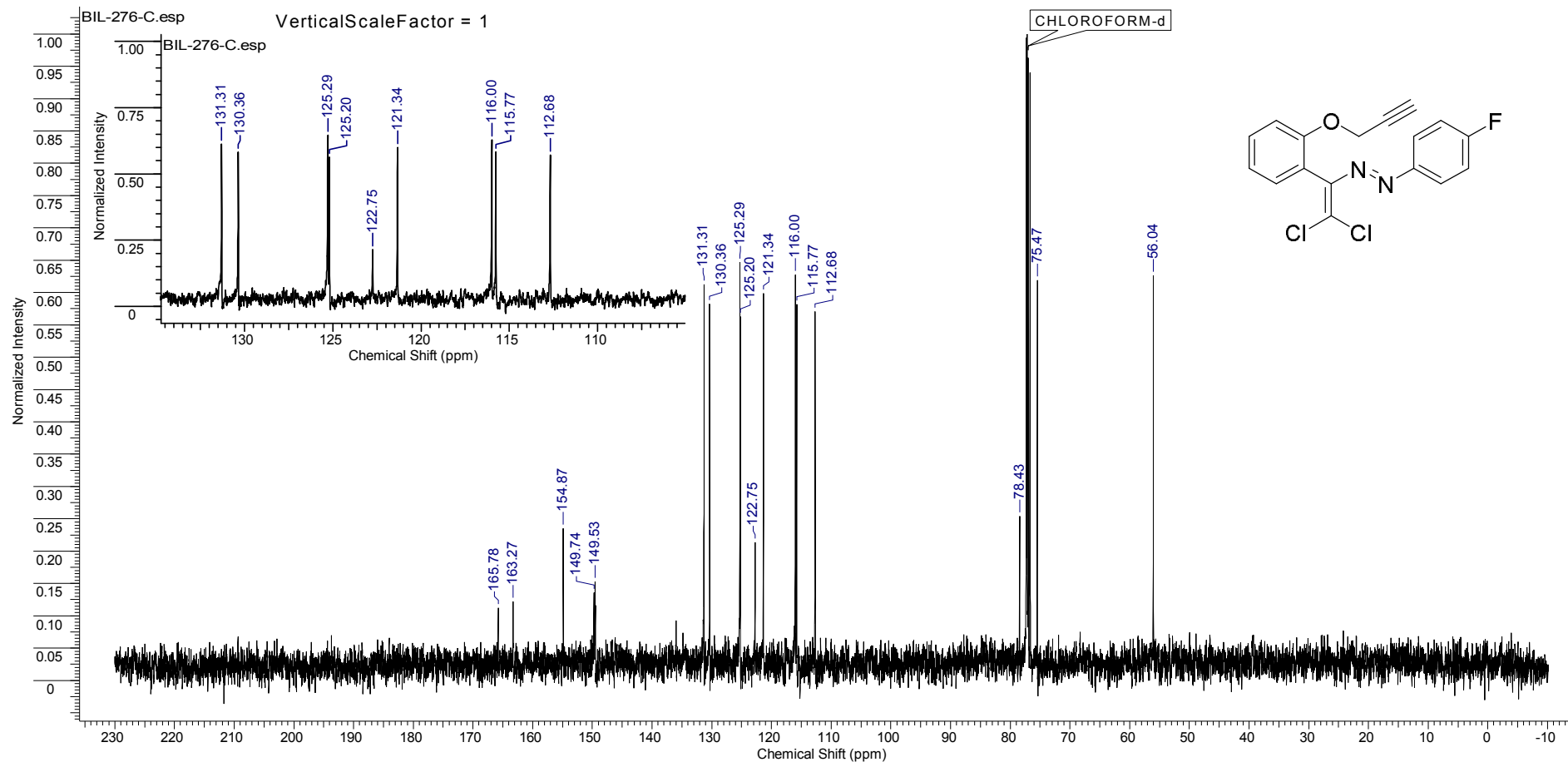
Acquisition Time (sec)	0.4999	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	24 Oct 2018 15:00:16
Date Stamp	24 Oct 2018 15:00:16				
File Name				Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	320	Origin	spect
Owner	root	Points Count	65536	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	13004.00
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11061.5498
				Sweep Width (Hz)	24154.22

¹³C NMR spectrum of **2g** (100.6 MHz, CDCl₃)

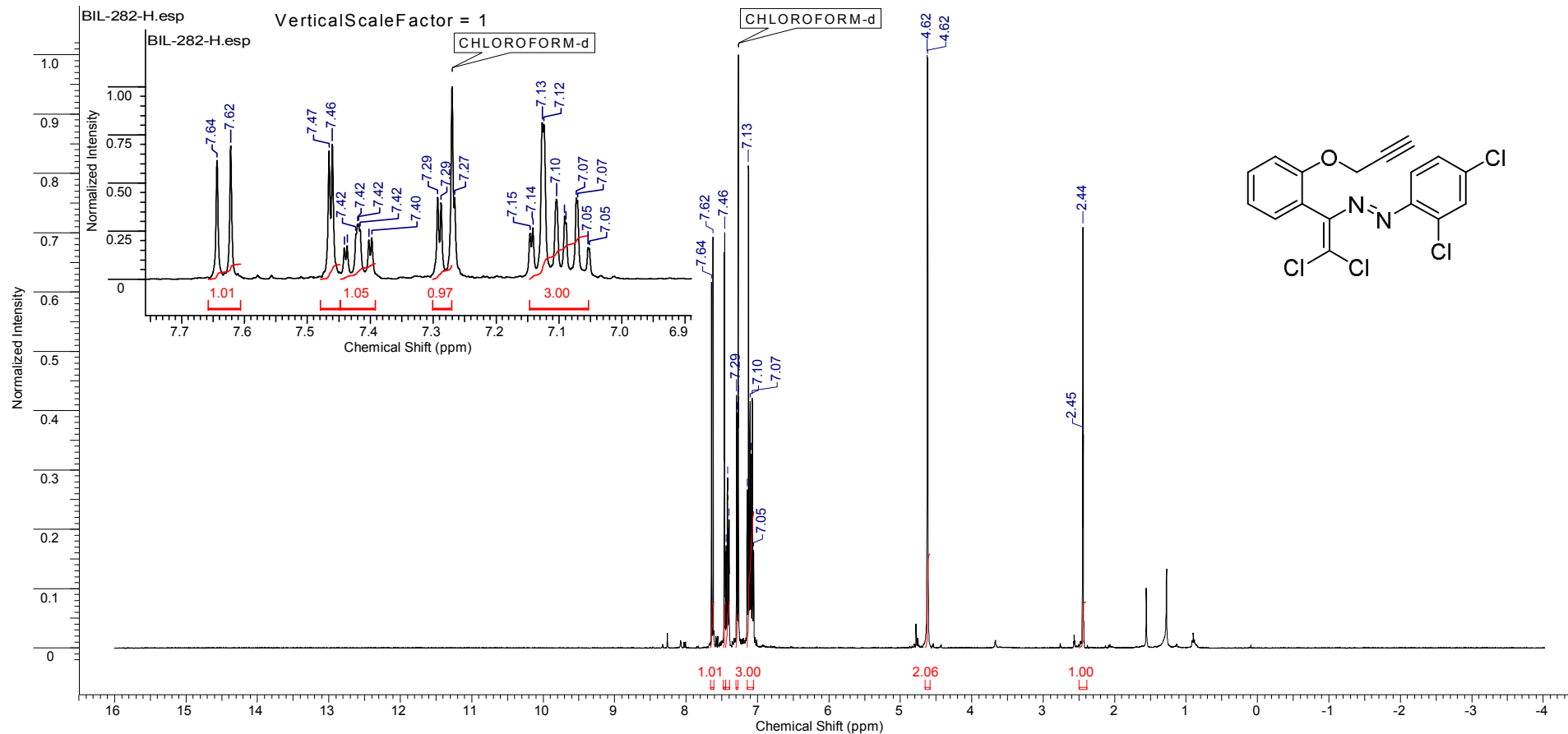
Acquisition Time (sec)	2.5559	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	26 Oct 2018 12:39:28
Date Stamp	26 Oct 2018 12:39:28				
File Name					
Nucleus	1H	Number of Transients	5	Origin	spect
Owner	root	Points Count	65536	Pulse Sequence	zg30
SW(cyclical) (Hz)	6410.26	Solvent	CHLOROFORM-d	Receiver Gain	114.00
Sweep Width (Hz)	6410.16	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2595.7979

¹H NMR spectrum of **2h** (400.1 MHz, CDCl₃)

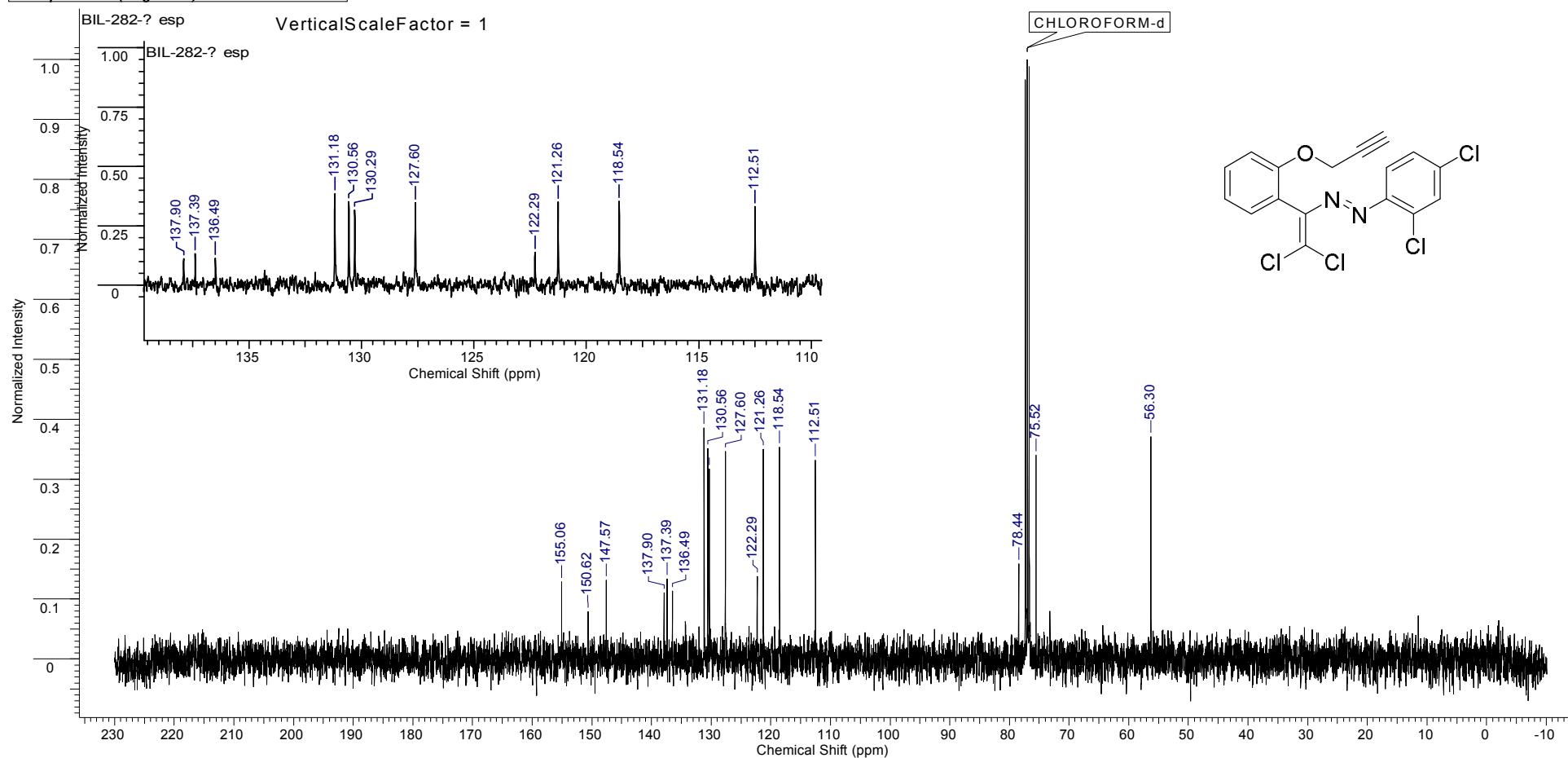
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Date Stamp	26 Oct 2018 12:41:36				
File Name				Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	116	Origin	spect
Owner	root	Points Count	65536	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	8192.00
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11061.9189
				Sweep Width (Hz)	24154.22

¹³C NMR spectrum of **2h** (100.6 MHz, CDCl₃)

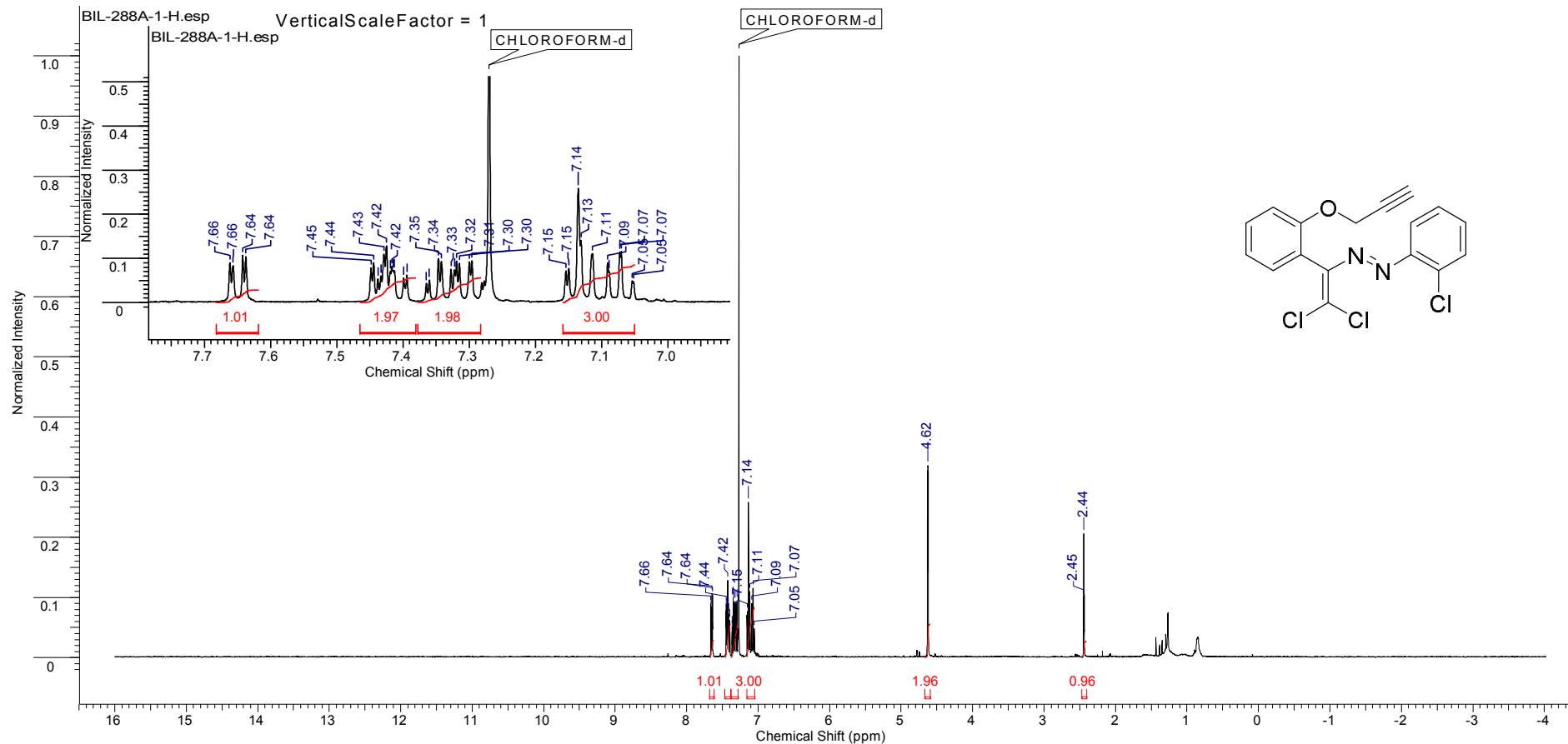
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File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	5	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	228.10
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.6421

¹H NMR spectrum of **2i** (400.1 MHz, CDCl₃)

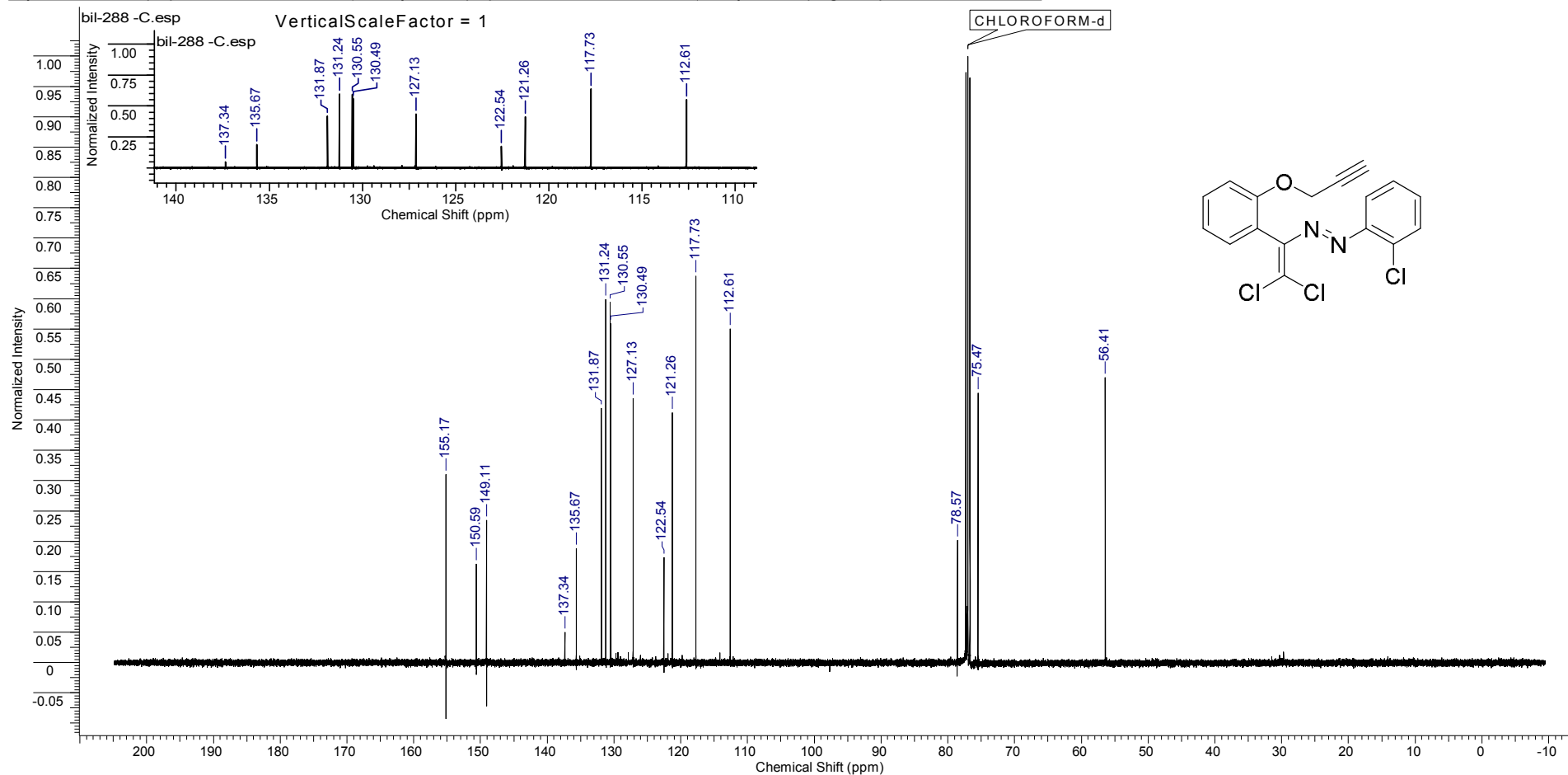
Acquisition Time (sec)	0.4999	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	31 Oct 2018 14:32:32
Date Stamp	31 Oct 2018 14:32:32				
File Name				Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	92	Origin	spect
Owner	root	Points Count	65536	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11062.6563
Temperature (degree C)	27.000			Sweep Width (Hz)	24154.22

¹³C NMR spectrum of **2i** (100.6 MHz, CDCl₃)

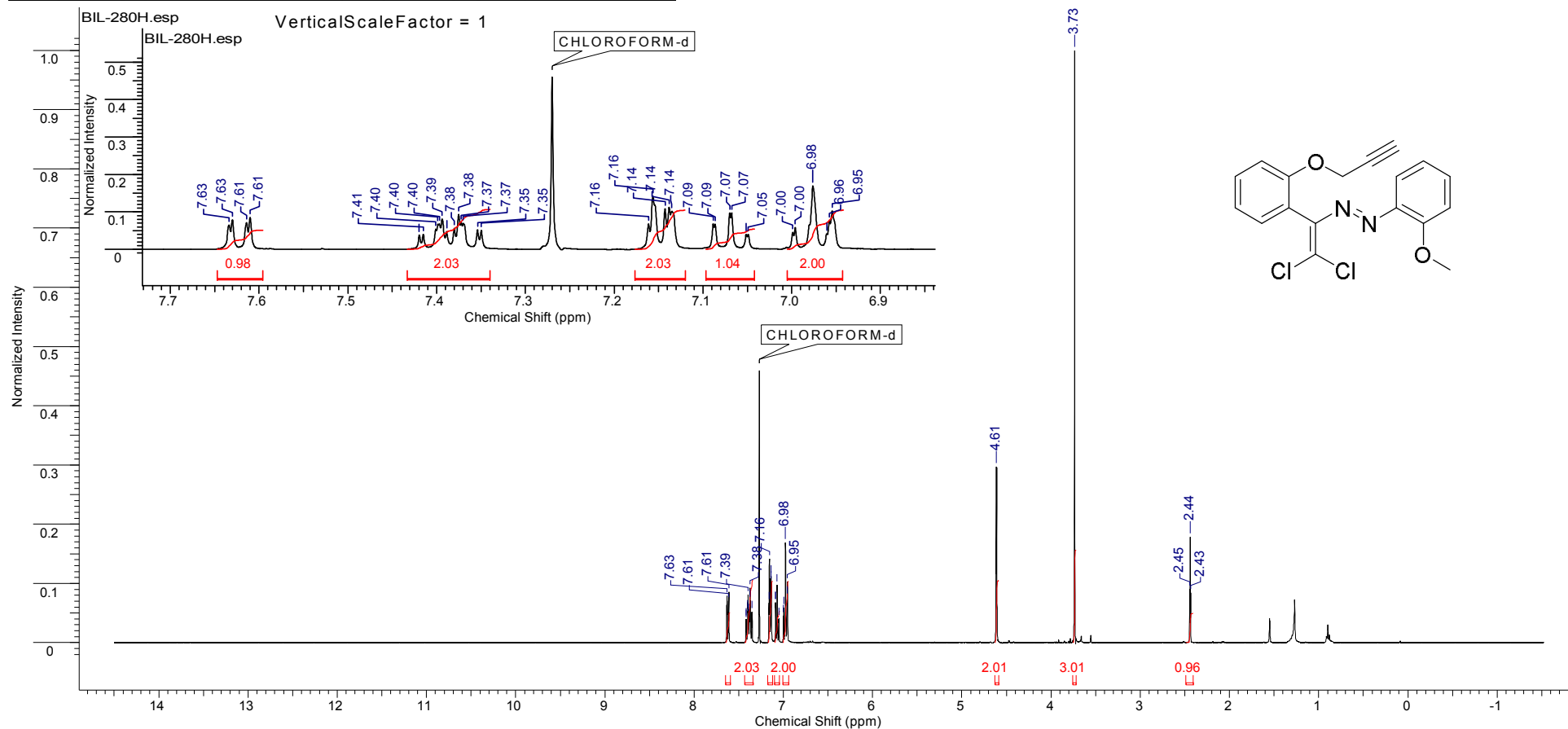
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Date Stamp	07 Feb 2019 08:14:56				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	362.00
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.7031

¹H NMR spectrum of **2j** (400.1 MHz, CDCl₃)

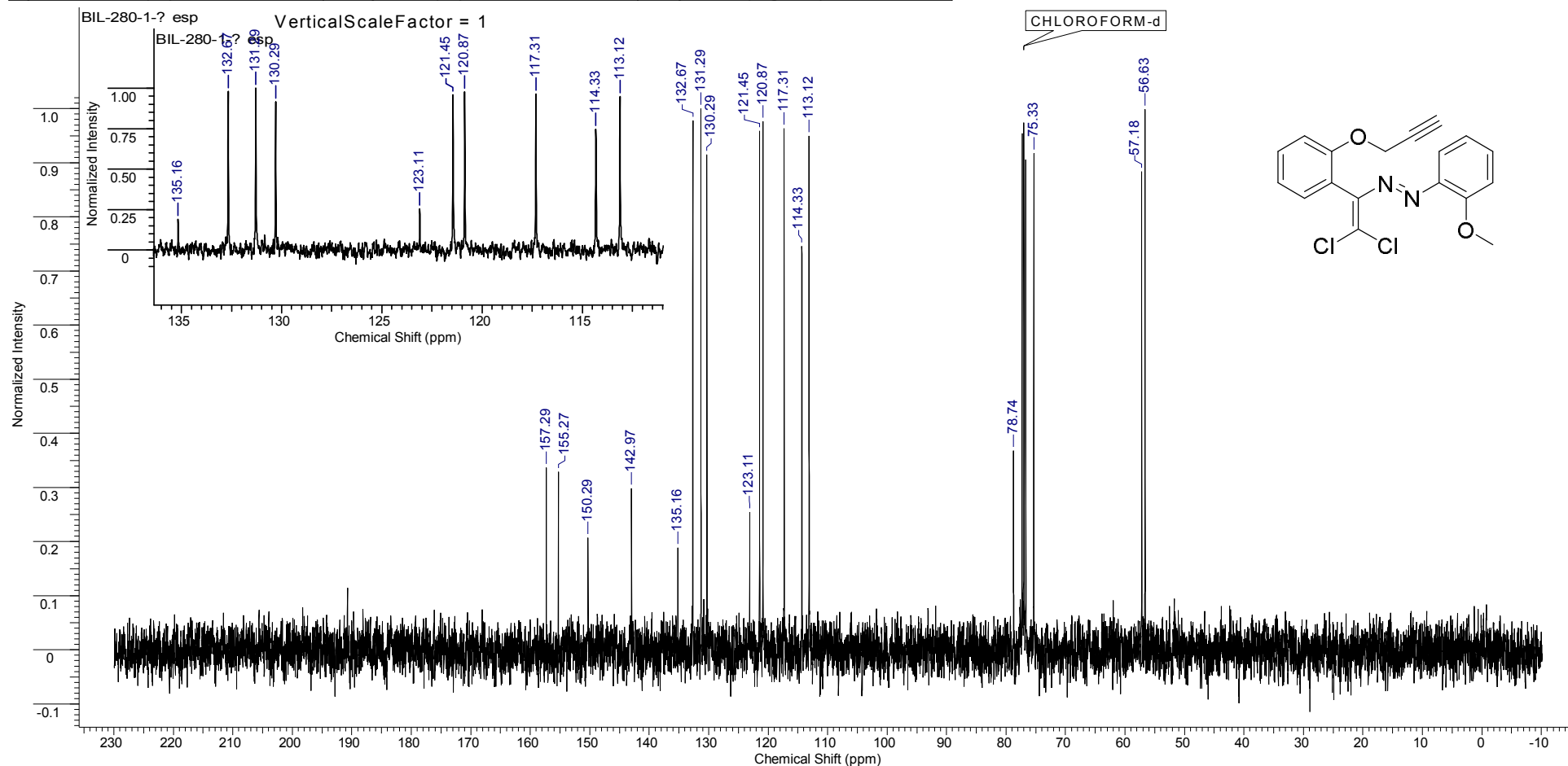
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File Name					
Frequency (MHz)	100.58	Nucleus	¹³ C	Number of Transients	18000
Points Count	65536	Pulse Sequence	s2pul	Receiver Gain	54.00
Spectrum Offset (Hz)	9822.5713	Sweep Width (Hz)	21551.72	Temperature (degree C)	24.000
				Solvent	CHLOROFORM-d

¹³C NMR spectrum of **2j** (100.6 MHz, CDCl₃)

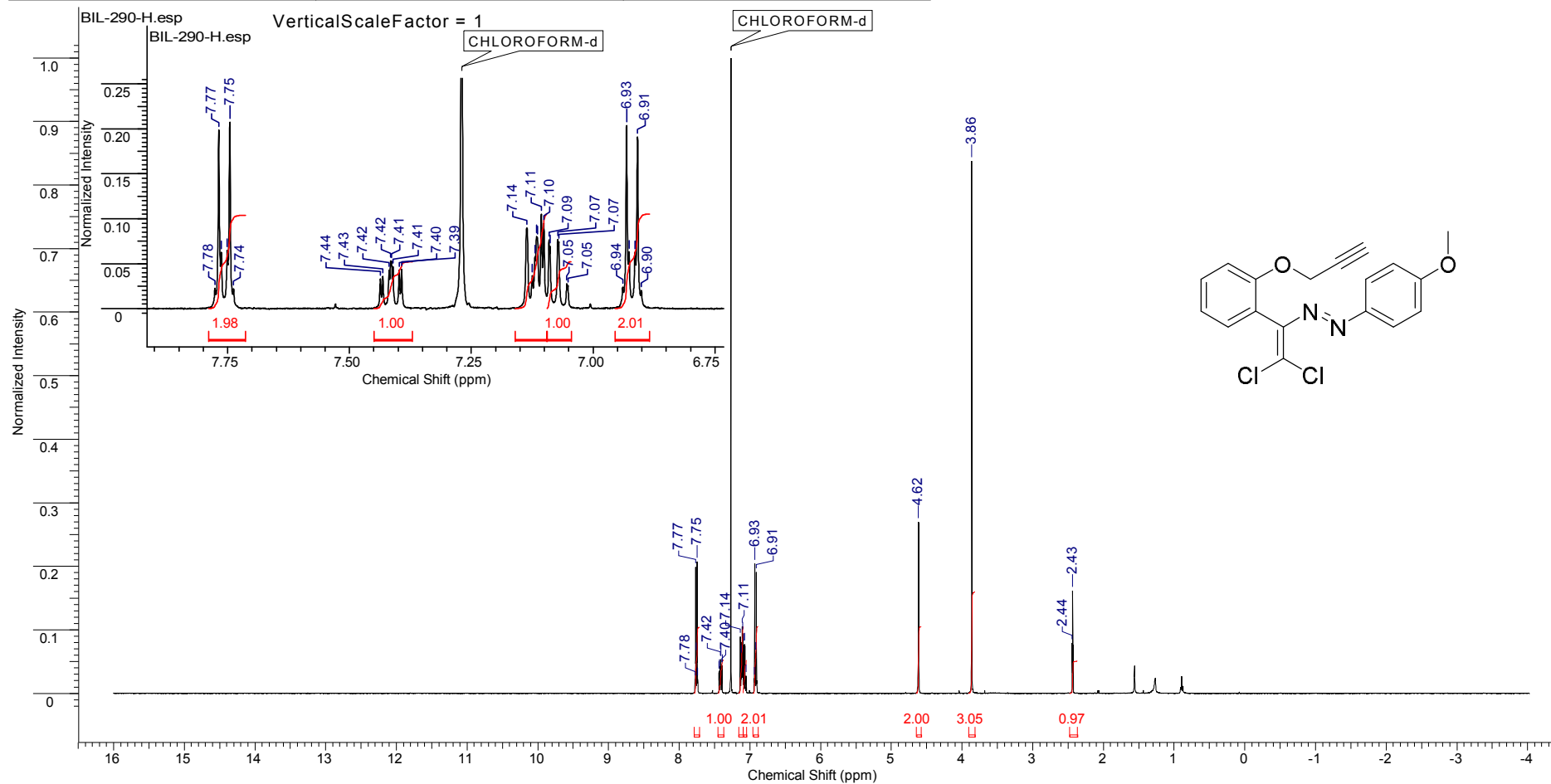
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Date Stamp	31 Oct 2018 14:36:48				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	5	Origin	spect
Owner	root	Points Count	65536	Pulse Sequence	zg30
SW(cyclical) (Hz)	6410.26	Solvent	CHLOROFORM-d	Receiver Gain	362.00
Sweep Width (Hz)	6410.16	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2595.7000

¹H NMR spectrum of **2k** (400.1 MHz, CDCl₃)

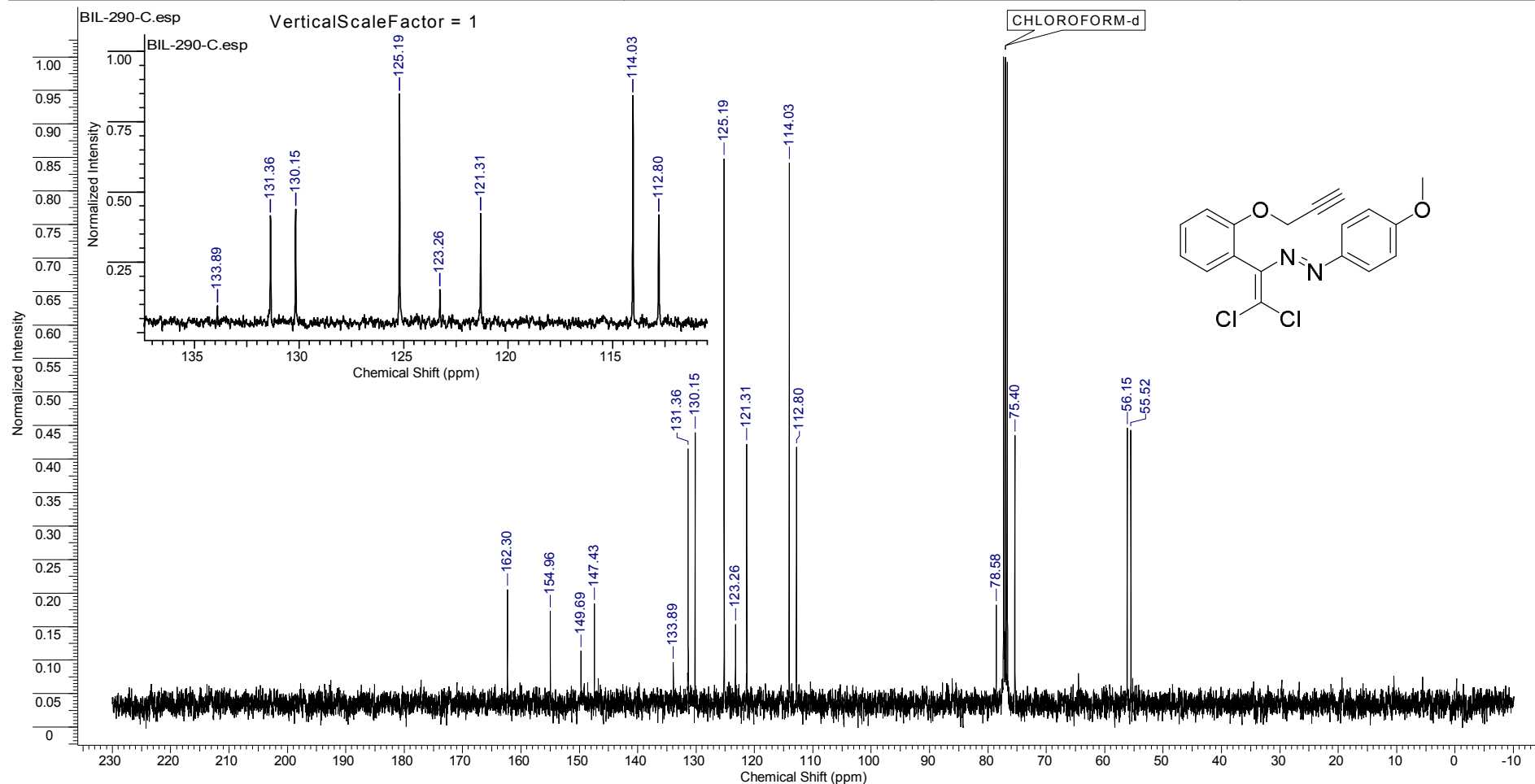
Acquisition Time (sec)	0.4999	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	14 Nov 2018 14:17:36
Date Stamp	14 Nov 2018 14:17:36	File Name			
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	129
Original Points Count	12076	Owner	root	Points Count	65536
Receiver Gain	8192.00	SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d
Spectrum Offset (Hz)	11056.0225	Sweep Width (Hz)	24154.22	Temperature (degree C)	27.000

 ^{13}C NMR spectrum of **2k** (100.6 MHz, CDCl_3)

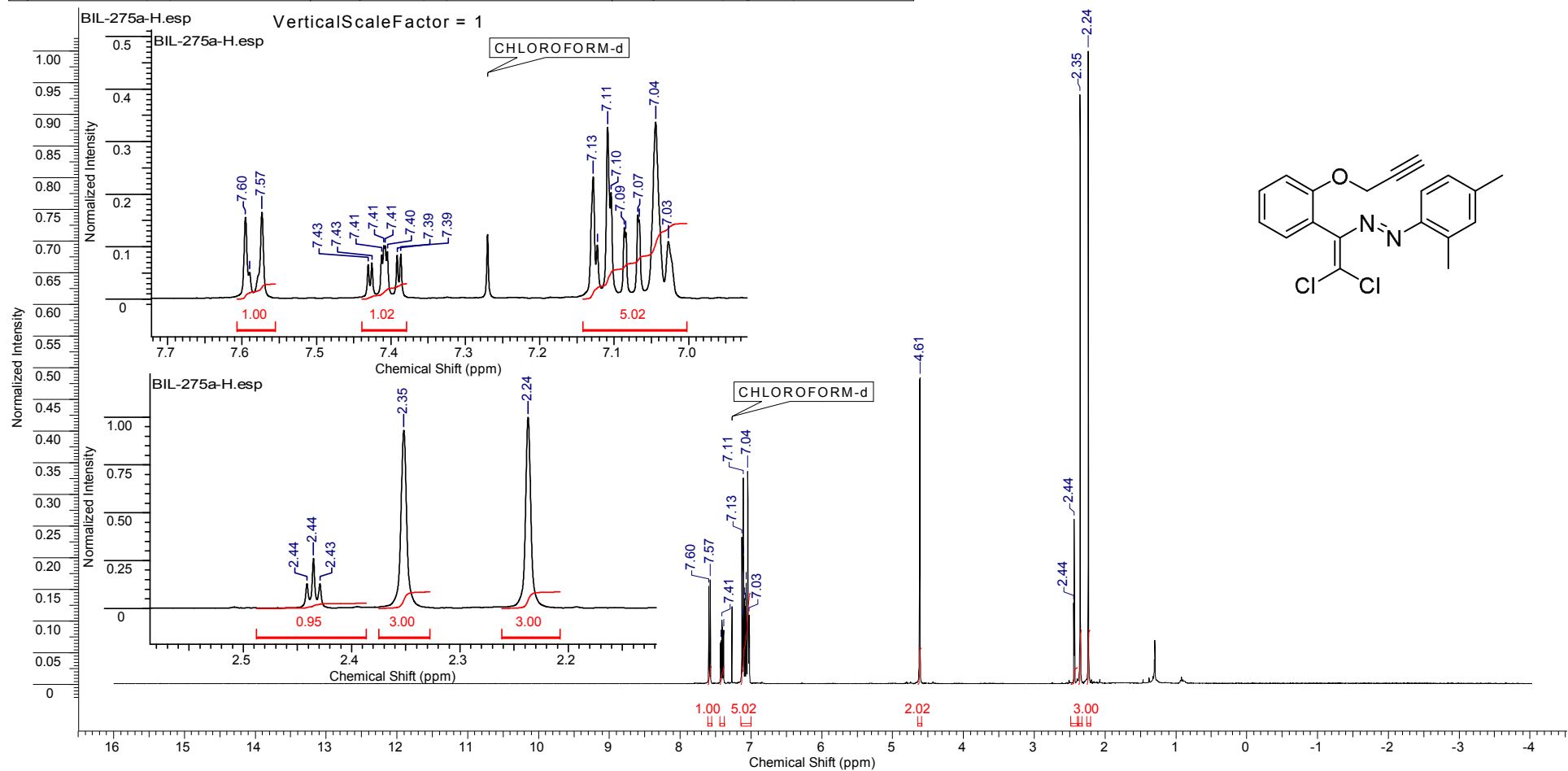
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Date Stamp	07 Dec 2018 12:26:40	File Name		Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Points Count	131072	Pulse Sequence	zg30	Receiver Gain	724.10
Spectrum Offset (Hz)	2395.7031	Sweep Width (Hz)	8012.76	SW(cyclical) (Hz)	8012.82
		Temperature (degree C)	27.000	Solvent	CHLOROFORM-d

¹H NMR spectrum of **2l** (400.1 MHz, CDCl₃)

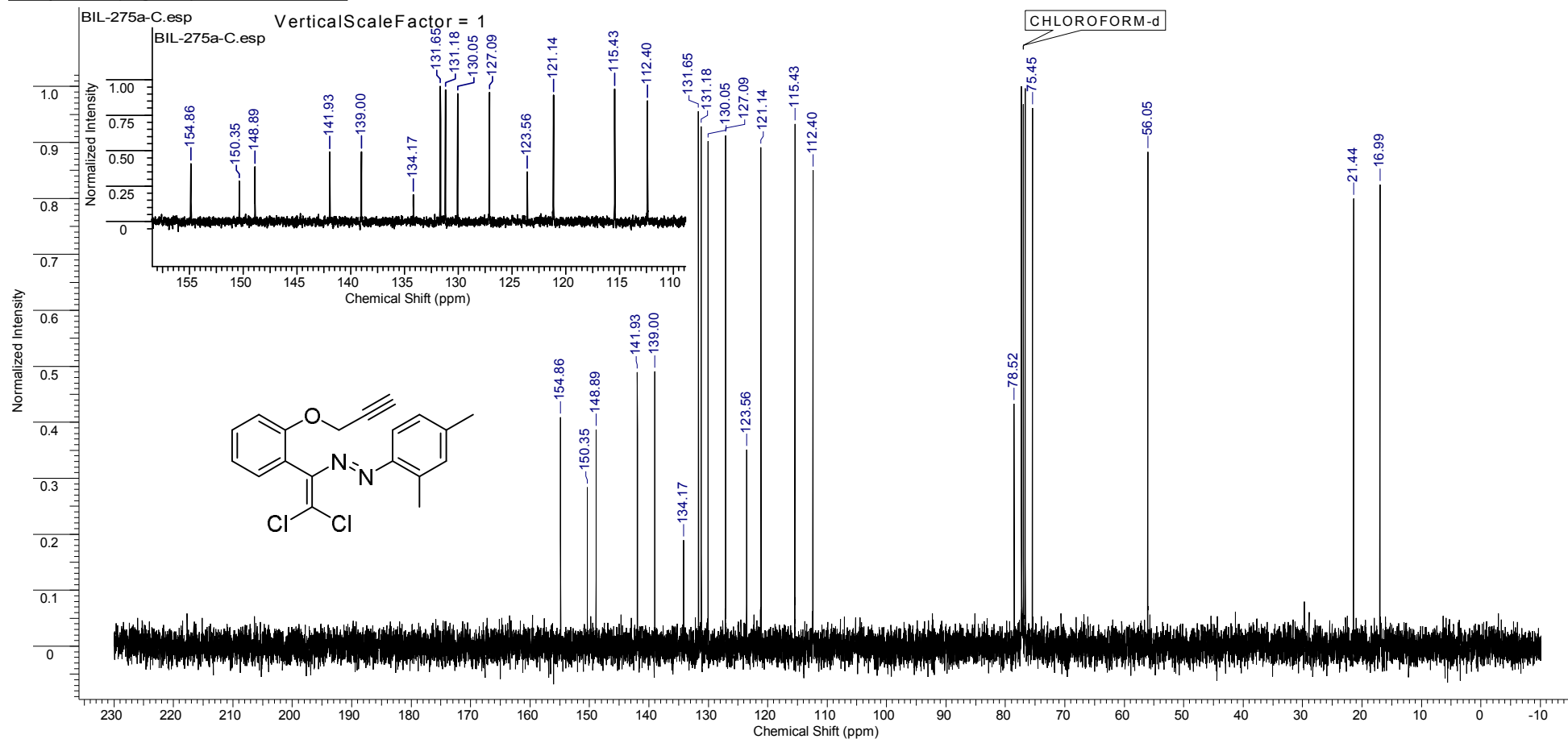
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Date Stamp	20 Nov 2018 11:37:36	File Name		Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	195	Origin	spect
Points Count	65536	Pulse Sequence	zgpg30	Receiver Gain	8192.00
Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11062.2871	SW(cyclical) (Hz)	24154.59
				Sweep Width (Hz)	24154.22
				Temperature (degree C)	27.000

¹³C NMR spectrum of **2I** (100.6 MHz, CDCl₃)

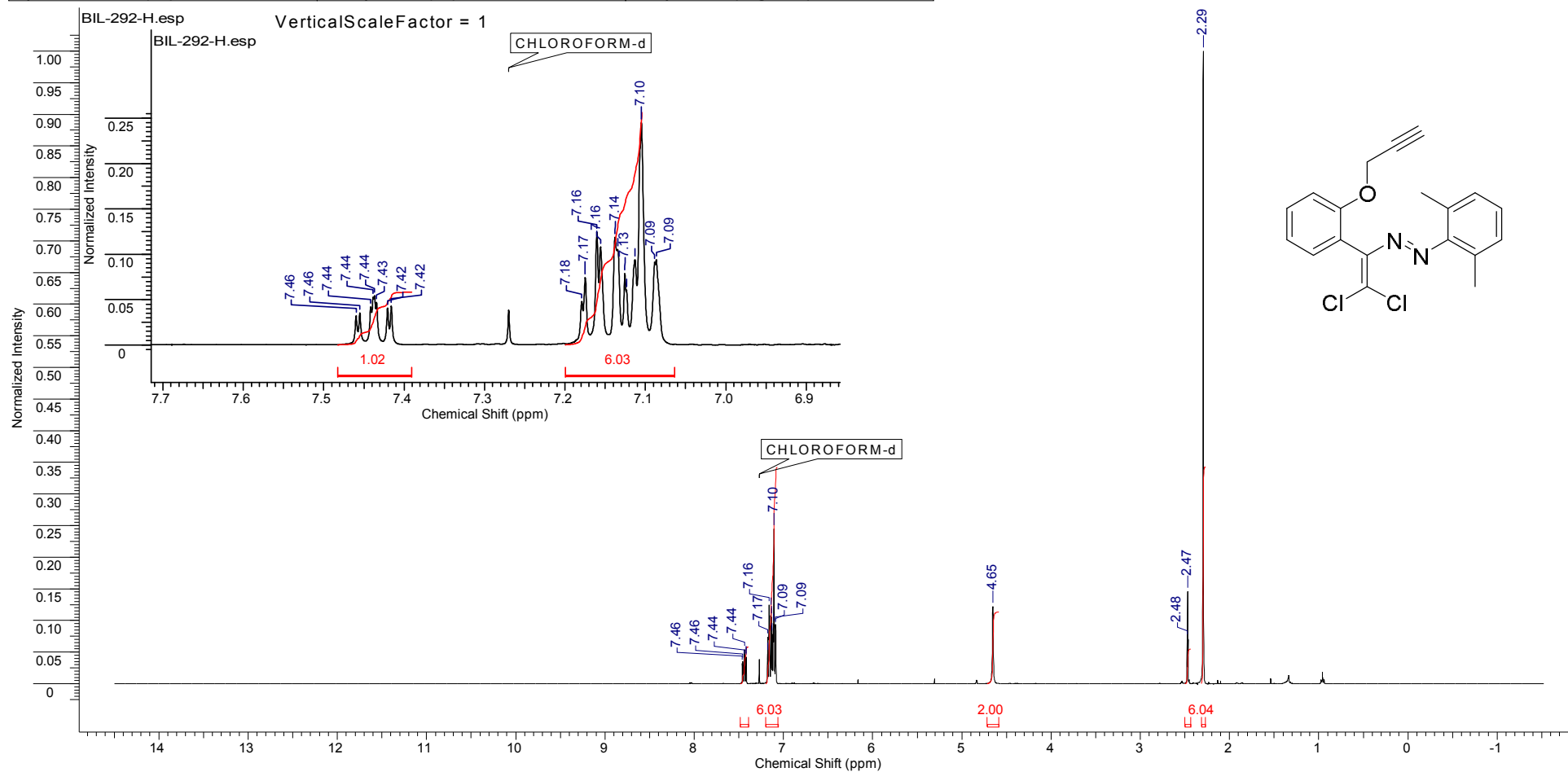
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Date Stamp	05 Feb 2019 11:33:20	File Name		Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	5	Origin	spect
Points Count	131072	Pulse Sequence	zg30	Receiver Gain	57.00
Spectrum Offset (Hz)	2395.8254	Sweep Width (Hz)	8012.76	SW(cyclical) (Hz)	8012.82
		Temperature (degree C)	27.000	Solvent	CHLOROFORM-d

¹H NMR spectrum of **2m** (400.1 MHz, CDCl₃)

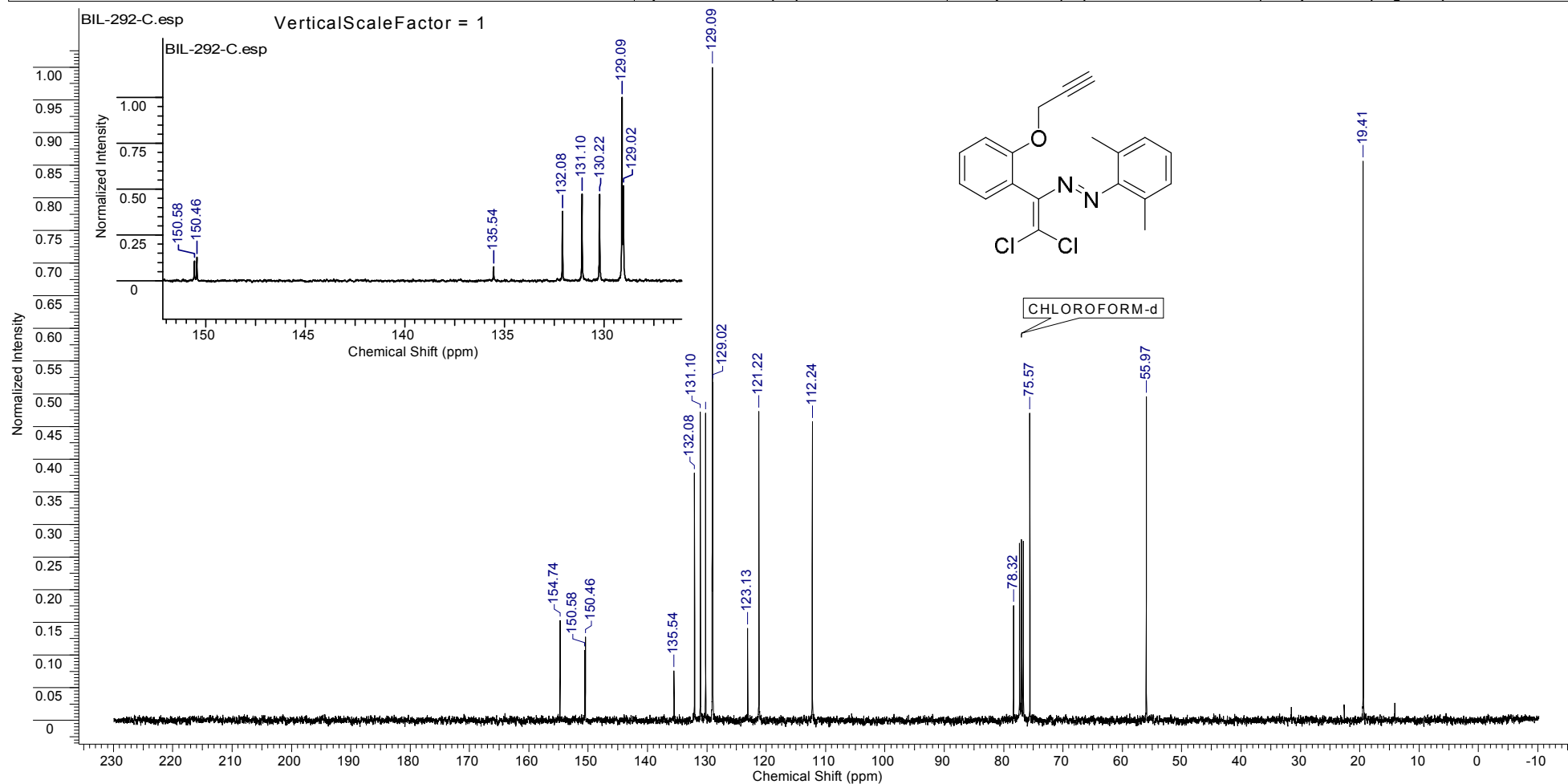
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	05 Feb 2019 11:35:28
Date Stamp	05 Feb 2019 11:35:28				
File Name				Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	73	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	13004.00
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11060.7207
				Sweep Width (Hz)	24154.41

¹³C NMR spectrum of **2m** (100.6 MHz, CDCl₃)

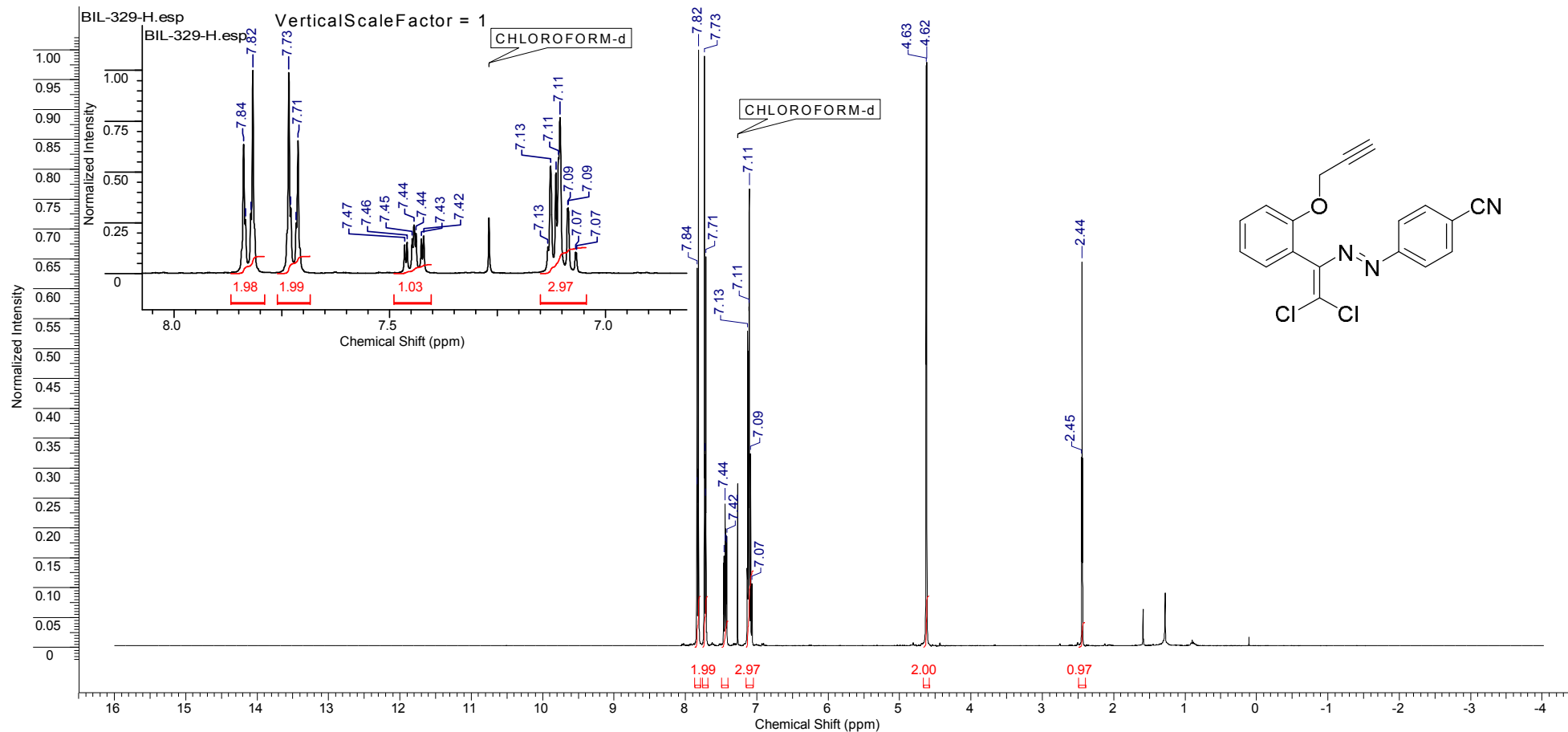
Acquisition Time (sec)	2.5559	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	21 Nov 2018 14:30:24
Date Stamp	21 Nov 2018 14:30:24	File Name		Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	5	Origin	spect
Points Count	65536	Pulse Sequence	zq30	Receiver Gain	64.00
Spectrum Offset (Hz)	2595.9934	Sweep Width (Hz)	6410.16	SW(cyclical) (Hz)	6410.26
		Temperature (degree C)	27.000	Solvent	CHLOROFORM-d

¹H NMR spectrum of **2n** (400.1 MHz, CDCl₃)

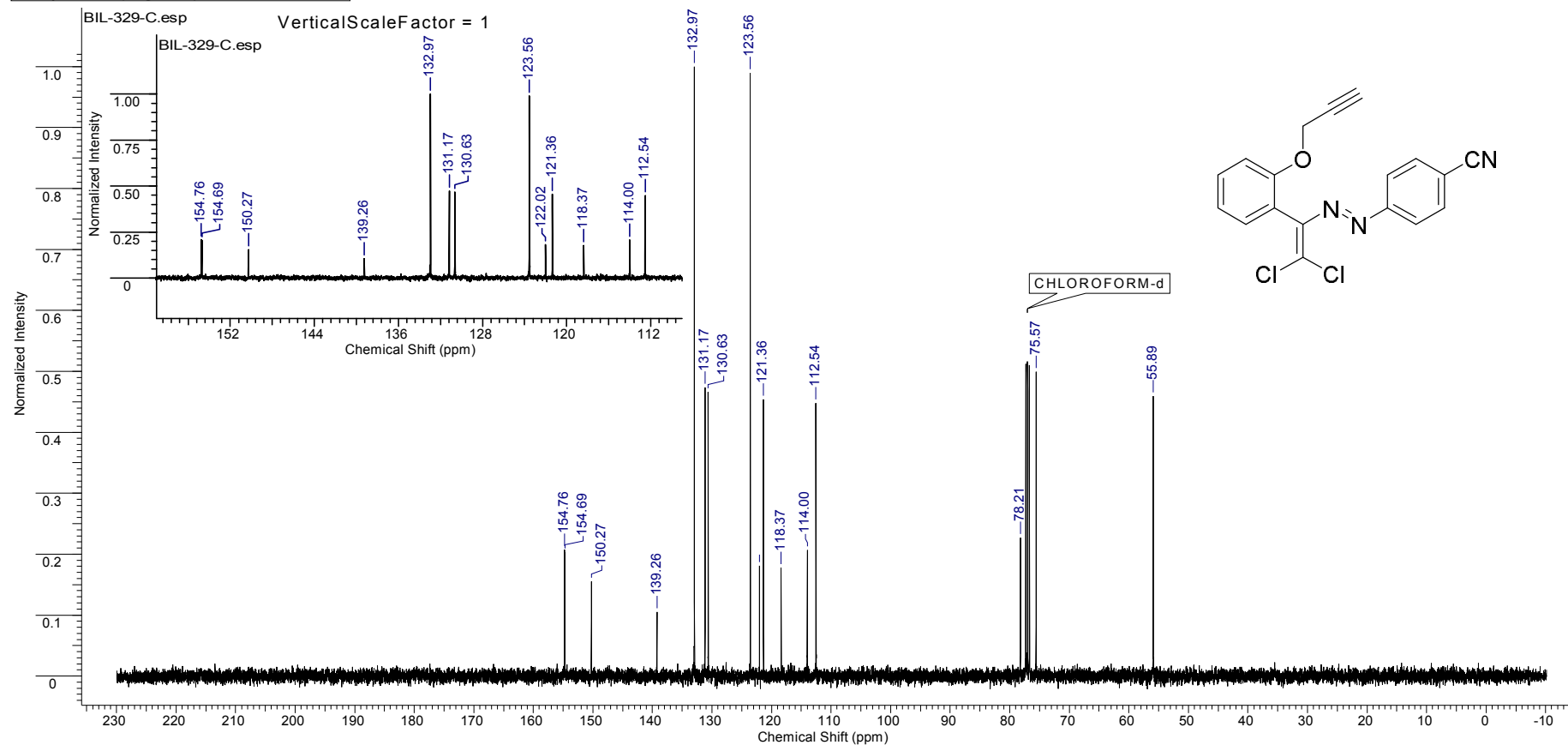
Acquisition Time (sec)	0.4999	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	22 Nov 2018 08:10:40
Date Stamp	22 Nov 2018 08:10:40	File Name		Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	154	Origin	spect
Points Count	65536	Pulse Sequence	zgpg30	Original Points Count	12076
Solvent	CHLOROFORM-d	Receiver Gain	8192.00	SW(cyclical) (Hz)	24154.59
		Spectrum Offset (Hz)	11053.8105	Sweep Width (Hz)	24154.22
				Temperature (degree C)	27.000

¹³C NMR spectrum of **2n** (100.6 MHz, CDCl₃)

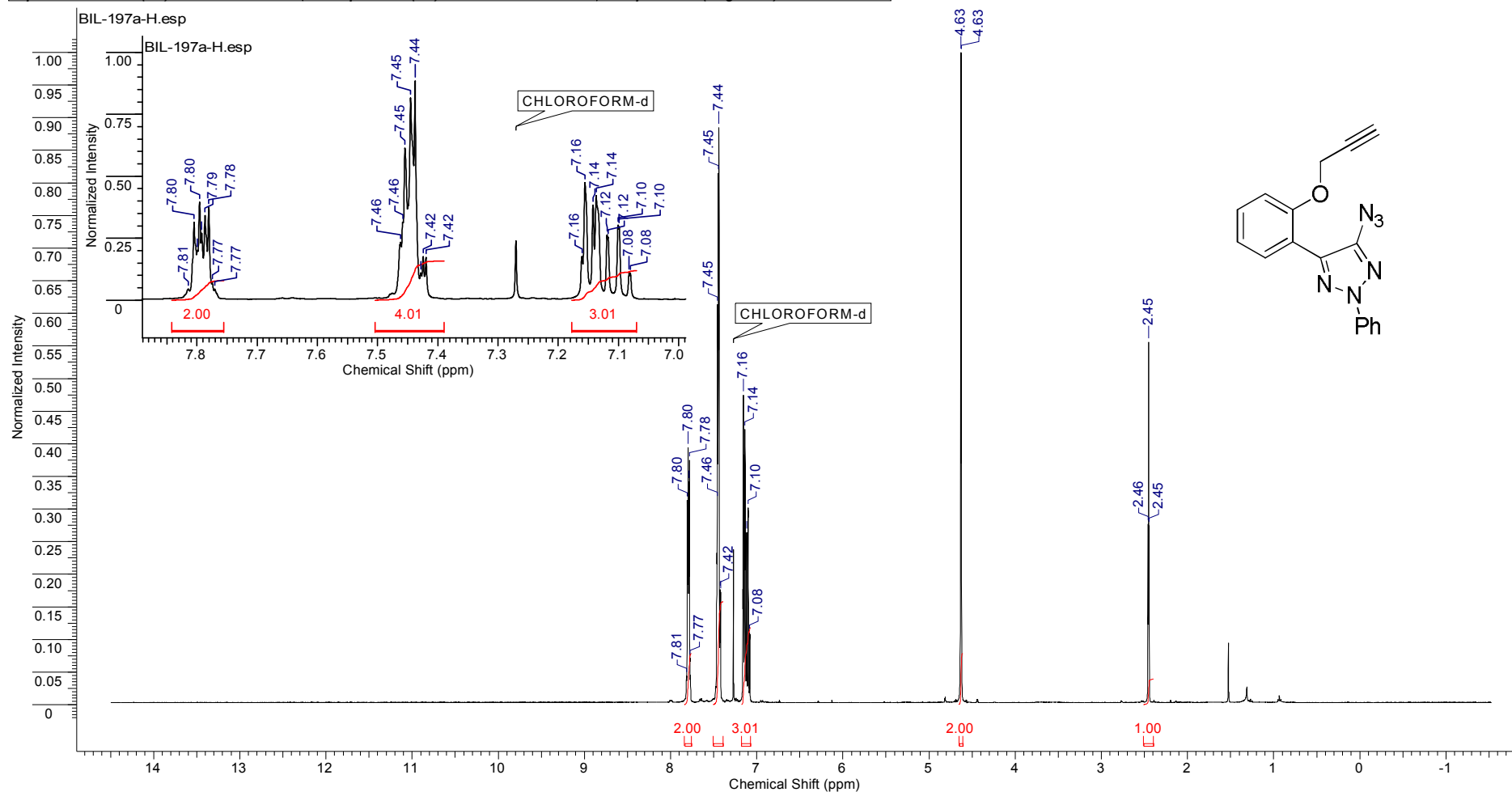
Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	05 Mar 2019 11:33:20
Date Stamp	05 Mar 2019 11:33:20				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	90.50
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.8254

¹H NMR spectrum of **2o** (400.1 MHz, CDCl₃)

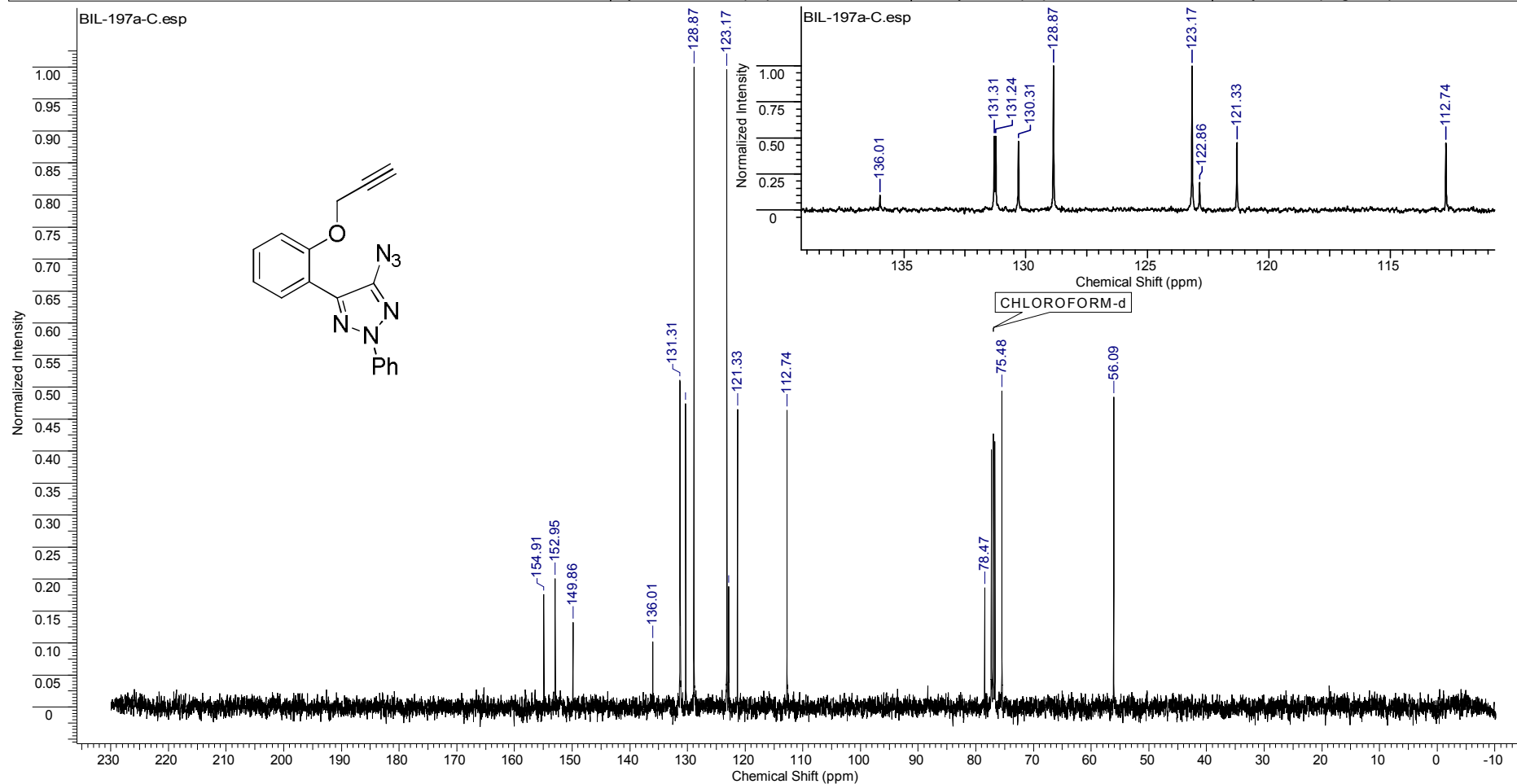
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	05 Mar 2019 11:35:28
Date Stamp	05 Mar 2019 11:35:28				
File Name				Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	65	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11057.0352
Temperature (degree C)	27.000			Receiver Gain	16384.00
				Sweep Width (Hz)	24154.41

¹³C NMR spectrum of **2o** (100.6 MHz, CDCl₃)

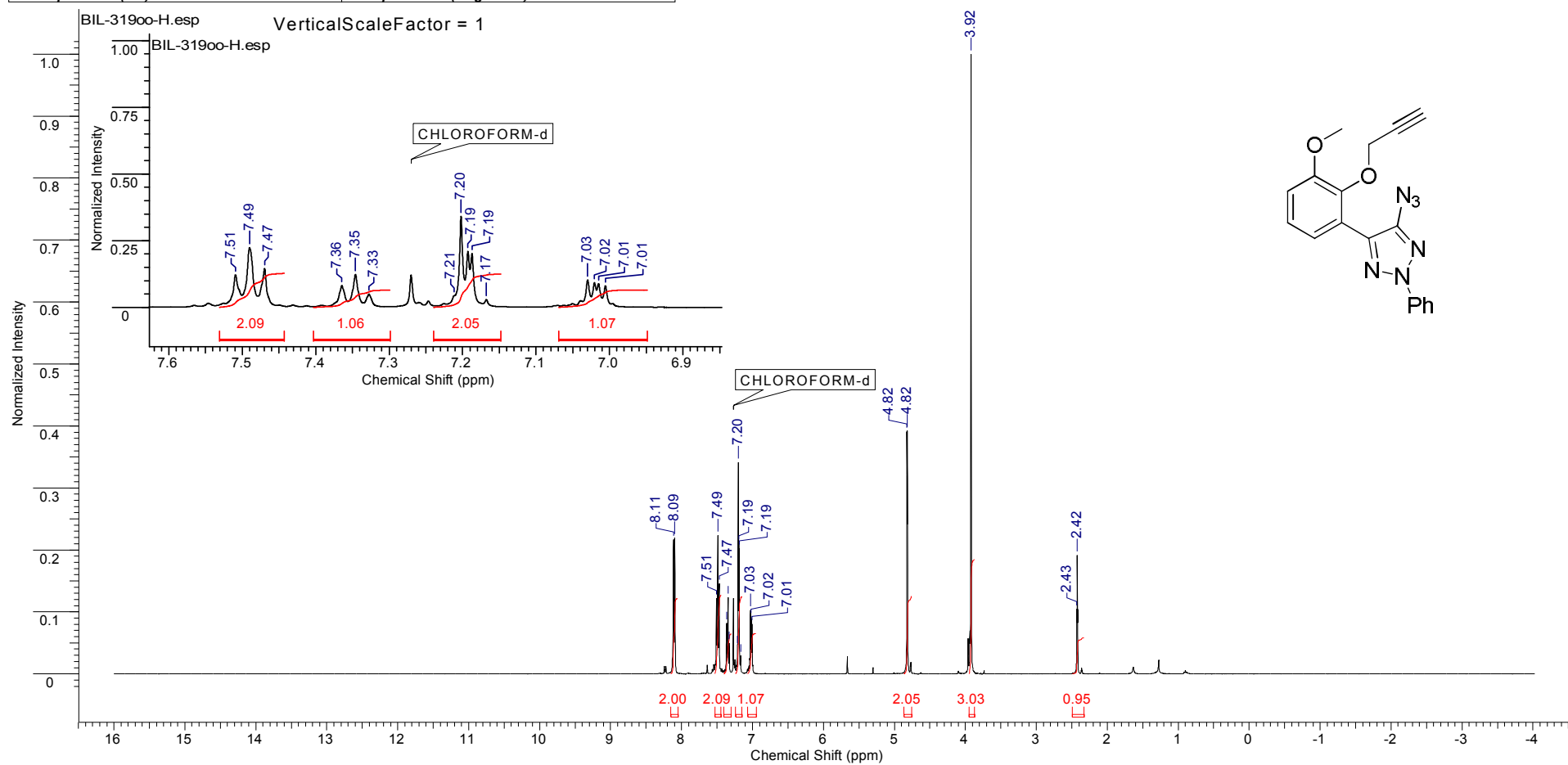
Acquisition Time (sec)	2.5559	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	18 Oct 2018 09:16:48
Date Stamp	18 Oct 2018 09:16:48	File Name		Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Points Count	65536	Pulse Sequence	zg30	Receiver Gain	90.50
Spectrum Offset (Hz)	2595.8953	Sweep Width (Hz)	6410.16	SW(cyclical) (Hz)	6410.26
		Temperature (degree C)	27.000	Solvent	CHLOROFORM-d

¹H NMR spectrum of **3a** (400.1 MHz, CDCl₃)

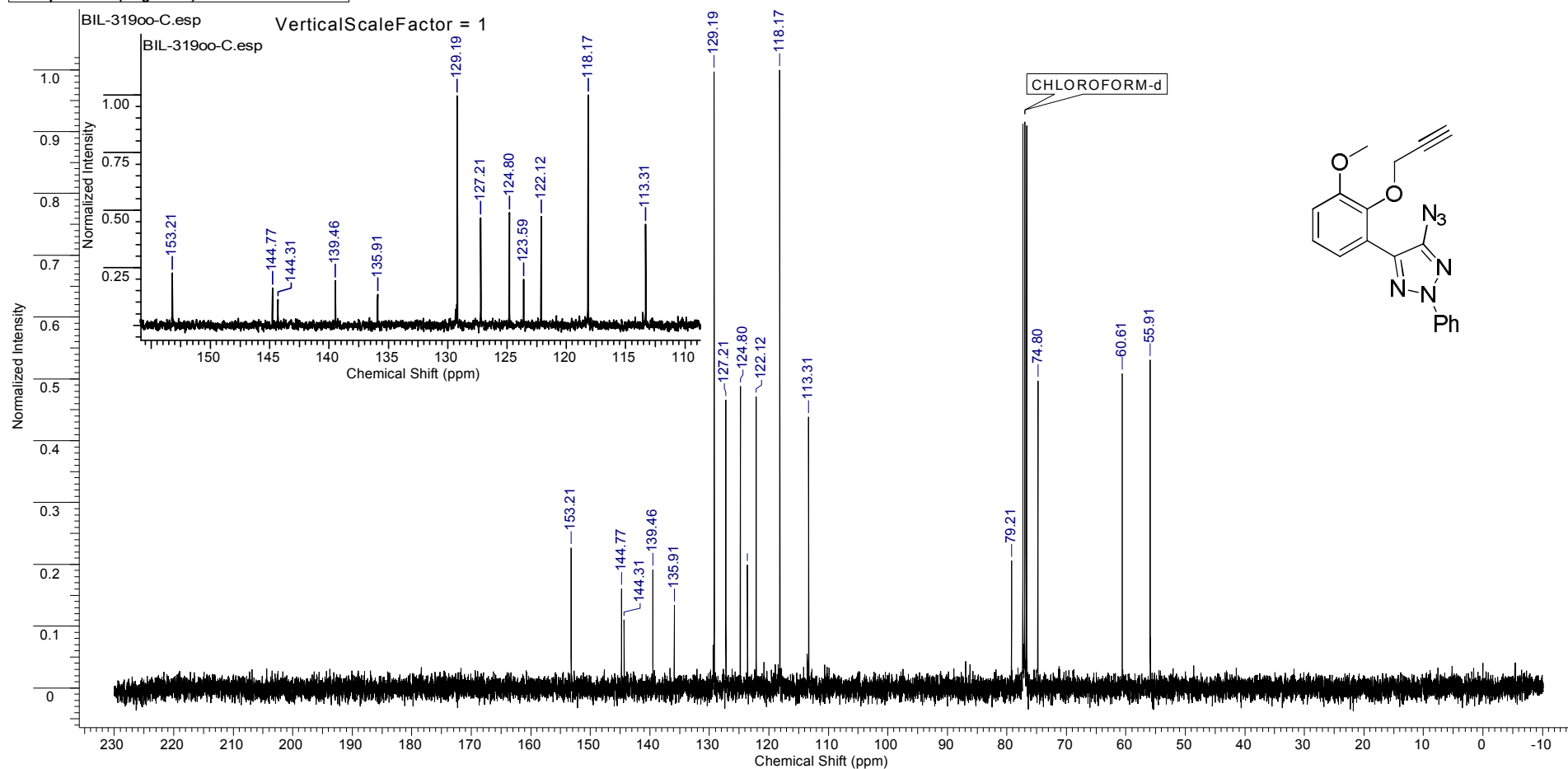
Acquisition Time (sec)	0.4999	Comment	5 mm BBO BB-1H/D Z3918/0123		Date	18 Oct 2018 09:18:56	
Date Stamp	18 Oct 2018 09:18:56	File Name	spect		Frequency (MHz)	100.61	
Nucleus	¹³ C	Number of Transients	102	Origin	Original Points Count	12076	Owner
Points Count	65536	Pulse Sequence	zgpg30	Receiver Gain	SW(cyclical) (Hz)	24154.59	root
Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11057.4961	Sweep Width (Hz)	24154.22	Temperature (degree C)	27.000

¹³C NMR spectrum of **3a** (100.6 MHz, CDCl₃)

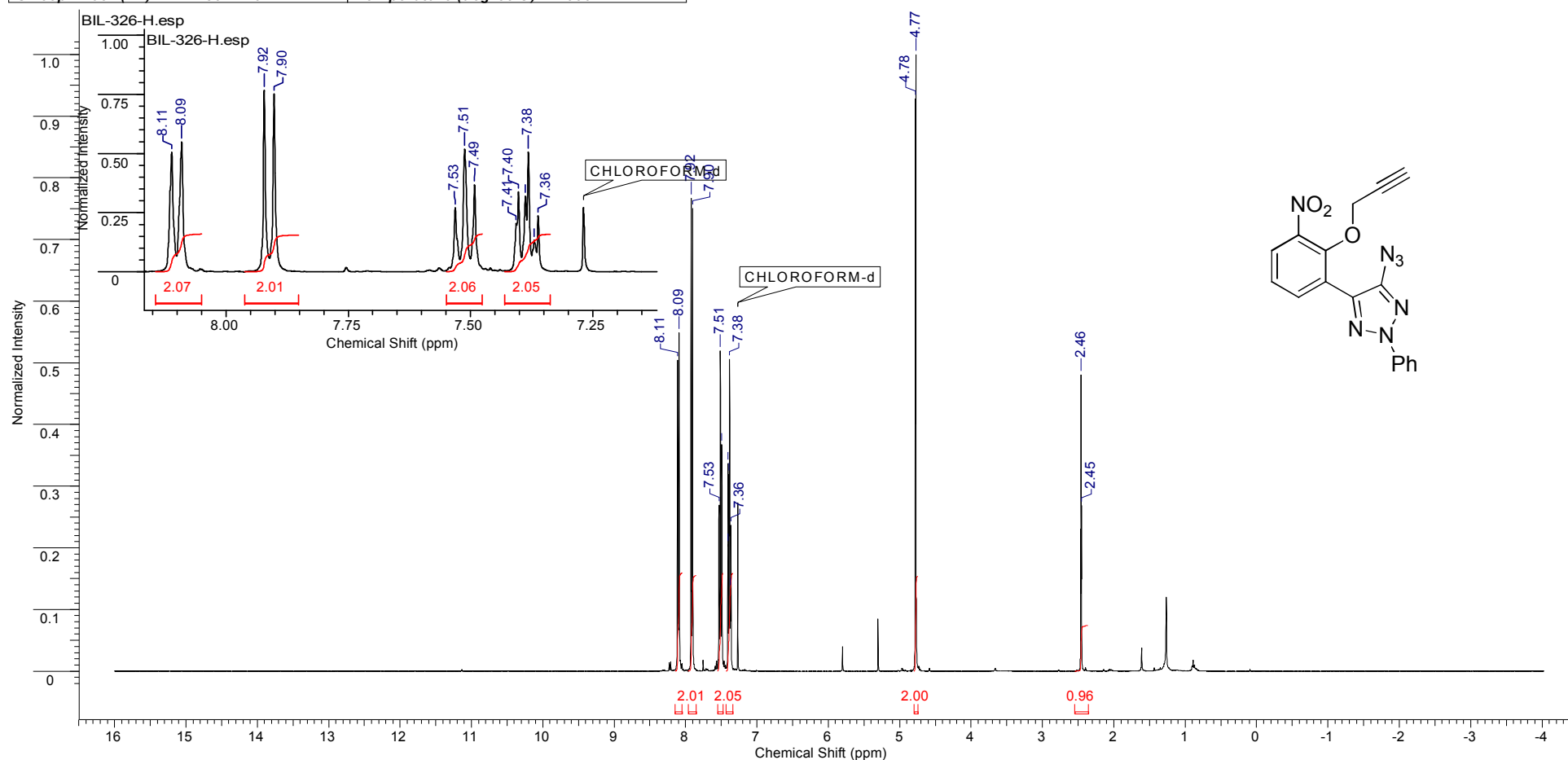
Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	07 May 2019 11:29:04
Date Stamp	07 May 2019 11:29:04				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zq30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	114.00
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2396.0088

¹H NMR spectrum of **3b** (400.1 MHz, CDCl₃)

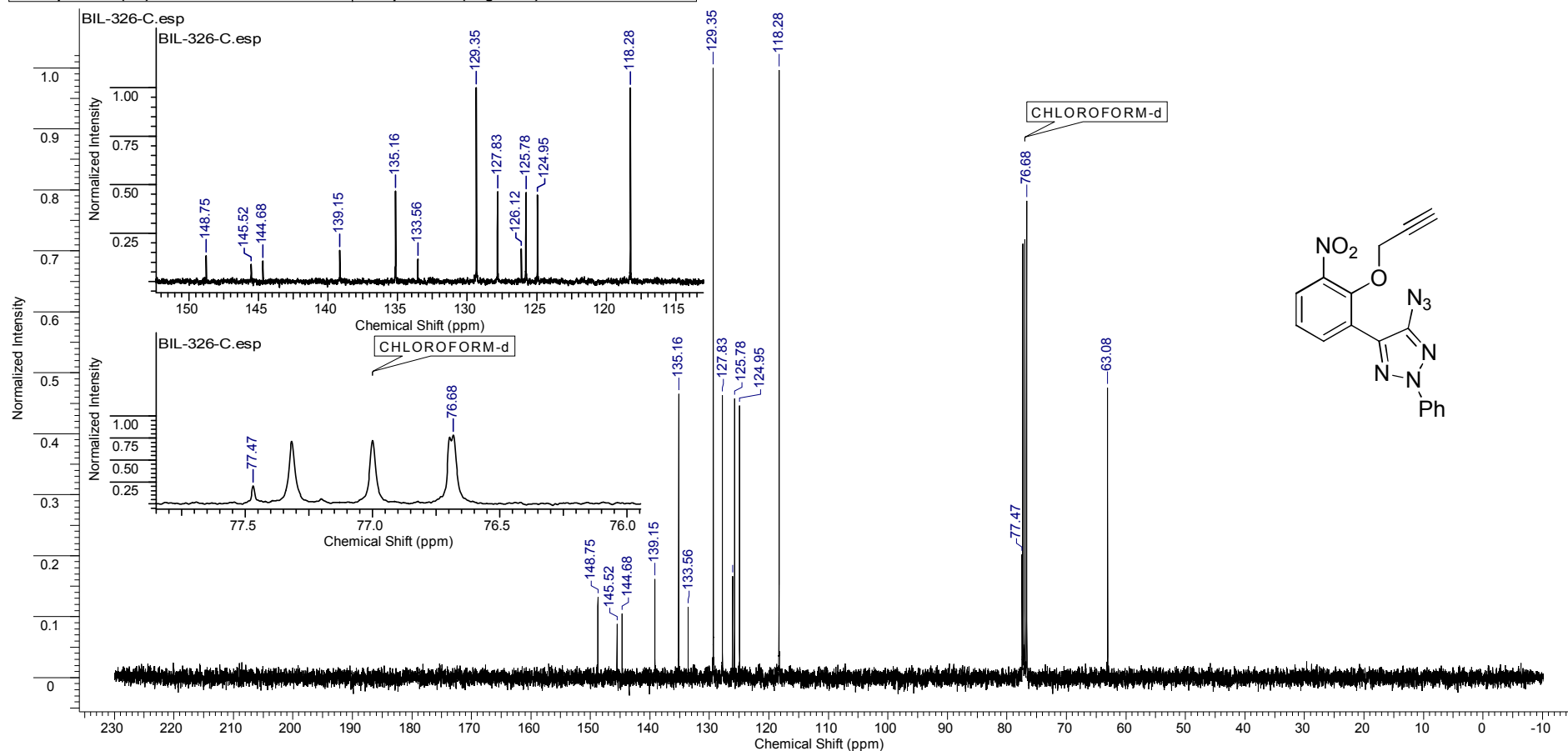
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	07 May 2019 11:29:04
Date Stamp	07 May 2019 11:29:04				
File Name				Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	88	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	13004.00
Temperature (degree C)	27.000	Spectrum Offset (Hz)	11059.4307	Sweep Width (Hz)	24154.41

¹³C NMR spectrum of **3b** (100.6 MHz, CDCl₃)

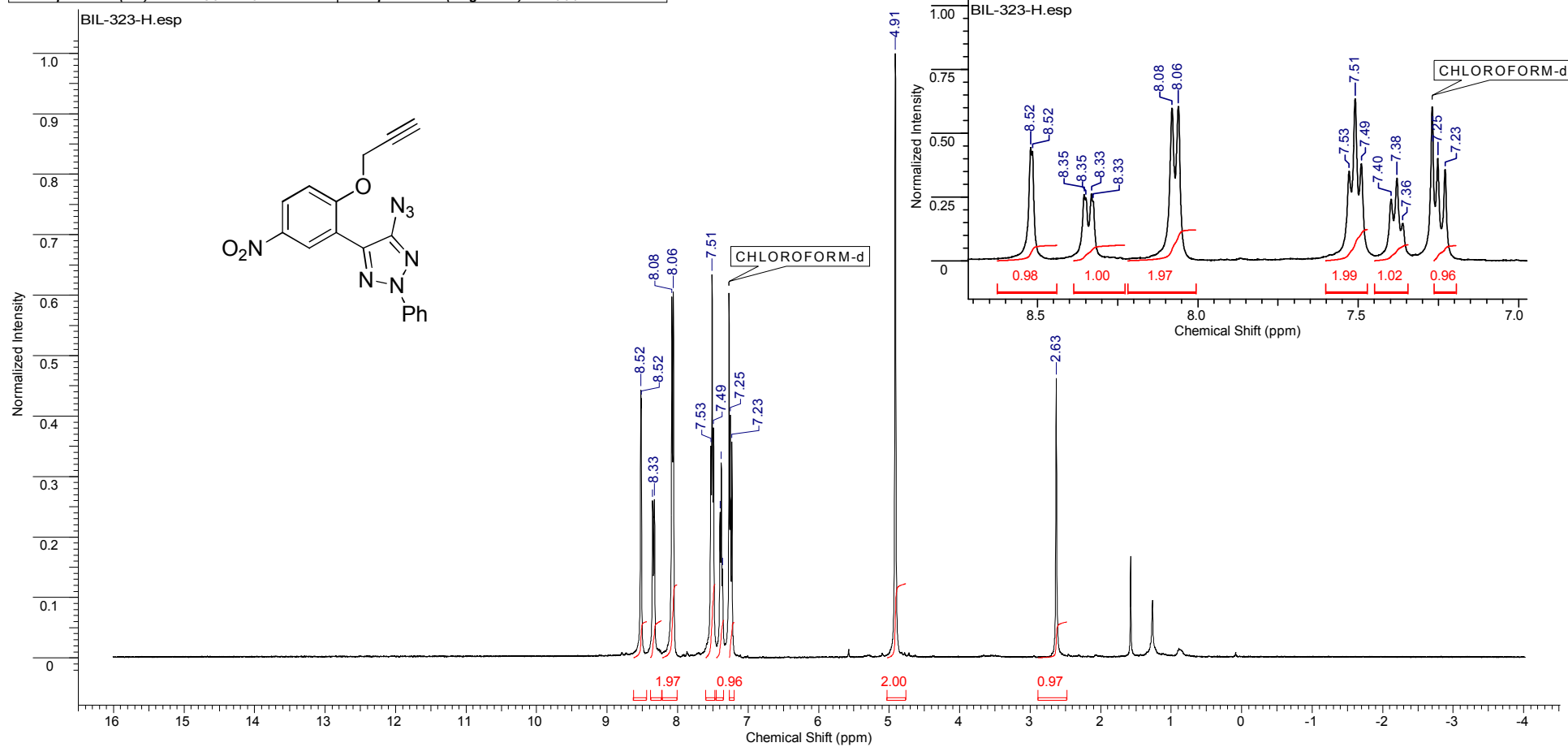
Acquisition Time (sec)	4.0894	Comment	5 mm Dual 13C/1H Z3756/0200	Date	22 Feb 2019 12:07:28
Date Stamp	22 Feb 2019 12:07:28				
File Name					
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	4
Original Points Count	32768	Owner	root	Points Count	131072
Receiver Gain	114.00	SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2396.3145

¹H NMR spectrum of **3c** (400.1 MHz, CDCl₃)

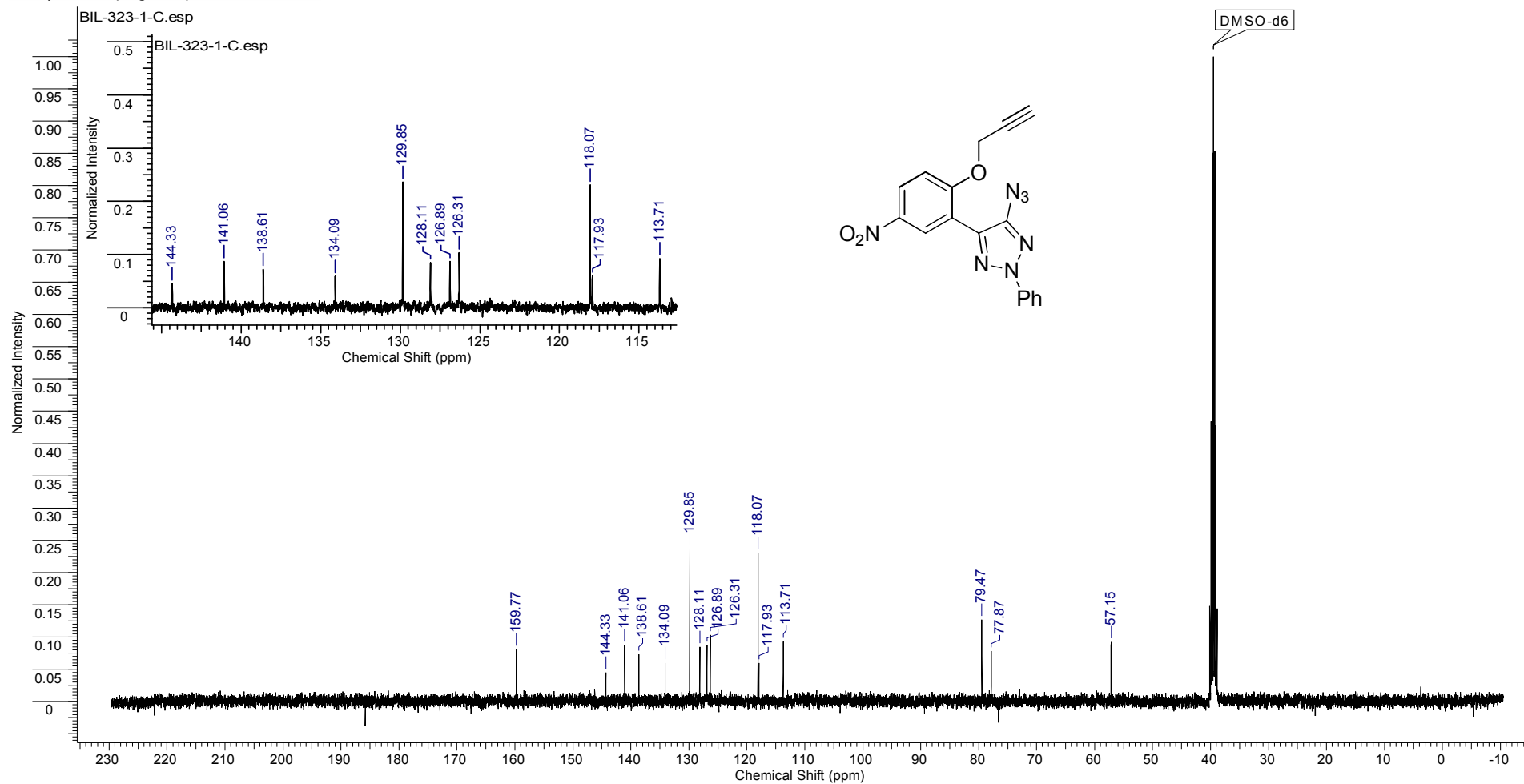
Acquisition Time (sec)	0.6783	Comment	5 mm Dual 13C/1H Z3756/0200	Date	22 Feb 2019 12:18:08
Date Stamp	22 Feb 2019 12:18:08				
File Name					
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	61
Original Points Count	16384	Owner	root	Points Count	131072
Receiver Gain	14596.50	SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d
Sweep Width (Hz)	24154.41	Temperature (degree C)	27.000	Spectrum Offset (Hz)	11060.3525



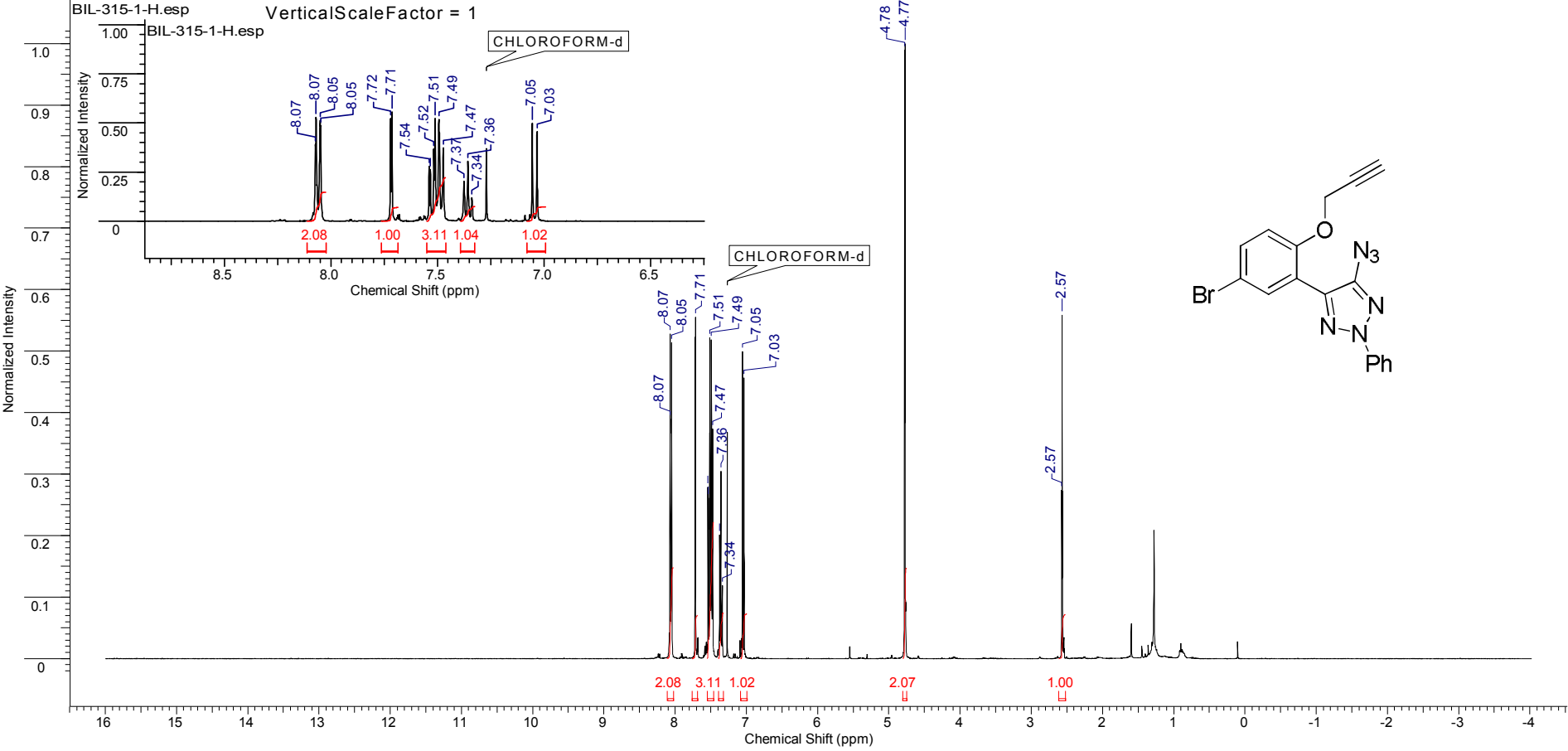
Acquisition Time (sec)	4.0894	Comment	5 mm Dual 13C/1H Z3756/0200	Date	19 Feb 2019 12:56:32
Date Stamp	19 Feb 2019 12:56:32				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	6	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	287.40
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2398.2097

¹H NMR spectrum of **3d** (400.1 MHz, CDCl₃)

Acquisition Time (sec)	0.6783	Comment	Imported from UXNMR.	Date	20 Feb 2019 18:00:04
File Name				Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	113	Original Points Count	16384
Pulse Sequence	zgpg30	Solvent	DMSO-d6	Points Count	131072
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11021.4902
				Sweep Width (Hz)	24154.59

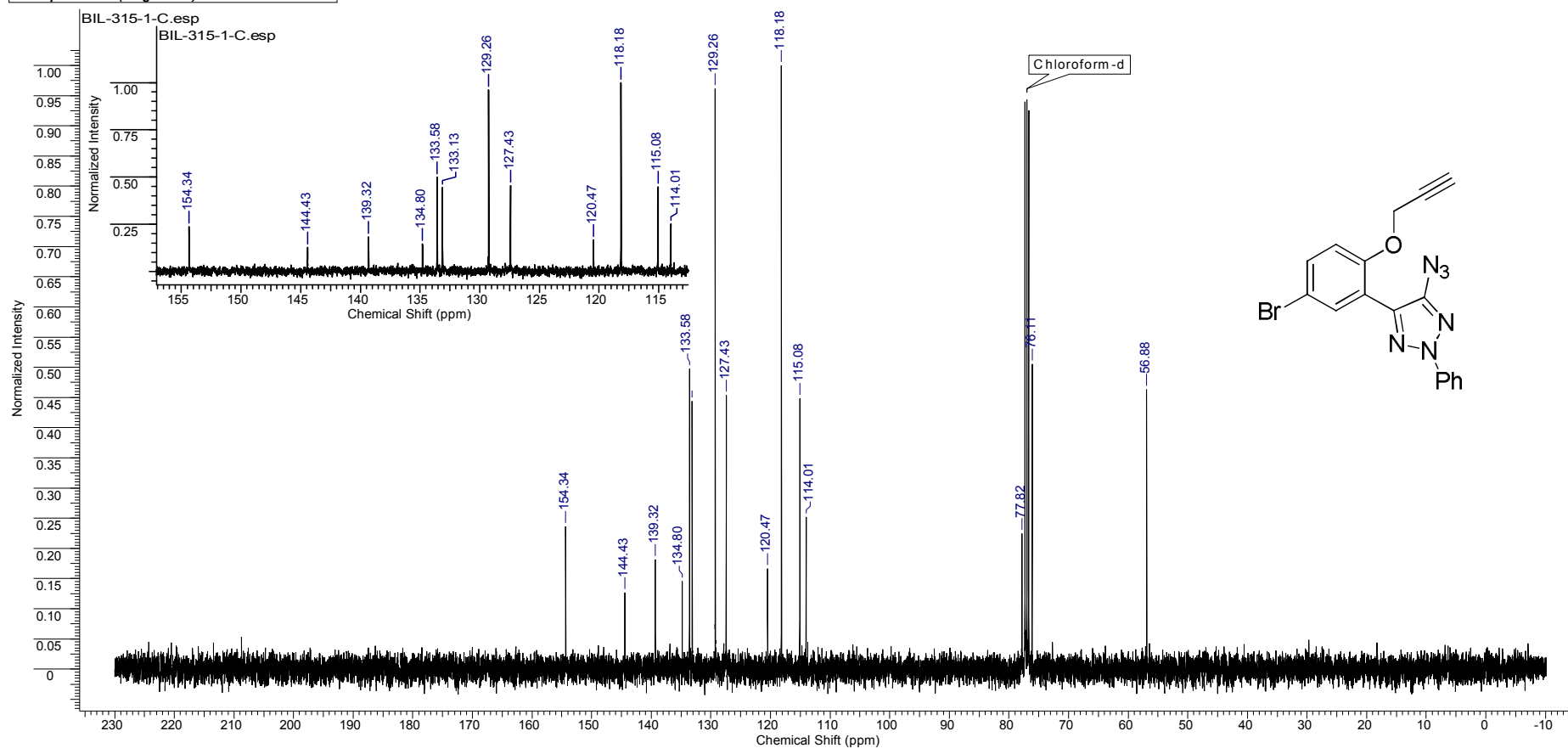
¹³C NMR spectrum of **3d** (100.6 MHz, CDCl₃)

Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	04 Feb 2019 12:33:04
Date Stamp	04 Feb 2019 12:33:04				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	5	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	128.00
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.7644

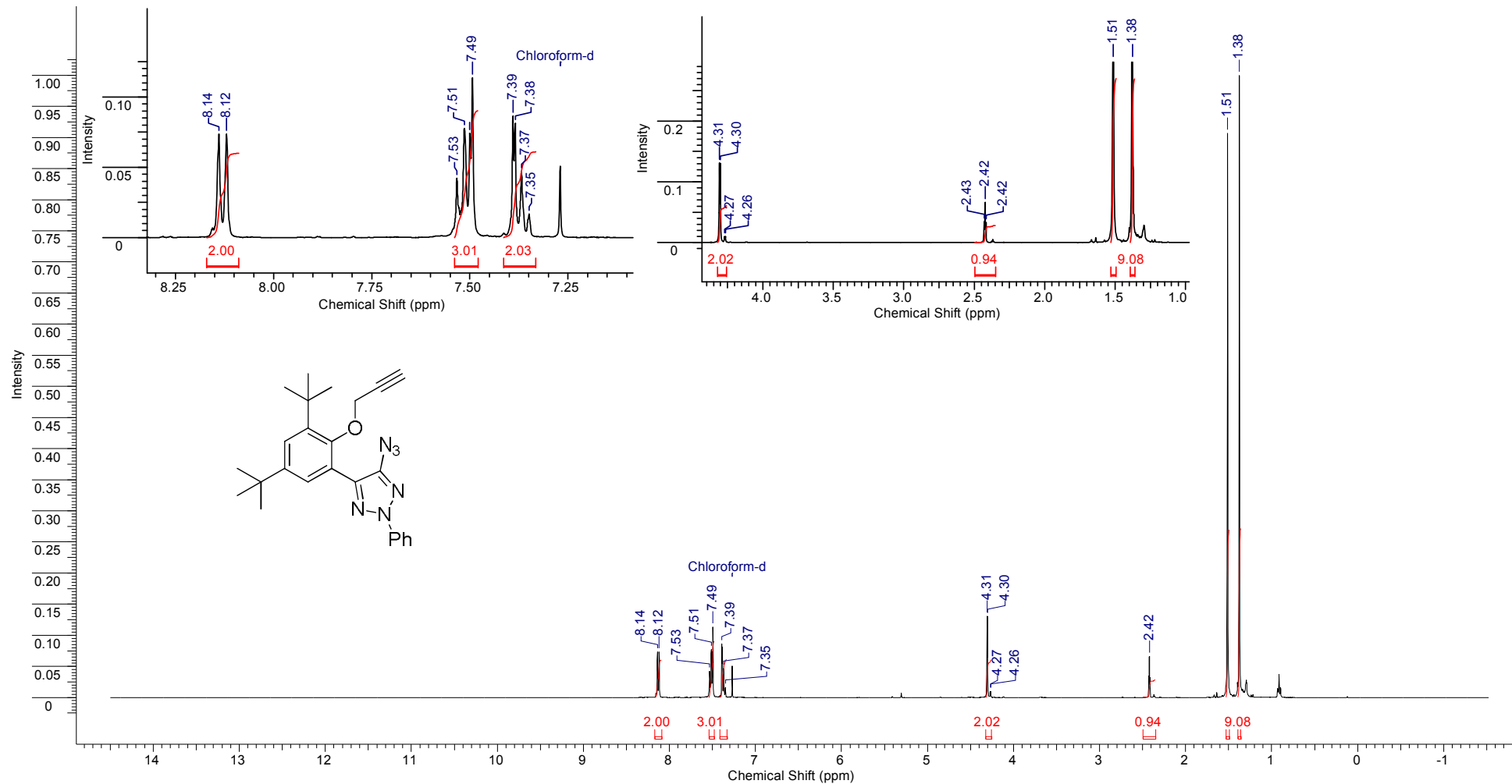


¹H NMR spectrum of **3e** (400.1 MHz, CDCl₃)

Acquisition Time (sec)	0.6783	Comment	Imported from UXNMR.	Date	04 Feb 2019 15:36:32
File Name				Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	54	Points Count	131072
Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Spectrum Offset (Hz)	11060.0088
Temperature (degree C)	27.000			Sweep Width (Hz)	24154.59

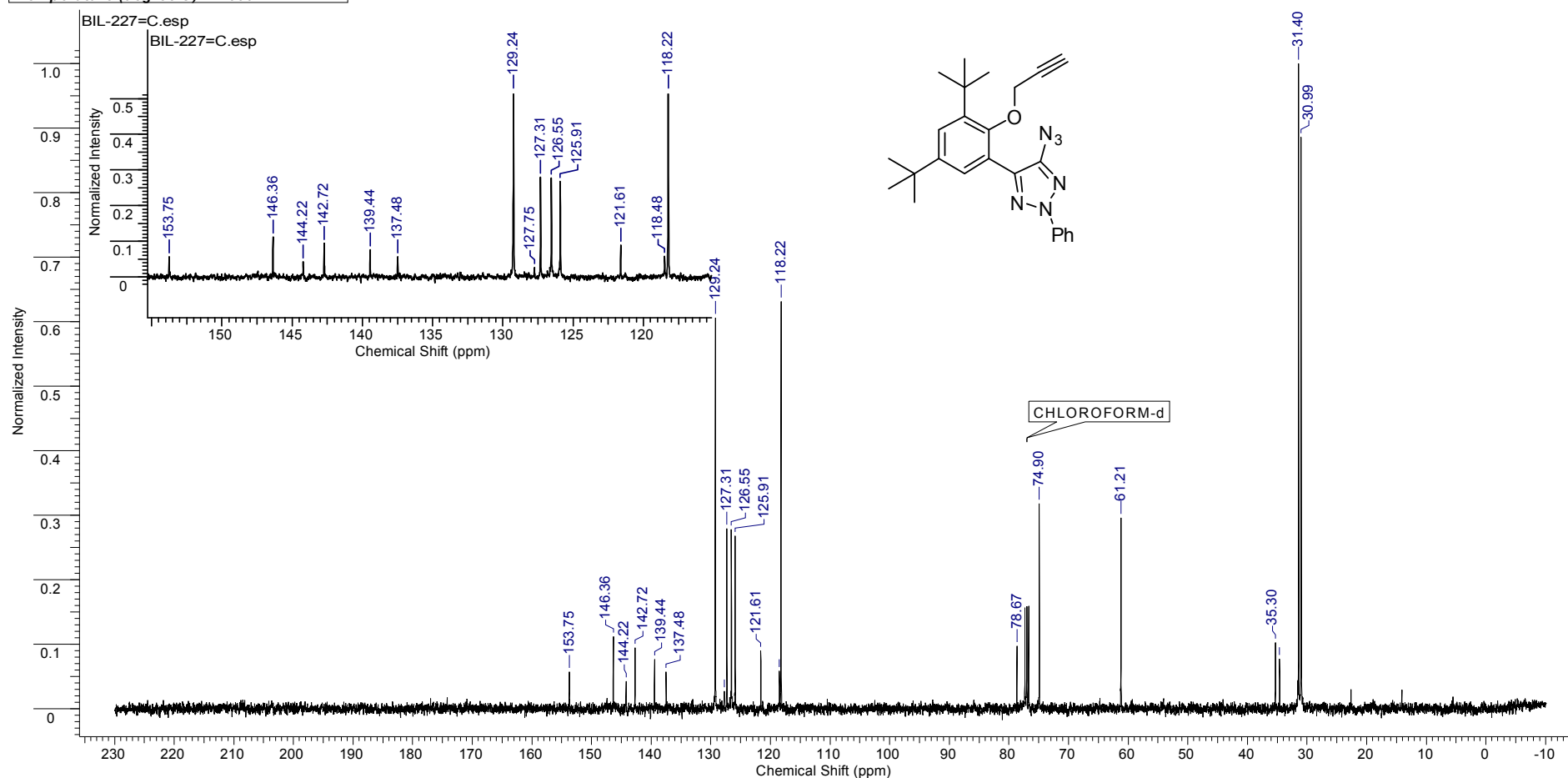
¹³C NMR spectrum of **3e** (100.6 MHz, CDCl₃)

Acquisition Time (sec)	2.5559	Comment Imported from UXNMR.		Date	07 Apr 2018 13:21:14
File Name				Frequency (MHz)	400.13
Nucleus	¹ H	Number of Transients	4	Original Points Count	16384
Pulse Sequence	zg30	Solvent	CHLOROFORM-D	Points Count	65536
Temperature (degree C)	27.000			Sweep Width (Hz)	6410.26

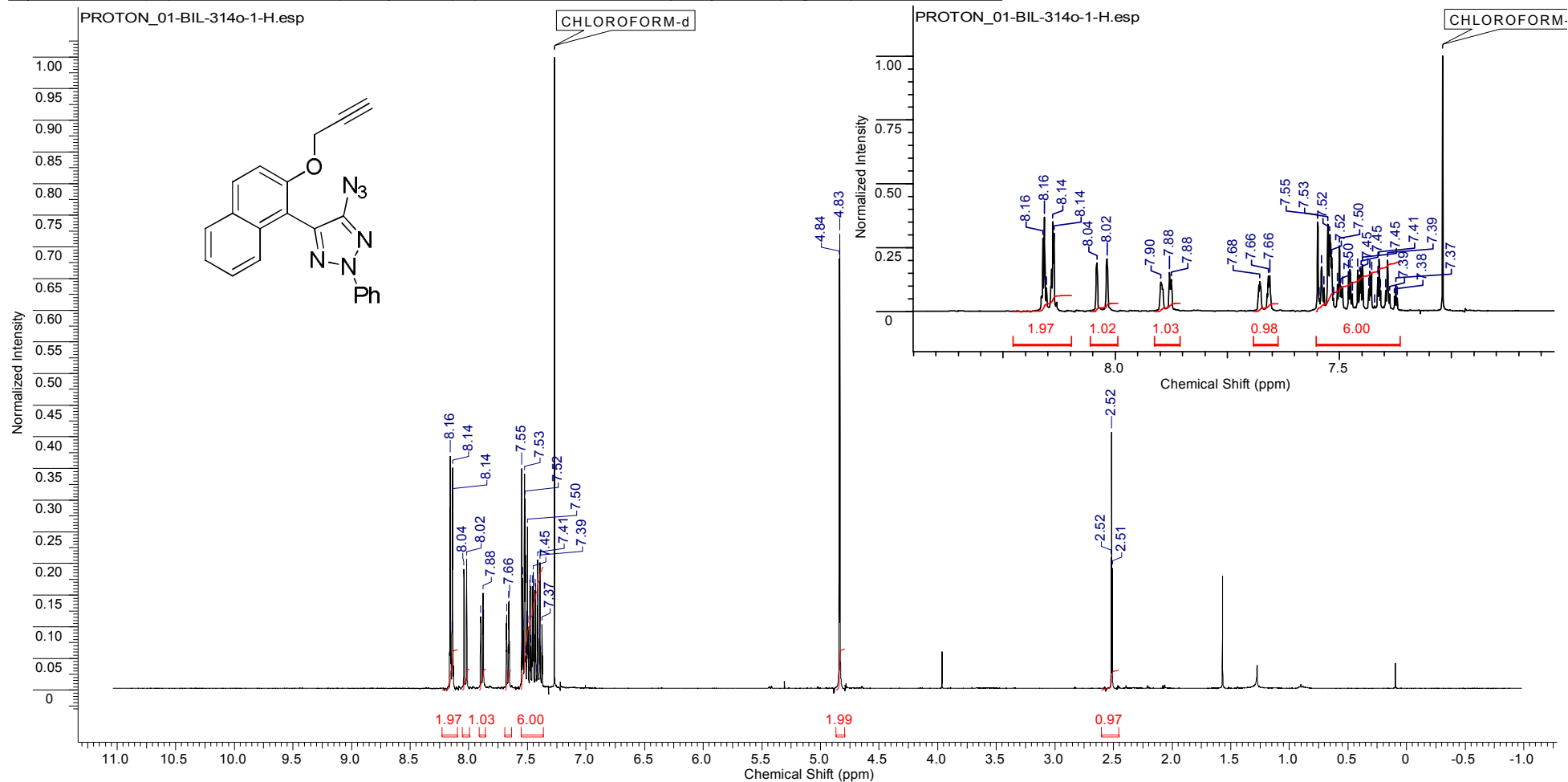


¹H NMR spectrum of 3f (400.1 MHz, CDCl₃)

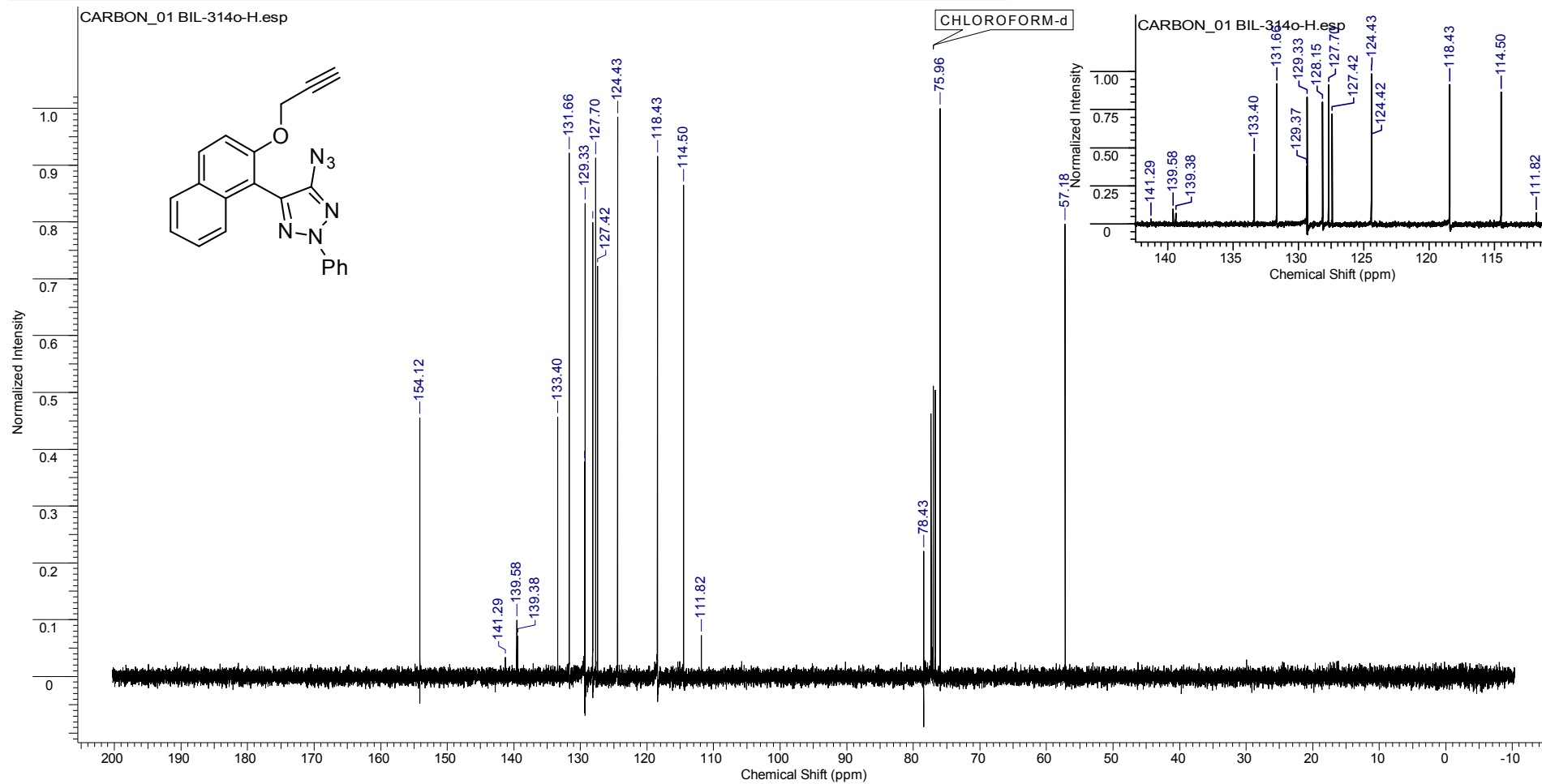
Acquisition Time (sec)	0.4999	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	07 Apr 2018 10:22:56
Date Stamp	07 Apr 2018 10:22:56				
File Name					
Nucleus	¹³ C	Number of Transients	58	Origin	spect
Owner	root	Points Count	65536	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11060.0762
Temperature (degree C)	27.000			Sweep Width (Hz)	24154.22

¹³C NMR spectrum of **3f** (100.6 MHz, CDCl₃)

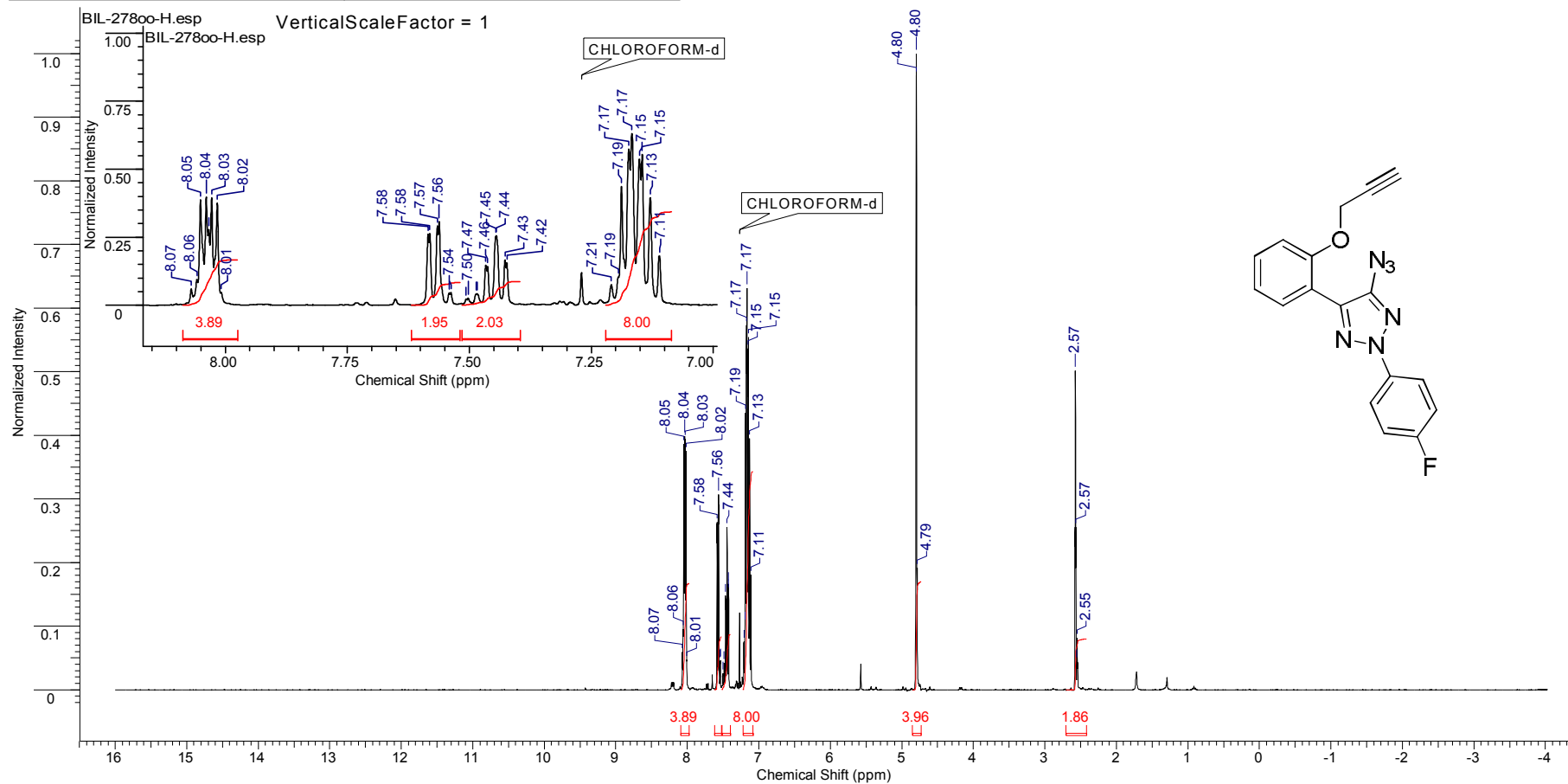
Acquisition Time (sec)	3.4079	Date	Mar 13 2019	Date Stamp	Mar 13 2019
File Name					
Frequency (MHz)	399.96	Nucleus	¹ H	Number of Transients	8
Points Count	16384	Pulse Sequence	s2pul	Receiver Gain	42.00
Spectrum Offset (Hz)	2010.4938	Sweep Width (Hz)	4807.69	Temperature (degree C)	22.000
				Solvent	CHLOROFORM-d

¹H NMR spectrum of **3g** (400.1 MHz, CDCl₃)

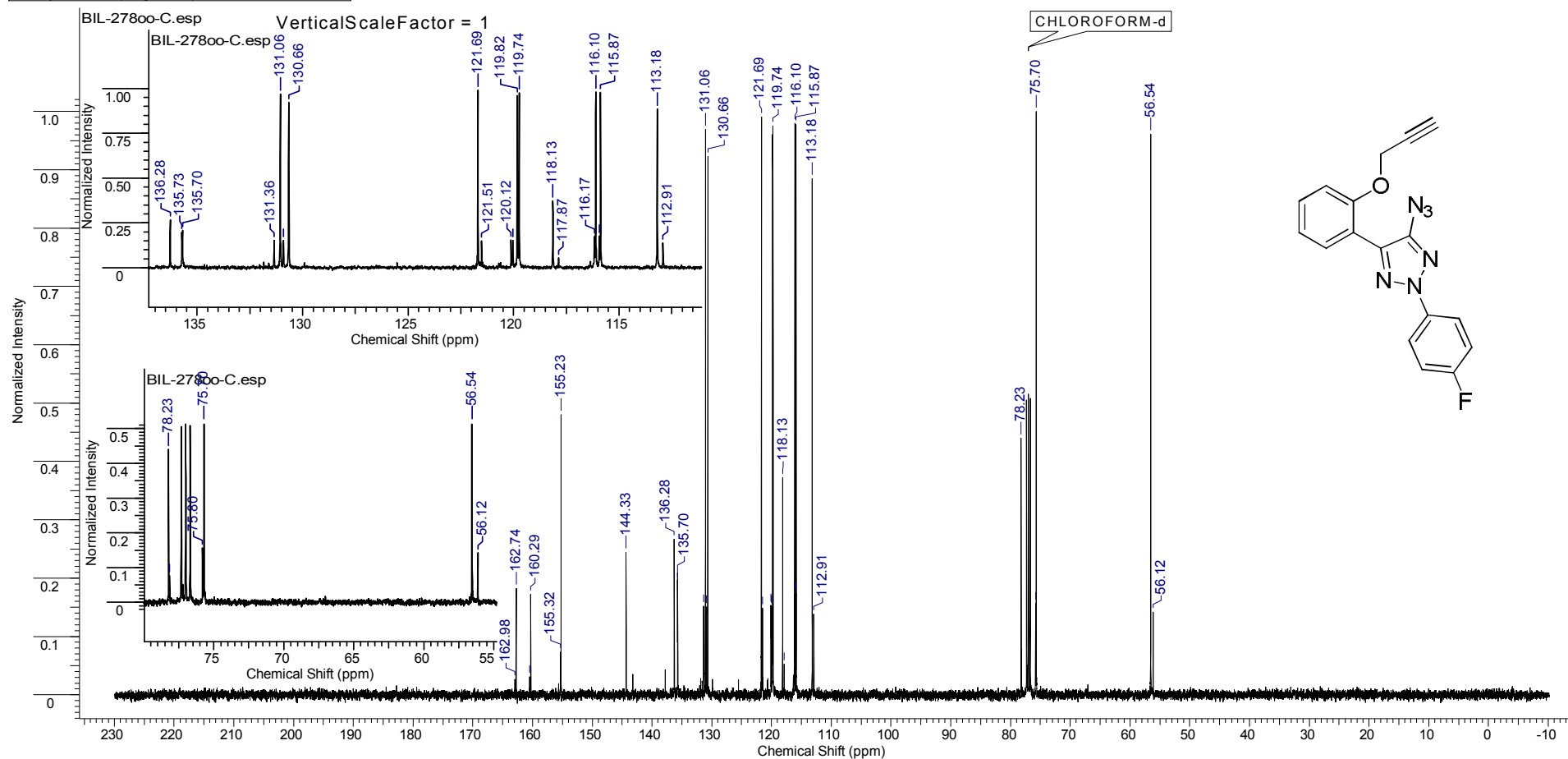
Acquisition Time (sec)	1.5466	Date	Mar 13 2019	Date Stamp	Mar 13 2019
File Name					
Frequency (MHz)	100.58	Nucleus	¹³ C	Number of Transients	5000
Points Count	32768	Pulse Sequence	s2pul	Receiver Gain	60.00
Spectrum Offset (Hz)	9554.1104	Sweep Width (Hz)	21186.44	Temperature (degree C)	22.000
				Original Points Count	32768
				Solvent	CHLOROFORM-d

¹³C NMR spectrum of **3g** (100.6 MHz, CDCl₃)

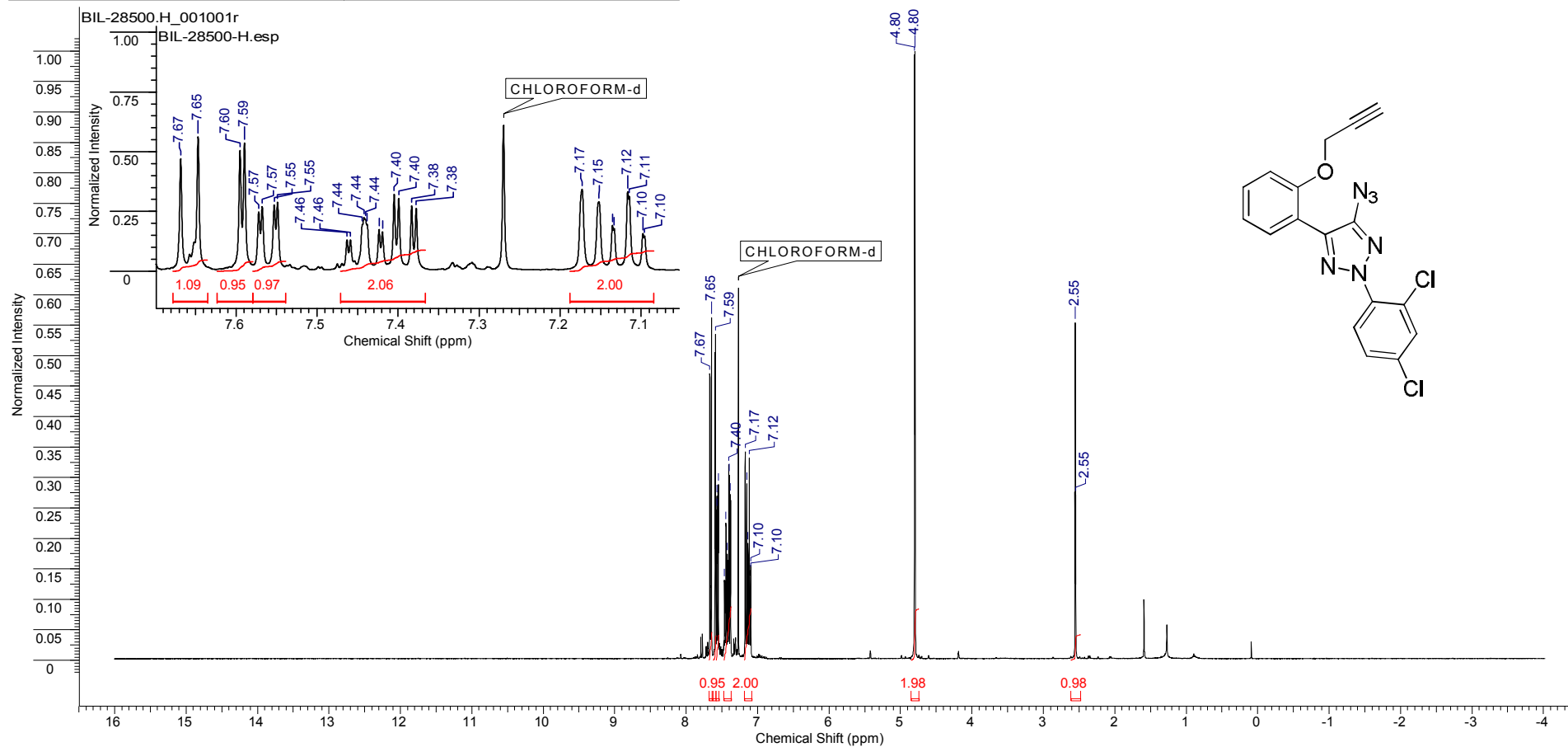
Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	14 May 2019 11:09:52
Date Stamp	14 May 2019 11:09:52				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	45.30
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2396.0703

¹H NMR spectrum of **3h** (400.1 MHz, CDCl₃)

Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	14 May 2019 11:14:08
Date Stamp	14 May 2019 11:14:08				
File Name					
Nucleus	¹³ C	Number of Transients	233	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11053.9023
Temperature (degree C)	27.000				
				Frequency (MHz)	100.61
				Original Points Count	16384
				Receiver Gain	13004.00
				Sweep Width (Hz)	24154.41

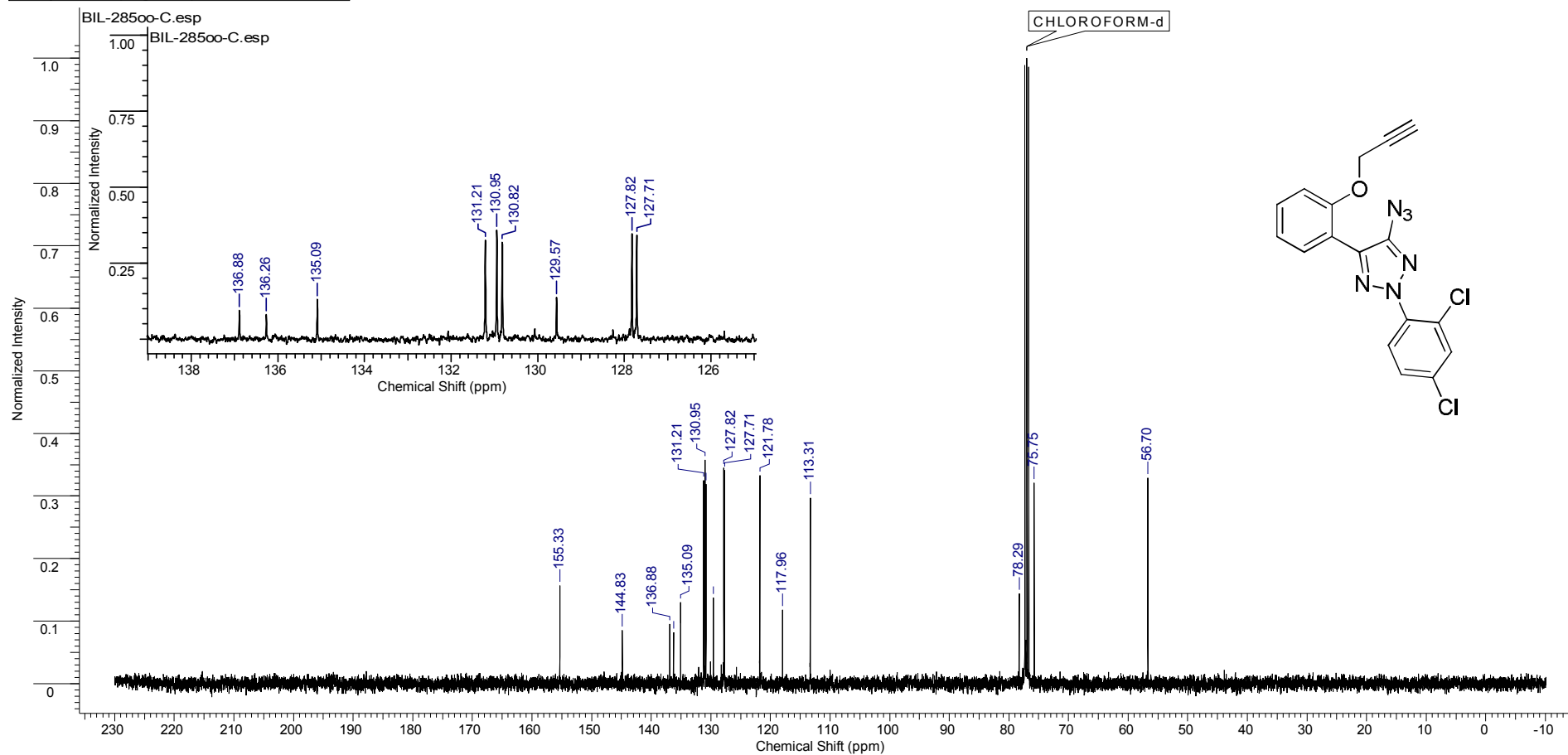
¹³C NMR spectrum of **3h** (100.6 MHz, CDCl₃)

Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	27 Mar 2019 14:28:16
Date Stamp	27 Mar 2019 14:28:16				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zq30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	228.10
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.7644

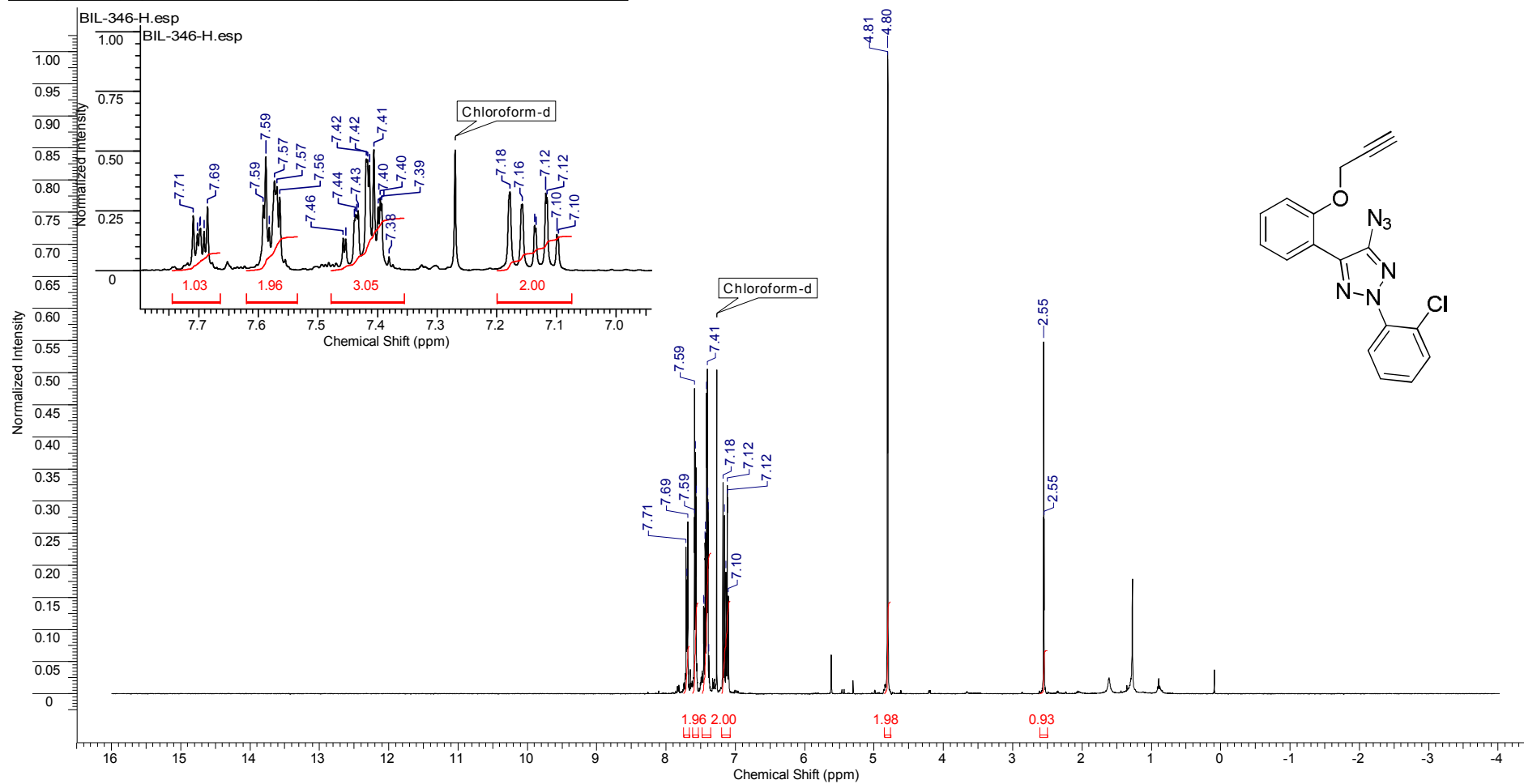


¹H NMR spectrum of **3i** (400.1 MHz, CDCl₃)

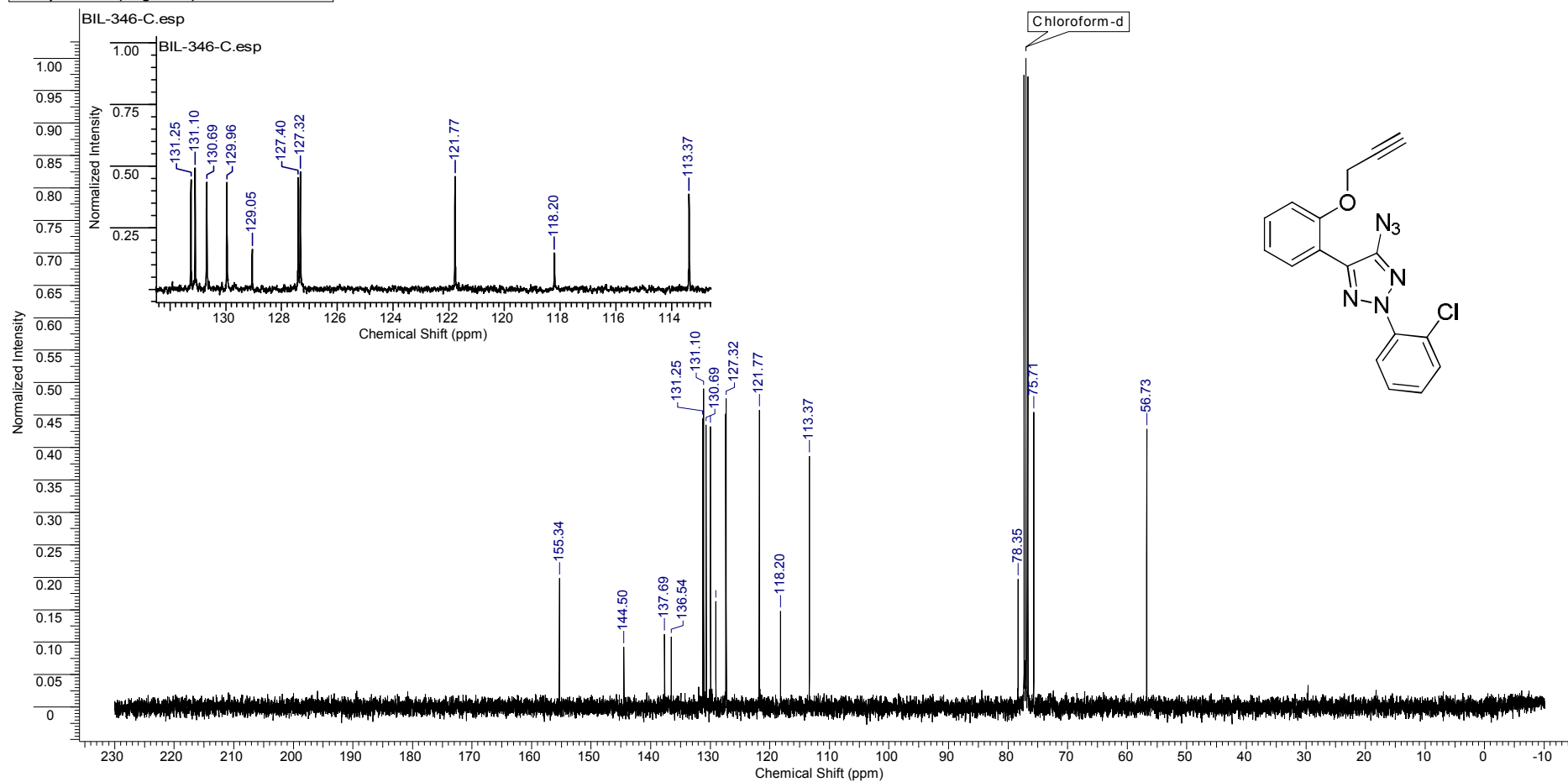
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	27 Mar 2019 14:30:24
Date Stamp	27 Mar 2019 14:30:24				
File Name				Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	234	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	16384.00
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11062.5635
				Sweep Width (Hz)	24154.41

¹³C NMR spectrum of **3i** (100.6 MHz, CDCl₃)

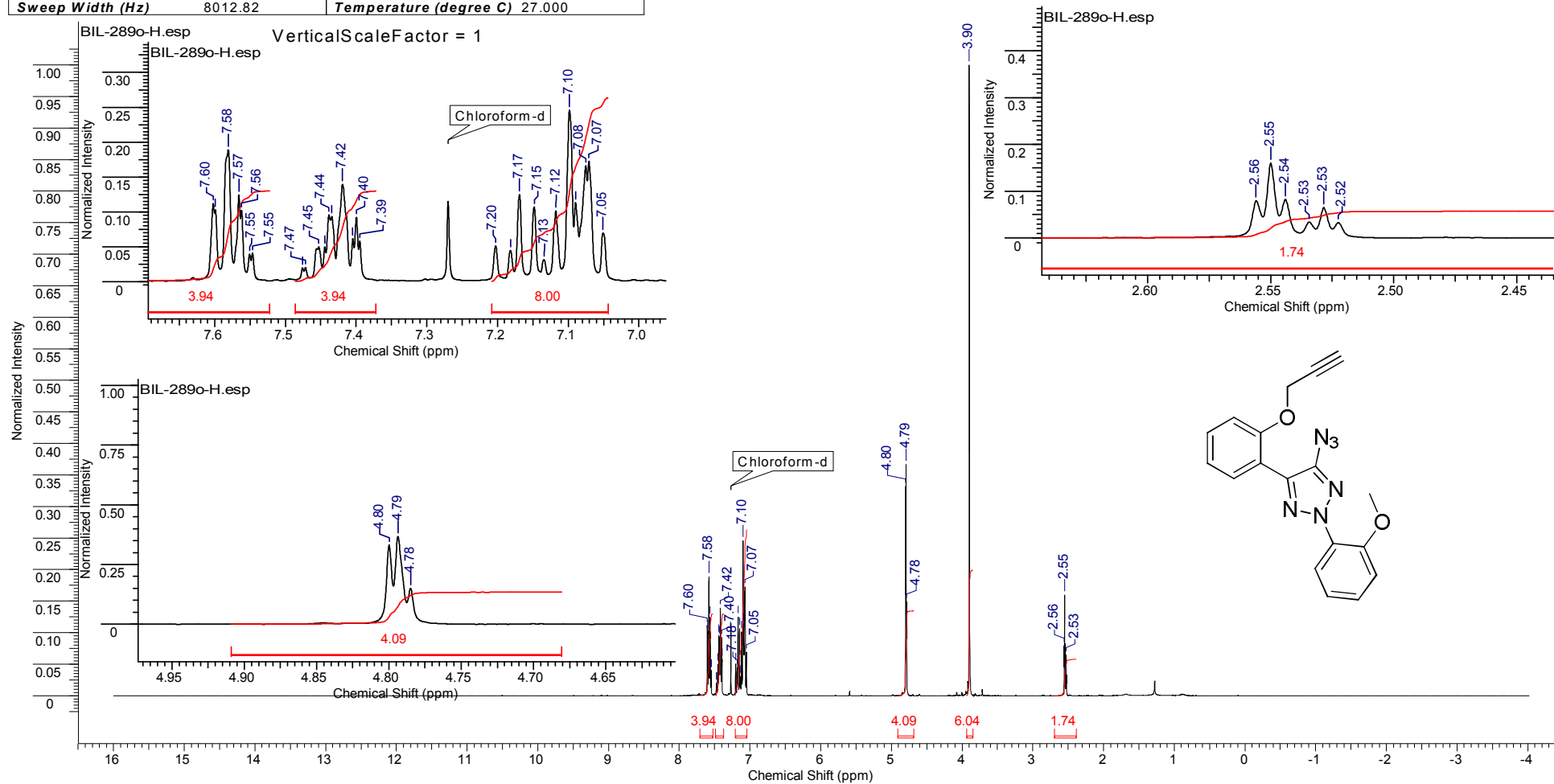
Acquisition Time (sec)	4.0894	Comment	Imported from UXNMR.	Date	09 Apr 2019 14:04:20
File Name				Frequency (MHz)	400.13
Nucleus	¹ H	Number of Transients	4	Original Points Count	32768
Pulse Sequence	zg30	Solvent	CHLOROFORM-d	Points Count	131072
Sweep Width (Hz)	8012.82	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.8215

¹H NMR spectrum of **3j** (400.1 MHz, CDCl₃)

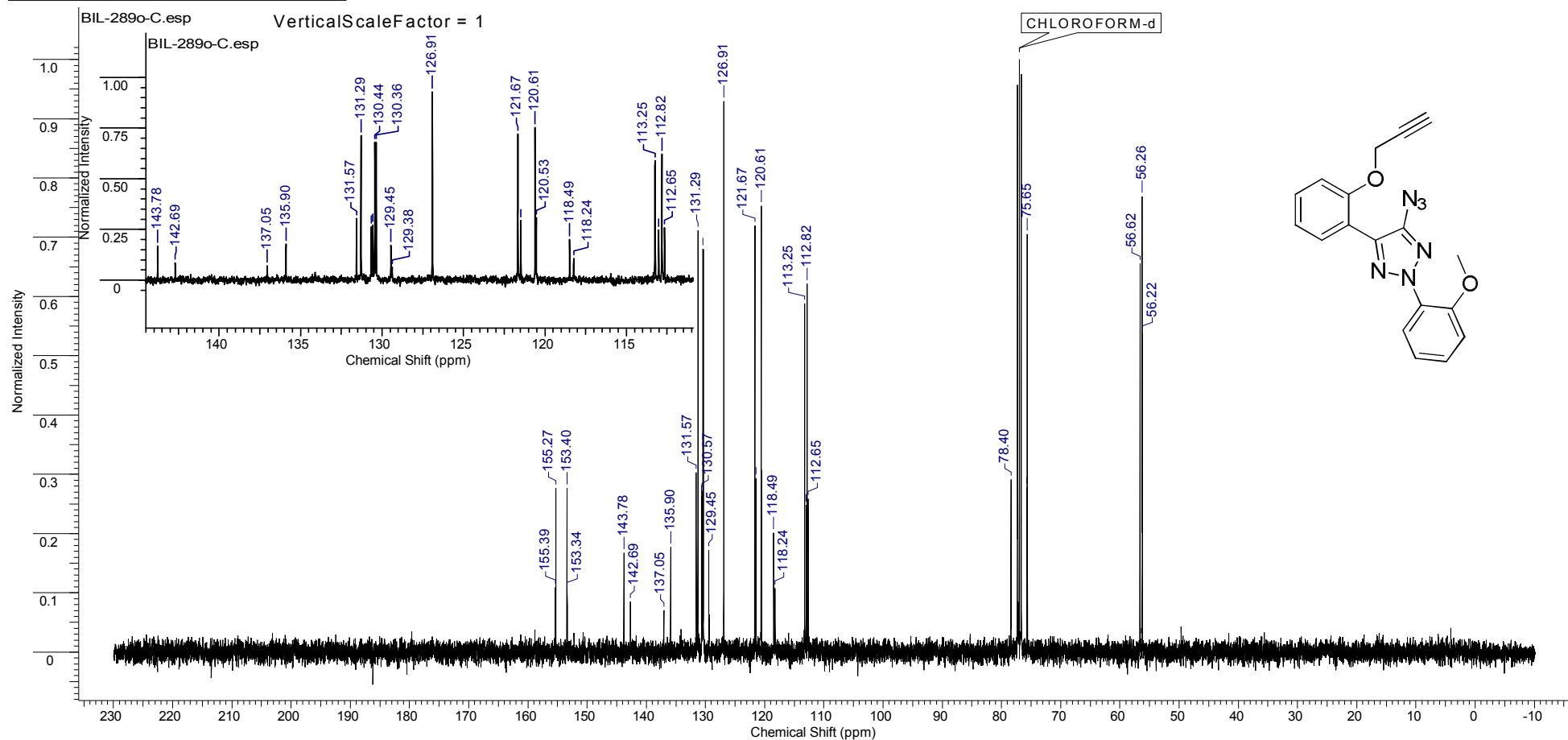
Acquisition Time (sec)	0.6783	Comment	Imported from UXMNR.		Date	09 Apr 2019 14:13:54	
File Name			Frequency (MHz)	100.61	Nucleus	13C	
Number of Transients	193	Original Points Count	16384	Points Count	131072	Pulse Sequence	zgpg30
Solvent	CHLOROFORM-d		Spectrum Offset (Hz)	11062.0352	Sweep Width (Hz)	24154.59	
Temperature (degree C)	27.000						

¹³C NMR spectrum of **3j** (100.6 MHz, CDCl₃)

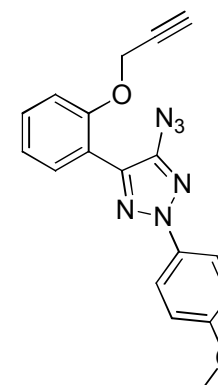
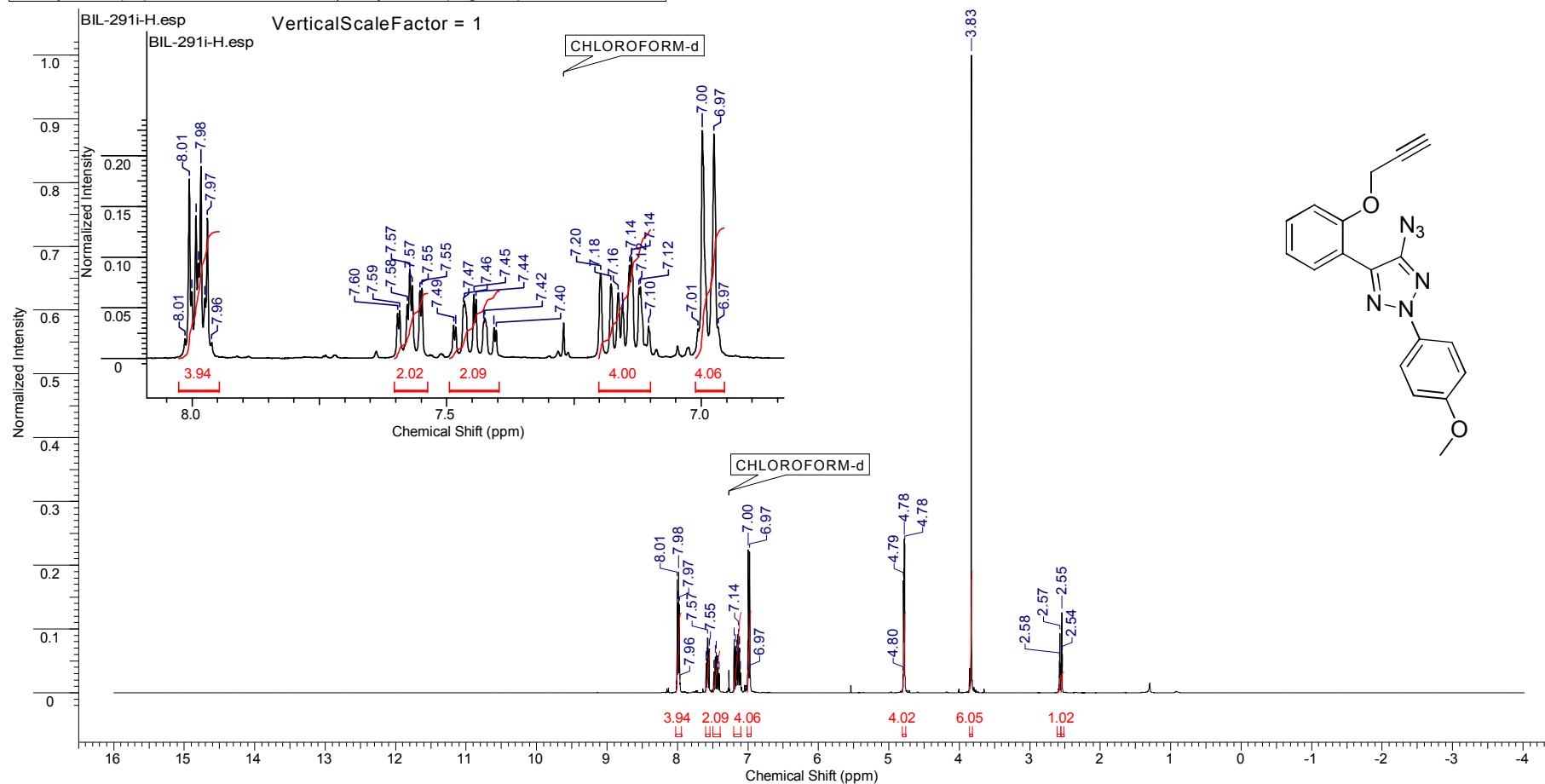
Acquisition Time (sec)	4.0894	Comment	Imported from UXNMR.			Date	20 Feb 2019 17:24:58
File Name	C:\DOCS\OUTPUT_301\2019\02.翦 休 唯 黑BIL-289o.H_001001r					Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	5	Original Points Count	32768	Points Count	131072
Pulse Sequence	zg30	Solvent	CHLOROFORM-d			Spectrum Offset (Hz)	2396.6162
Sweep Width (Hz)	8012.82	Temperature (degree C)	27.000				

¹H NMR spectrum of **3k** (400.1 MHz, CDCl₃)

Acquisition Time (sec)	0.6783	Comment	5 mm Dual 13C/1H Z3756/0200	Date	20 Feb 2019 14:26:08
Date Stamp	20 Feb 2019 14:26:08				
File Name				Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	121	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	14596.50
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11059.0625
				Sweep Width (Hz)	24154.41

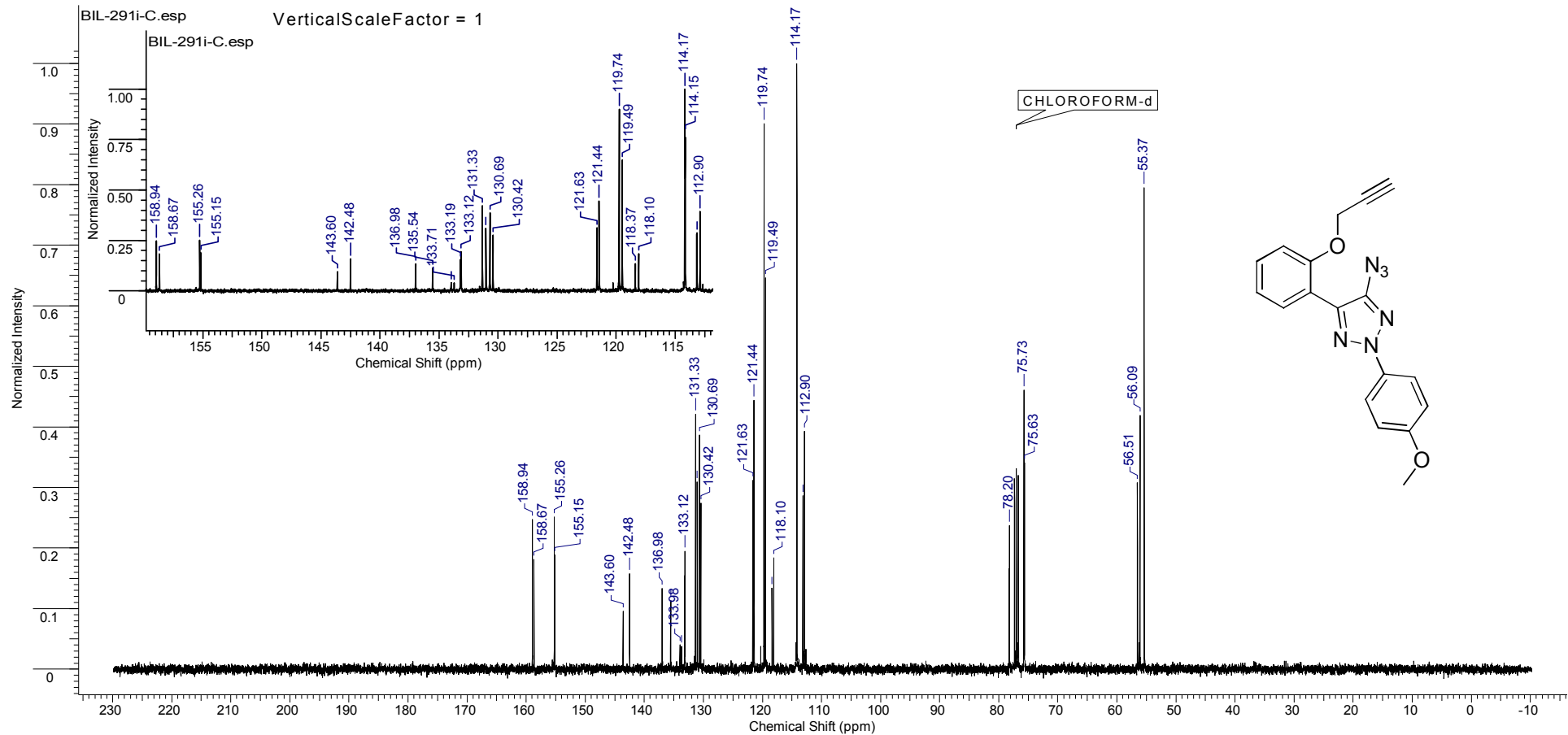
¹³C NMR spectrum of **3k** (100.6 MHz, CDCl₃)

Acquisition Time (sec)	4.0894	Comment	5 mm Dual 13C/1H Z3756/0200	Date	28 Feb 2019 08:06:24
Date Stamp	28 Feb 2019 08:06:24				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	28.50
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2397.4763

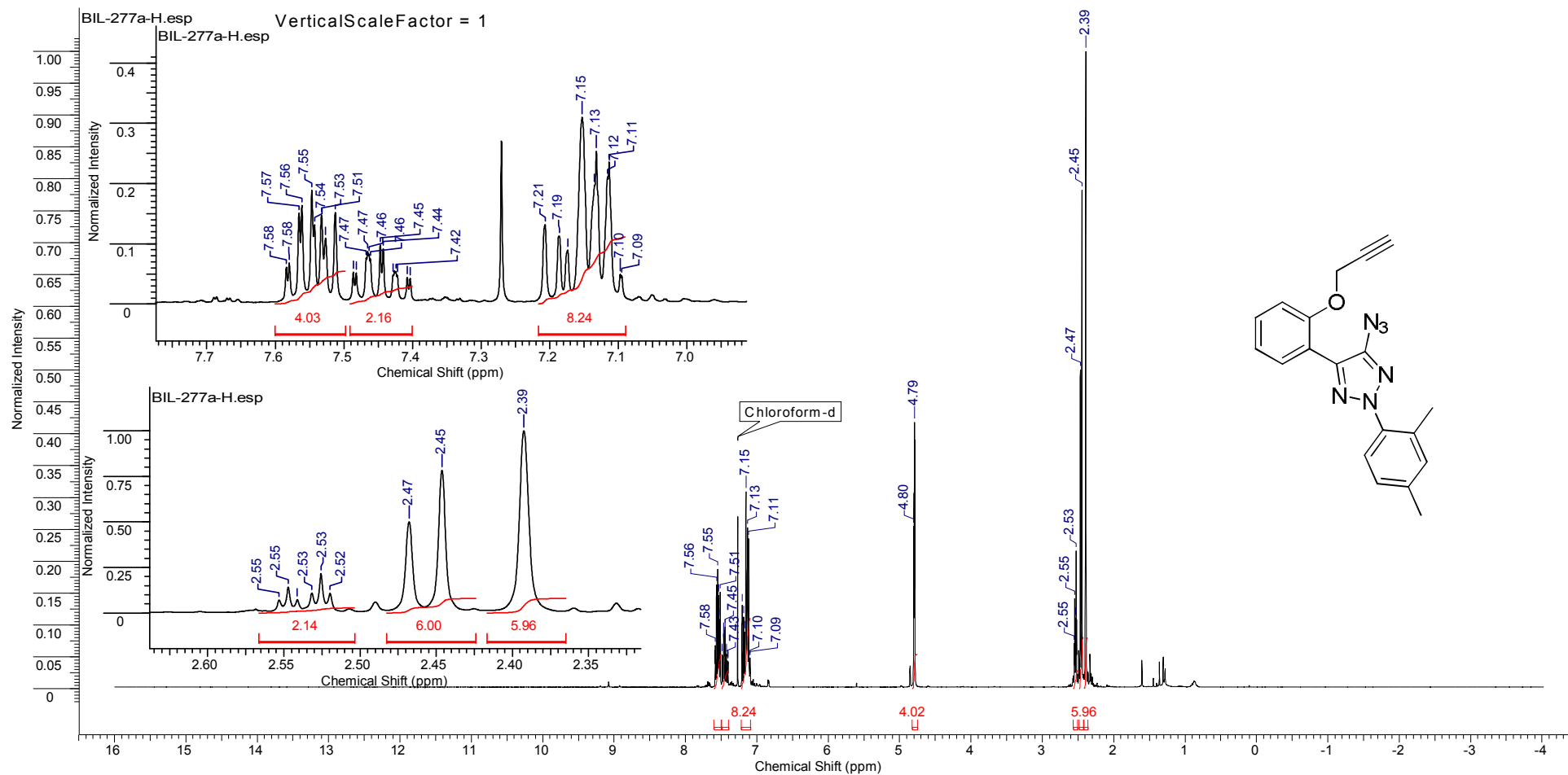


¹H NMR spectrum of **31** (400.1 MHz, CDCl₃)

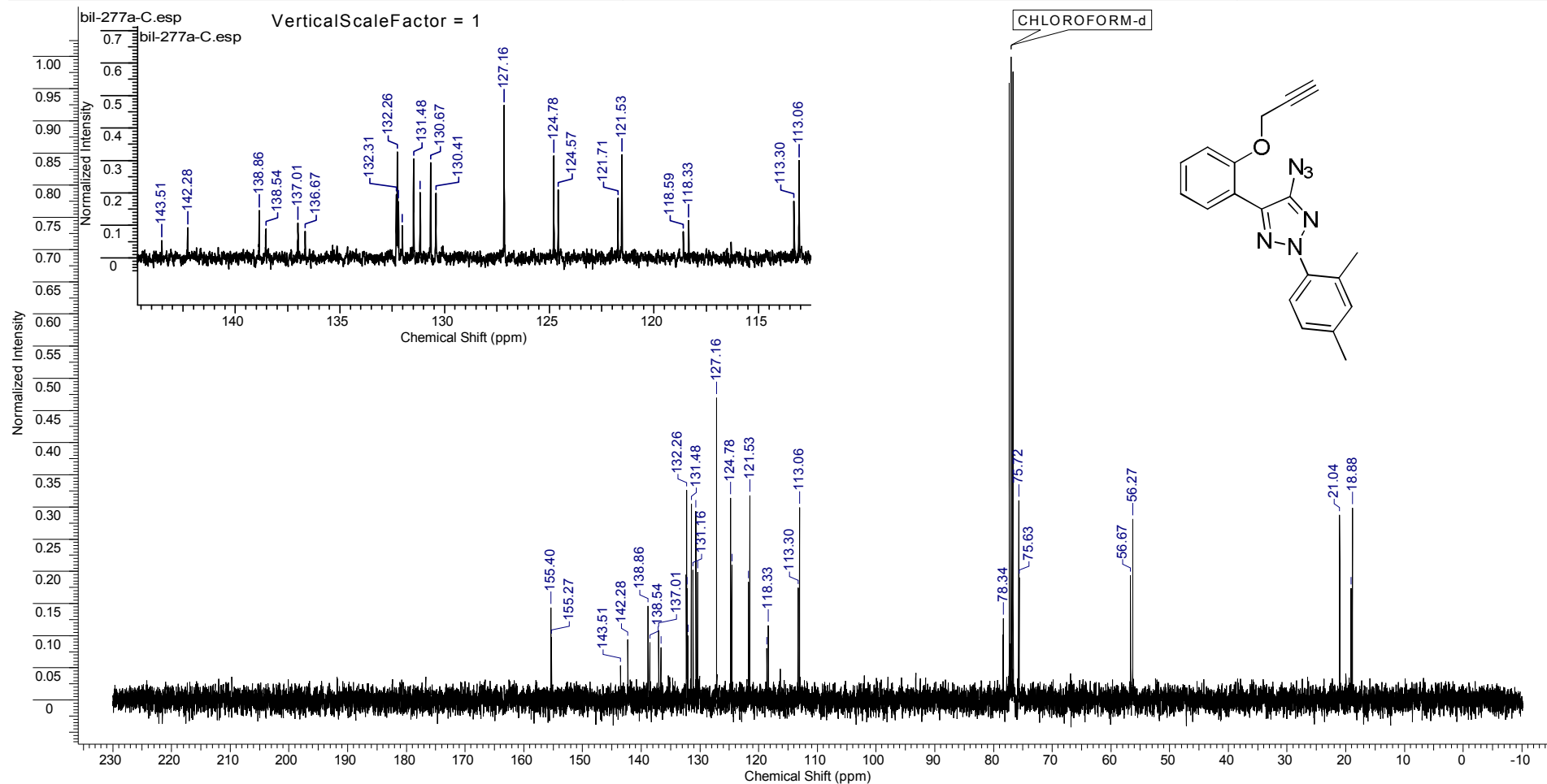
Acquisition Time (sec)	0.6783	Comment	5 mm Dual 13C/1H Z3756/0200	Date	28 Feb 2019 08:08:32
Date Stamp	28 Feb 2019 08:08:32				
File Name				Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	64	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	7298.20
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11047.6367
				Sweep Width (Hz)	24154.41

¹³C NMR spectrum of **3I** (100.6 MHz, CDCl₃)

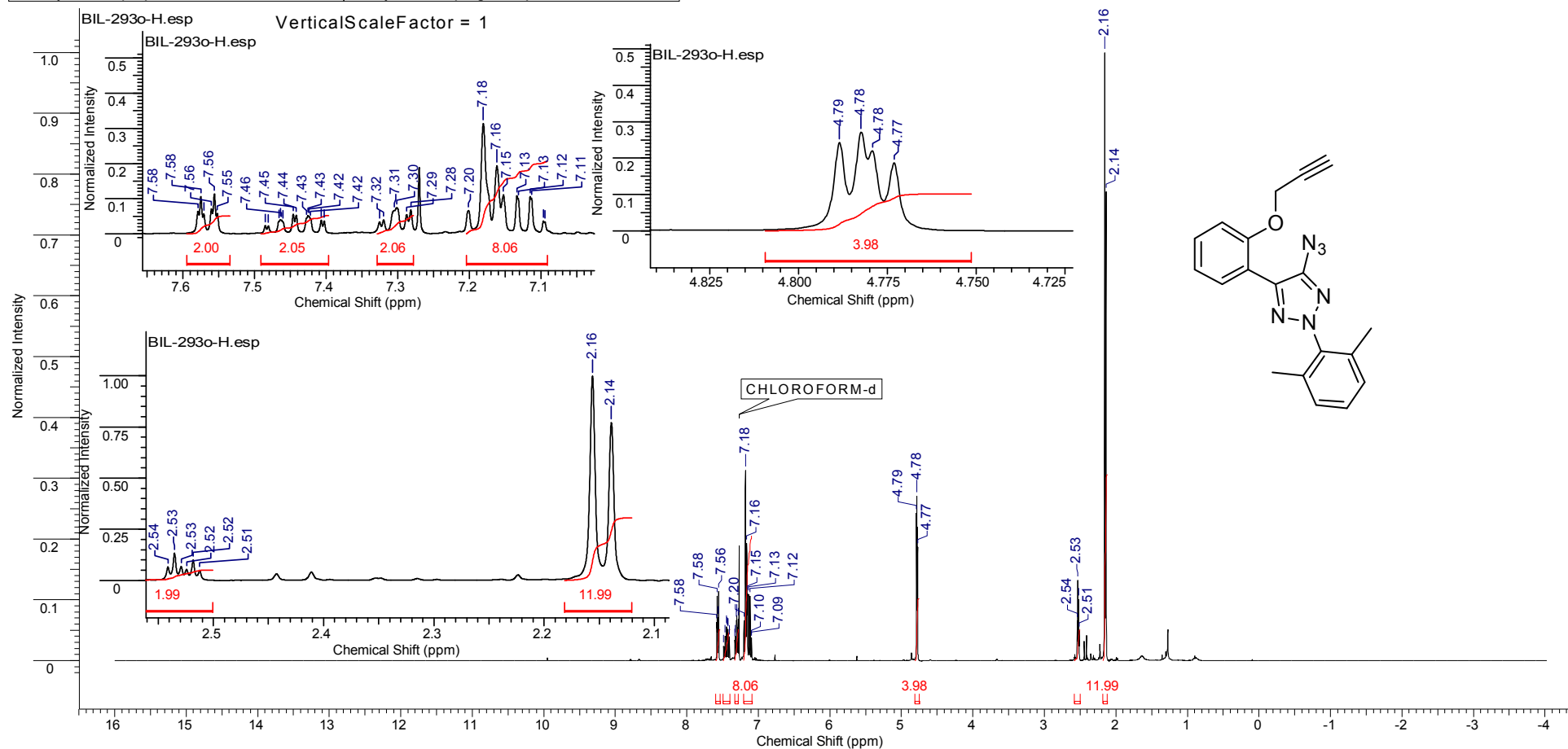
Acquisition Time (sec)	4.0894	Comment	Imported from UXNMR.	Date	06 Feb 2019 17:09:16
File Name				Frequency (MHz)	400.13
Nucleus	¹ H	Number of Transients	5	Original Points Count	32768
Pulse Sequence	zg30	Solvent	CHLOROFORM-d	Points Count	131072
Sweep Width (Hz)	8012.82	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.8215

¹H NMR spectrum of **3m** (400.1 MHz, CDCl₃)

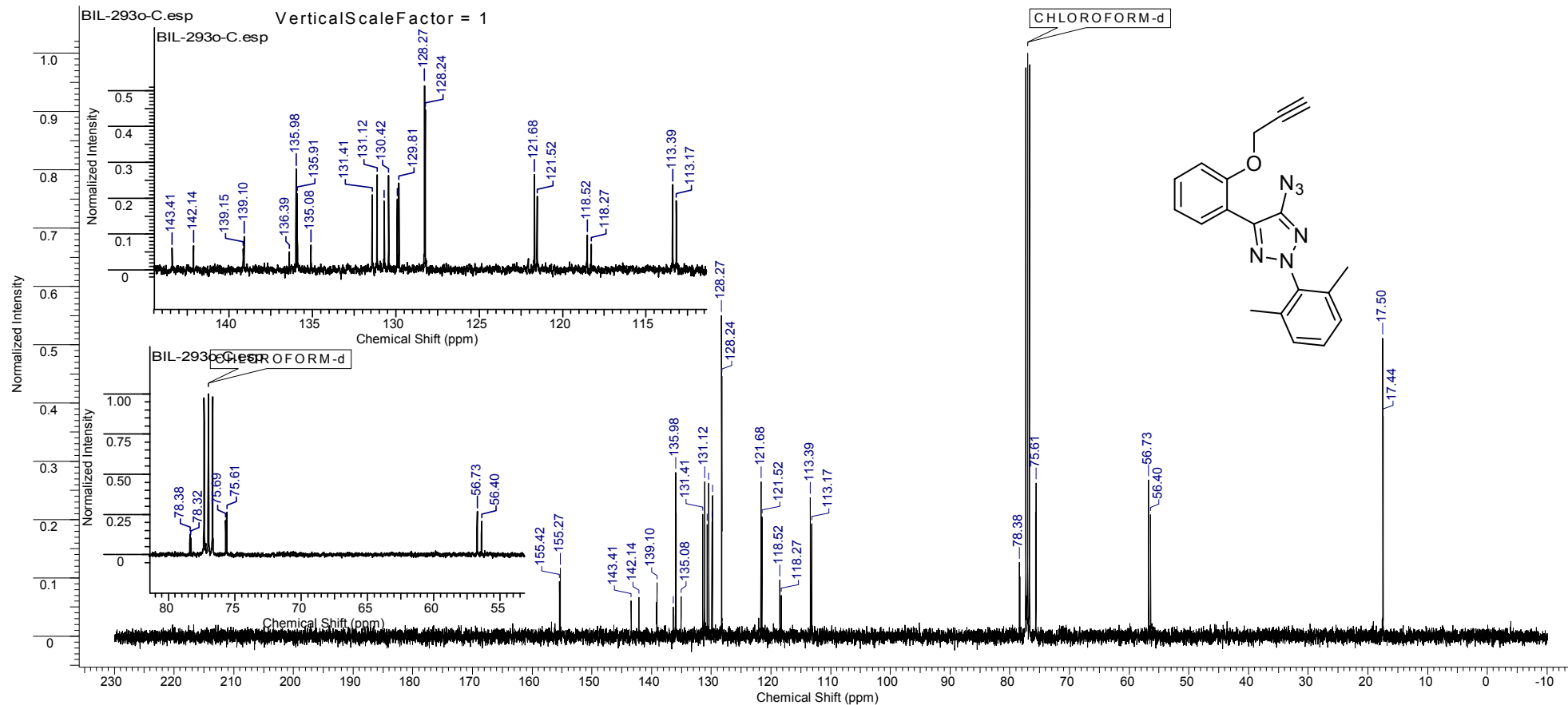
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	06 Feb 2019 14:15:28
Date Stamp	06 Feb 2019 14:15:28	File Name		Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	124	Origin	spect
Points Count	131072	Pulse Sequence	zgpg30	Receiver Gain	13004.00
Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11061.0898	SW(cyclical) (Hz)	24154.59
				Sweep Width (Hz)	24154.41
				Temperature (degree C)	27.000

 ^{13}C NMR spectrum of **3m** (100.6 MHz, CDCl_3)

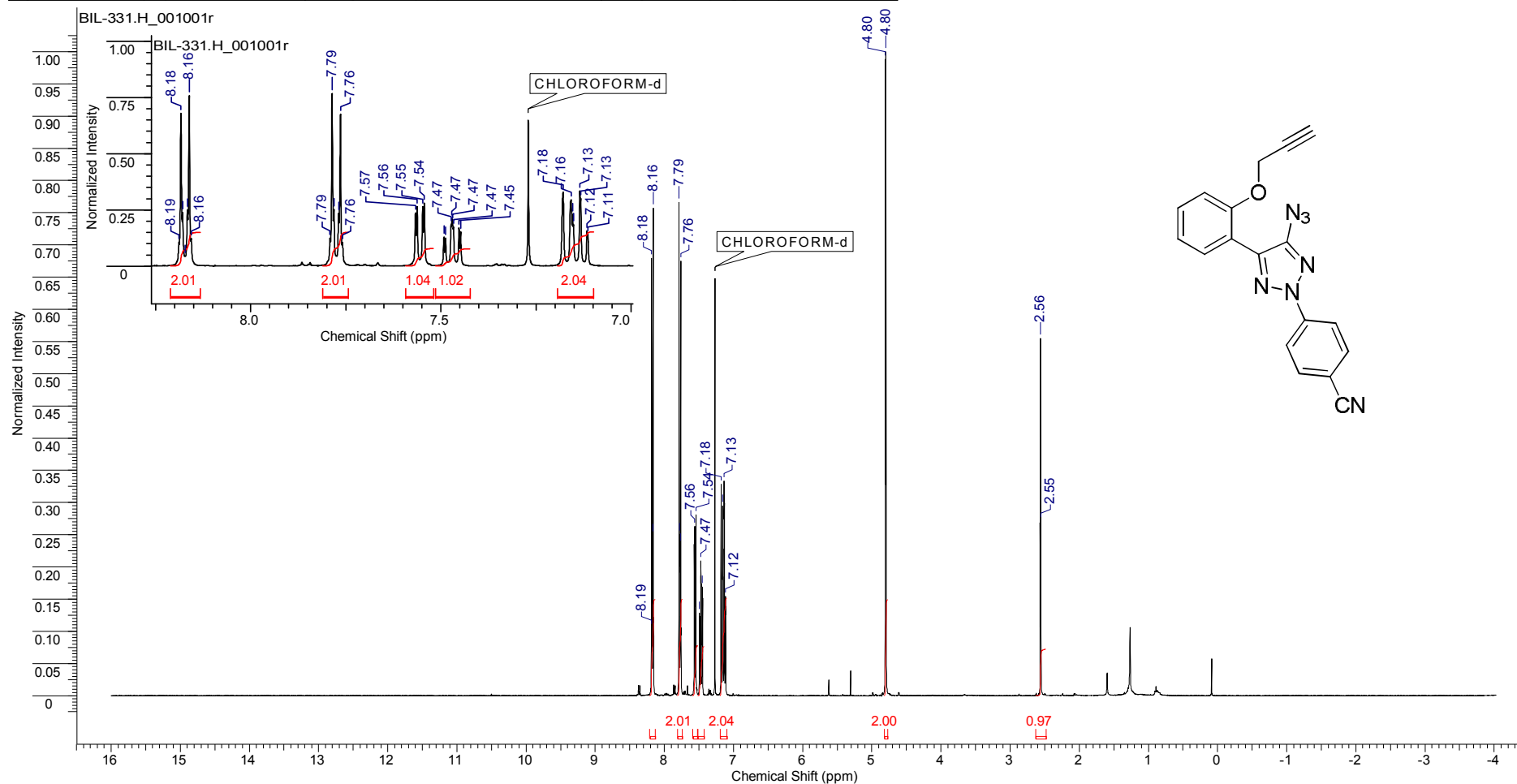
Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	13 May 2019 12:18:08
Date Stamp	13 May 2019 12:18:08				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	114.00
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.8254

¹H NMR spectrum of **3n** (400.1 MHz, CDCl₃)

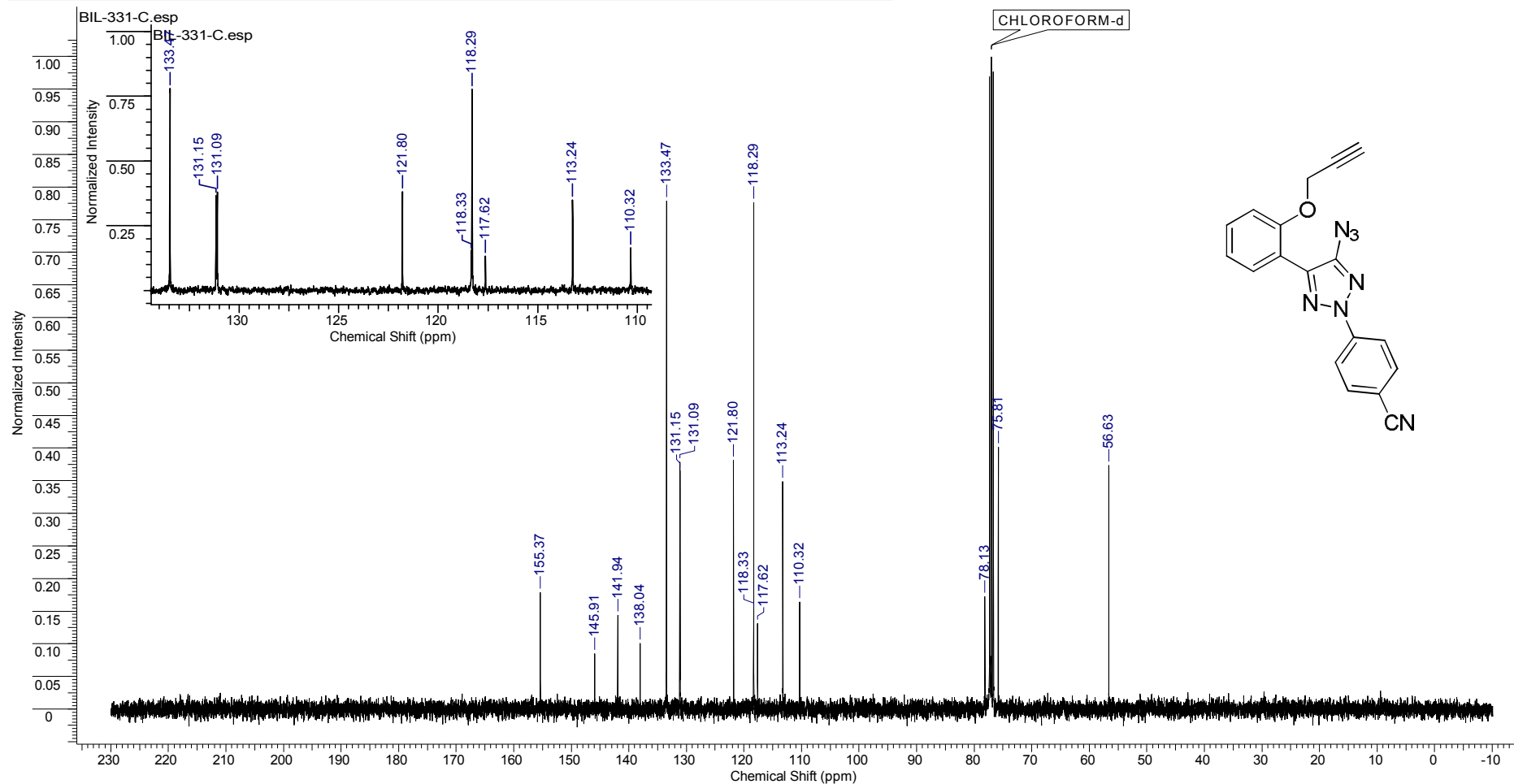
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	13 May 2019 12:20:16
Date Stamp	13 May 2019 12:20:16				
File Name				Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	217	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11060.1680
Temperature (degree C)	27.000			Sweep Width (Hz)	24154.41

¹³C NMR spectrum of **3n** (100.6 MHz, CDCl₃)

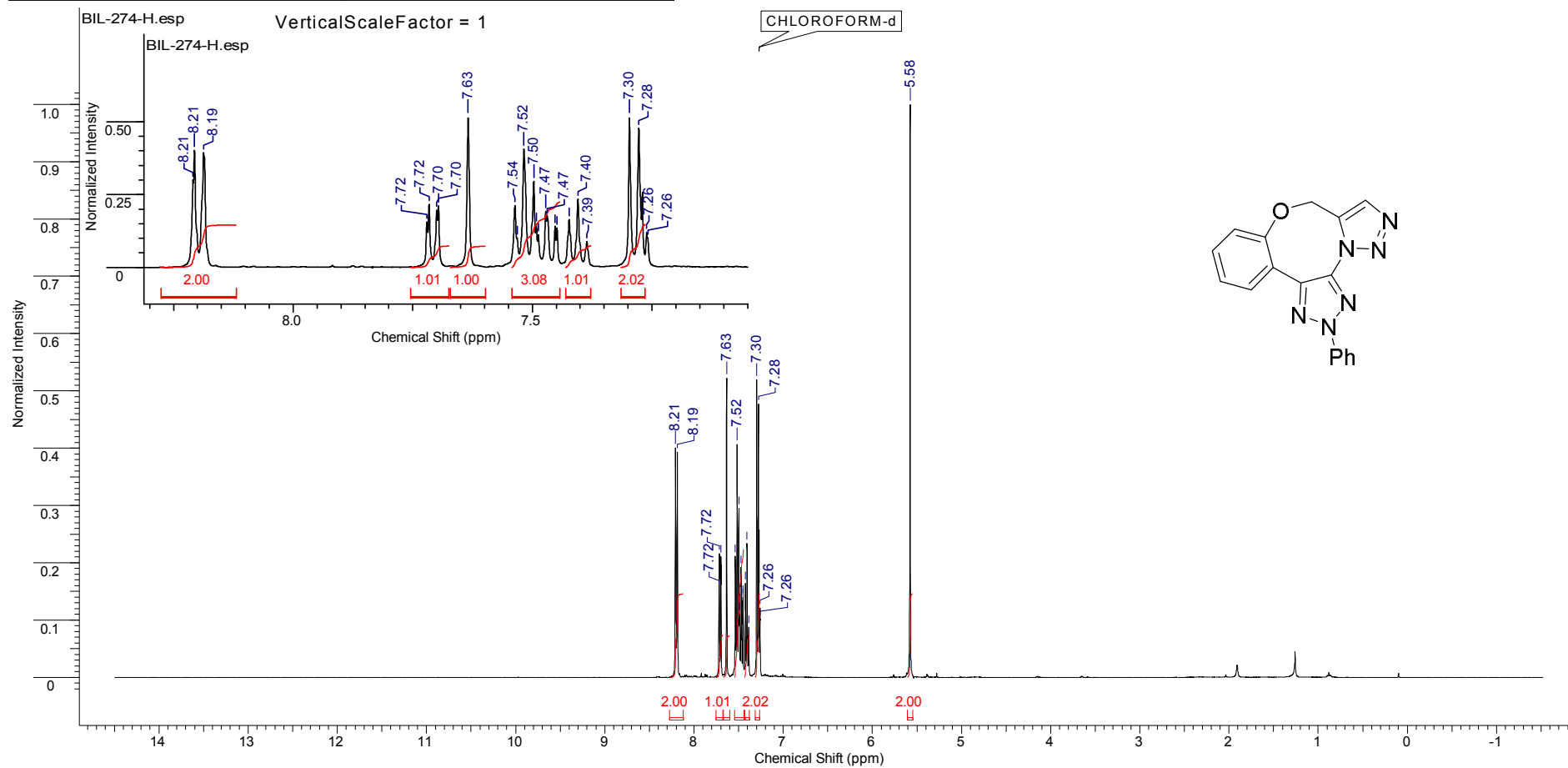
Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	06 Mar 2019 14:24:00
Date Stamp	06 Mar 2019 14:24:00	File Name		Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Points Count	131072	Pulse Sequence	zg30	Receiver Gain	203.20
Spectrum Offset (Hz)	2395.8254	Sweep Width (Hz)	8012.76	SW(cyclical) (Hz)	8012.82
		Temperature (degree C)	27.000	Solvent	CHLOROFORM-d

¹H NMR spectrum of **3o** (400.1 MHz, CDCl₃)

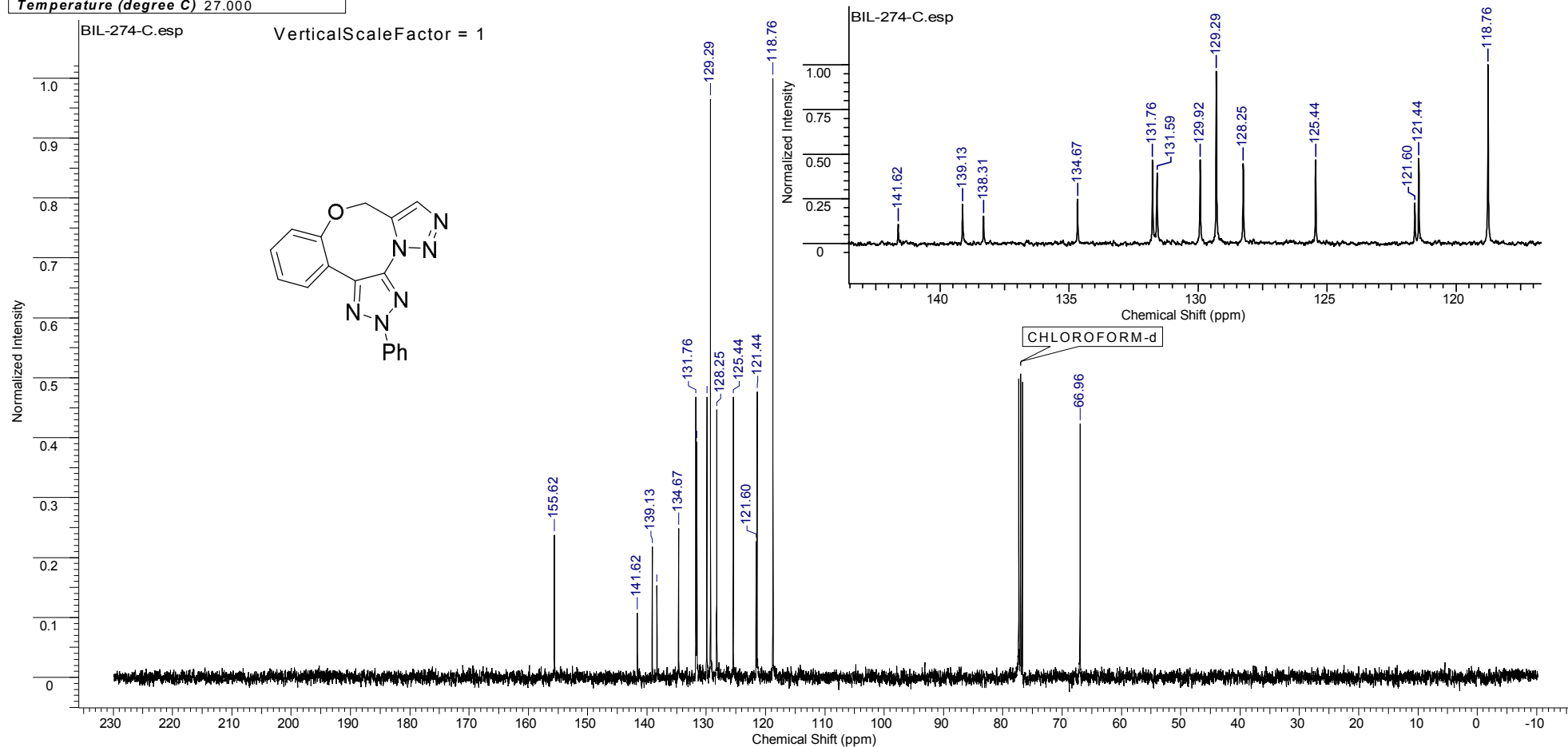
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	06 Mar 2019 14:26:08
Date Stamp	06 Mar 2019 14:26:08	File Name		Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	212	Origin	spect
Points Count	131072	Pulse Sequence	zgpg30	Receiver Gain	16384.00
Spectrum Offset (Hz)	11062.1953	Sweep Width (Hz)	24154.41	SW(cyclical) (Hz)	24154.59
		Temperature (degree C)	27.000	Solvent	CHLOROFORM-d

¹³C NMR spectrum of **3o** (100.6 MHz, CDCl₃)

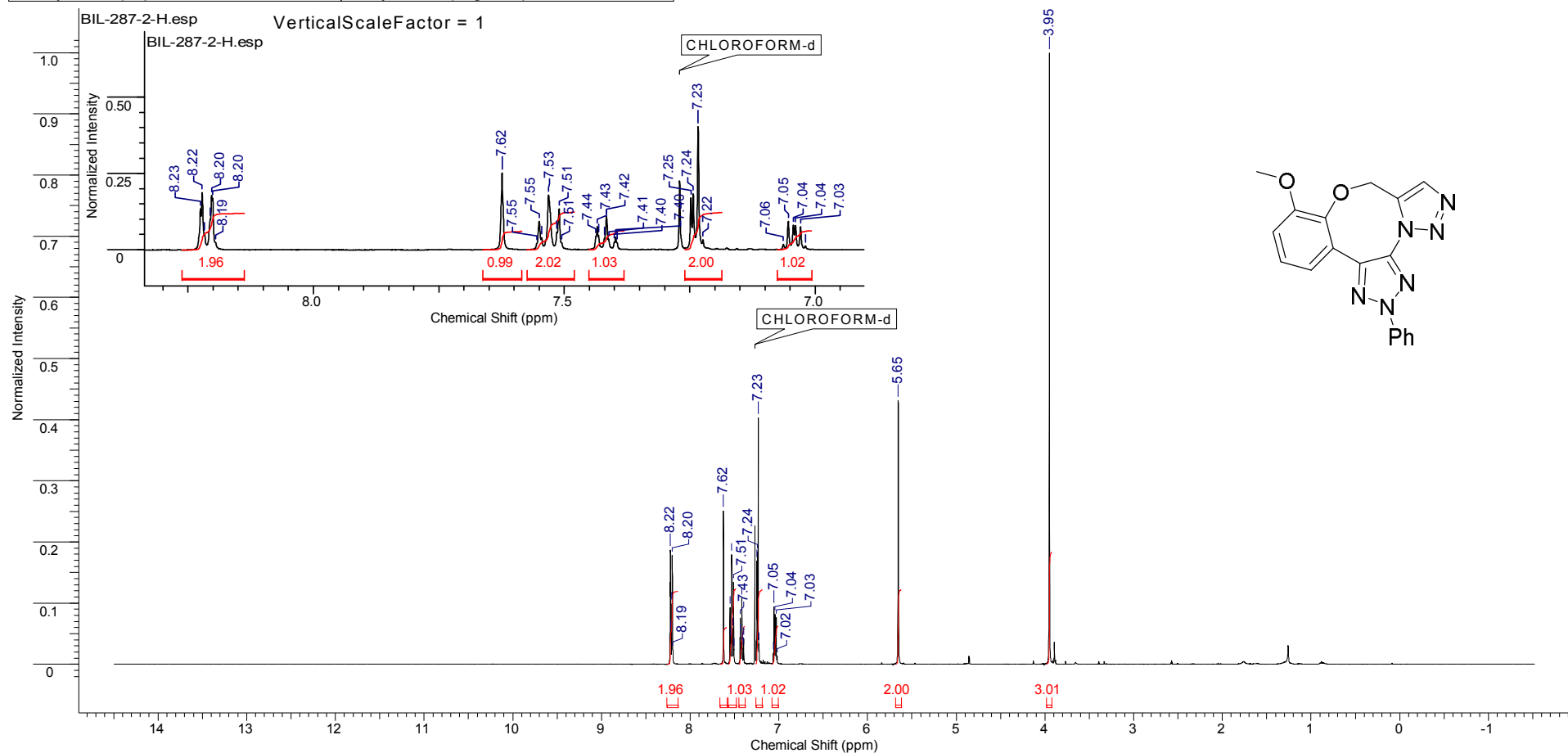
Acquisition Time (sec)	2.5559	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	25 Oct 2018 09:31:44
Date Stamp	25 Oct 2018 09:31:44				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	65536	Pulse Sequence	zg30
SW(cyclical) (Hz)	6410.26	Solvent	CHLOROFORM-d	Receiver Gain	90.50
Sweep Width (Hz)	6410.16	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2595.9934

¹H NMR spectrum of **4a** (400.1 MHz, CDCl₃)

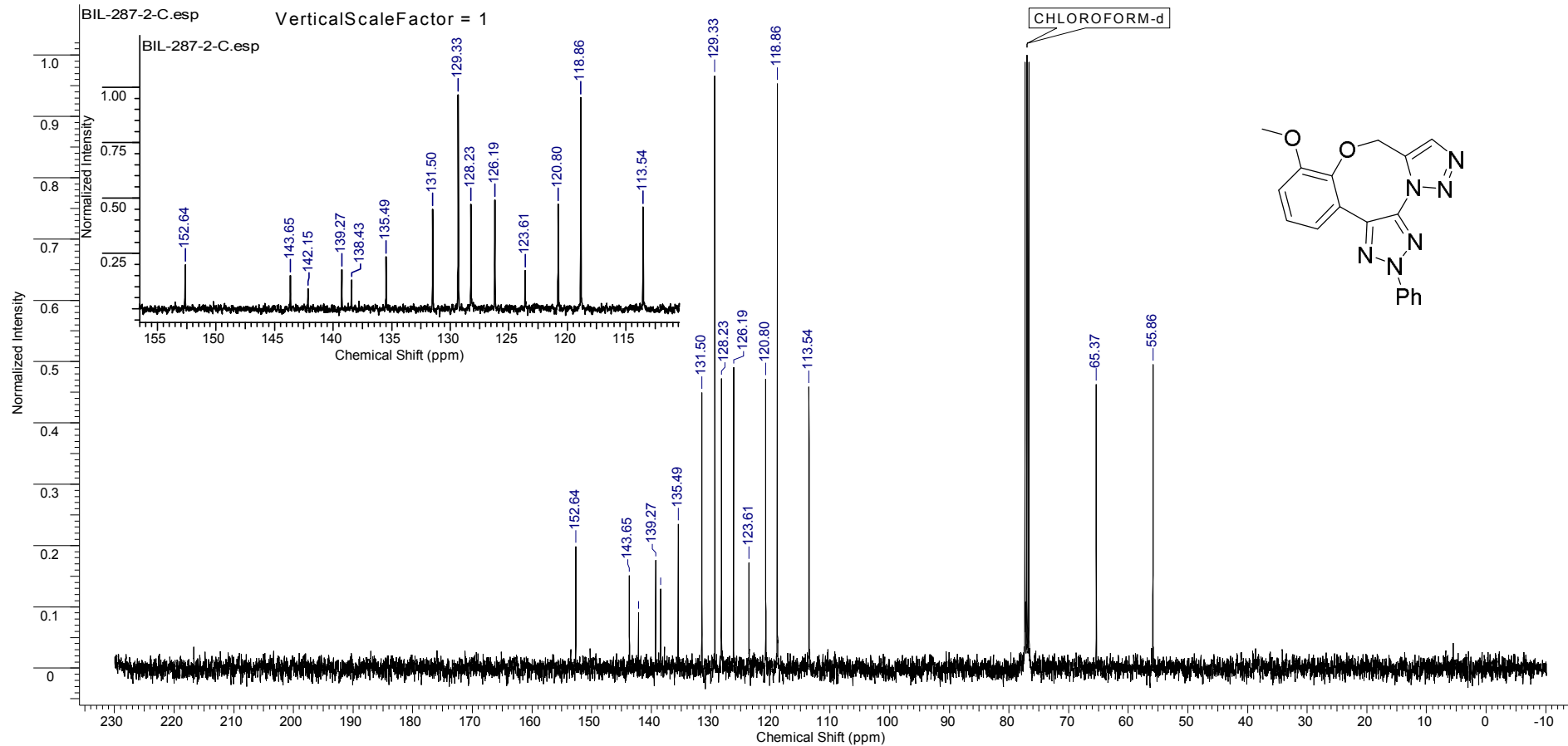
Acquisition Time (sec)	0.4999	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	25 Oct 2018 09:33:52
Date Stamp	25 Oct 2018 09:33:52				
File Name				Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	127	Origin	spect
Owner	root	Points Count	65536	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	8192.00
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11052.3359
				Sweep Width (Hz)	24154.22

¹³C NMR spectrum of **4a** (100.6 MHz, CDCl₃)

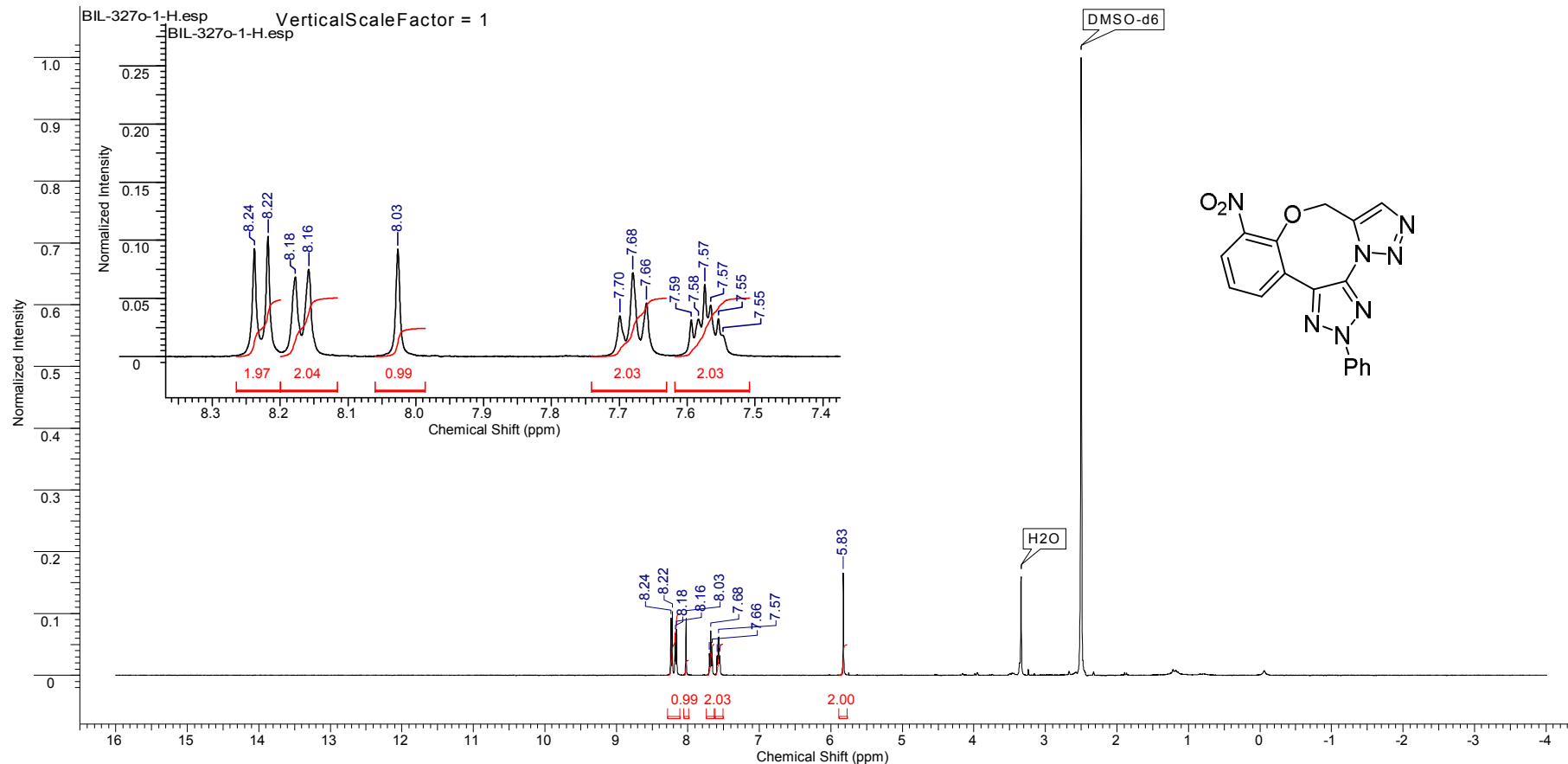
Acquisition Time (sec)	2.5559	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	12 Nov 2018 12:41:36
Date Stamp	12 Nov 2018 12:41:36				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	65536	Pulse Sequence	zg30
SW(cyclical) (Hz)	6410.26	Solvent	CHLOROFORM-d	Receiver Gain	161.30
Sweep Width (Hz)	6410.16	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2595.8953

¹H NMR spectrum of **4b** (400.1 MHz, CDCl₃)

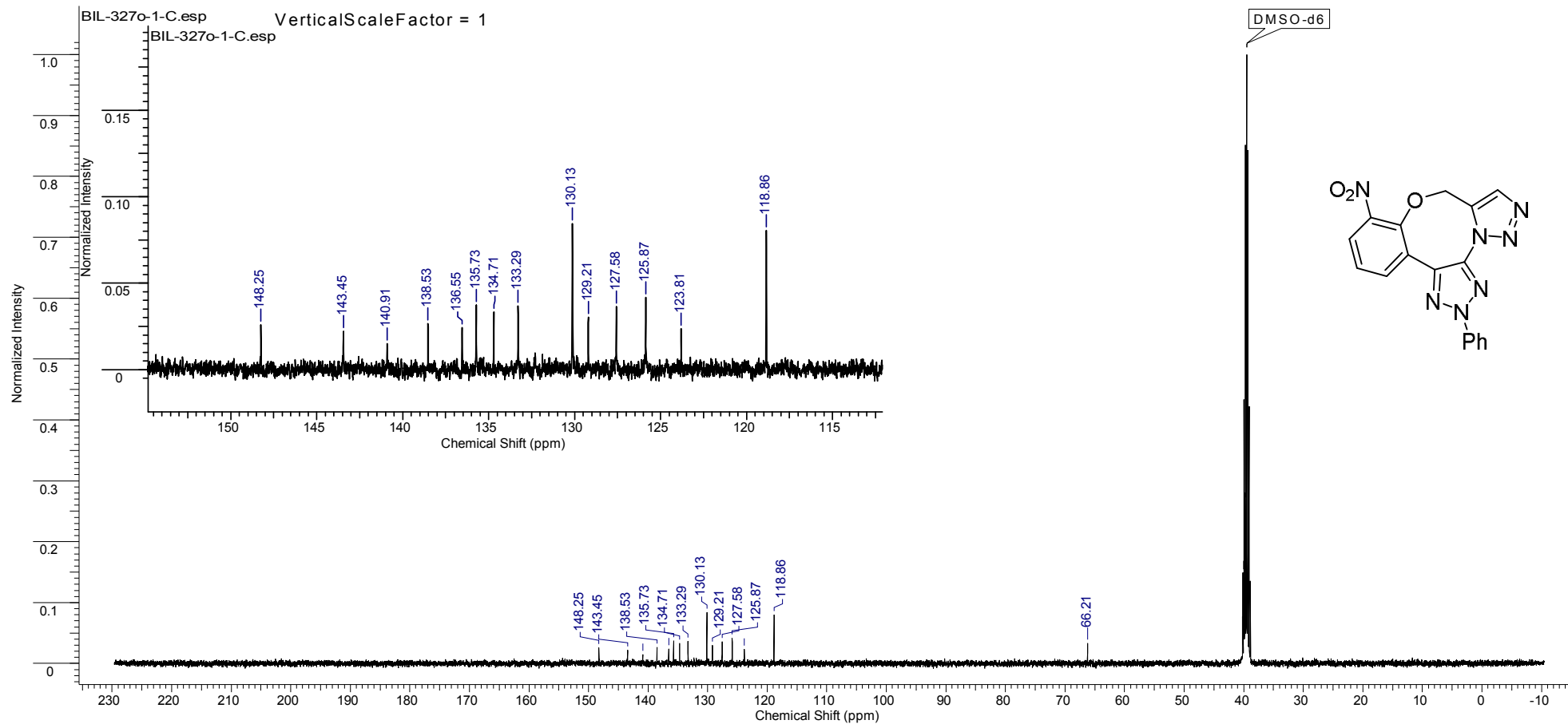
Acquisition Time (sec)	0.4999	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	12 Nov 2018 12:43:44
Date Stamp	12 Nov 2018 12:43:44				
File Name				Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	165	Original Points Count	12076
Owner	root	Points Count	65536	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	8192.00
Temperature (degree C)	27.000	Spectrum Offset (Hz)	11058.9697	Sweep Width (Hz)	24154.22

¹³C NMR spectrum of **4b** (100.6 MHz, CDCl₃)

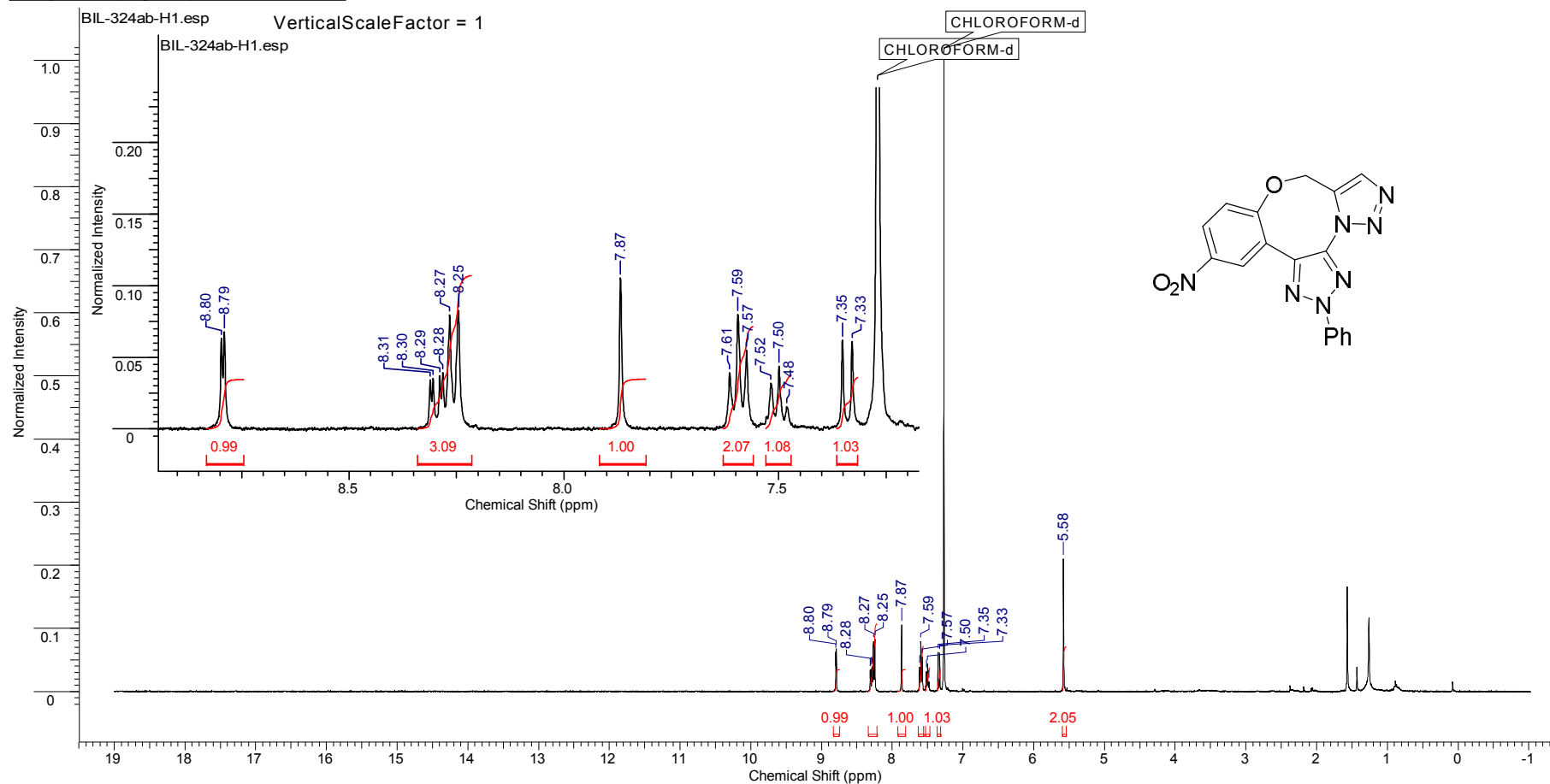
Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	21 May 2019 12:39:28
Date Stamp	21 May 2019 12:39:28				
File Name					
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	4
Original Points Count	32768	Owner	root	Points Count	131072
Receiver Gain	287.40	SW(cyclical) (Hz)	8012.82	Solvent	DMSO-d6
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2399.2002

¹H NMR spectrum of **4c** (400.1 MHz, CDCl₃)

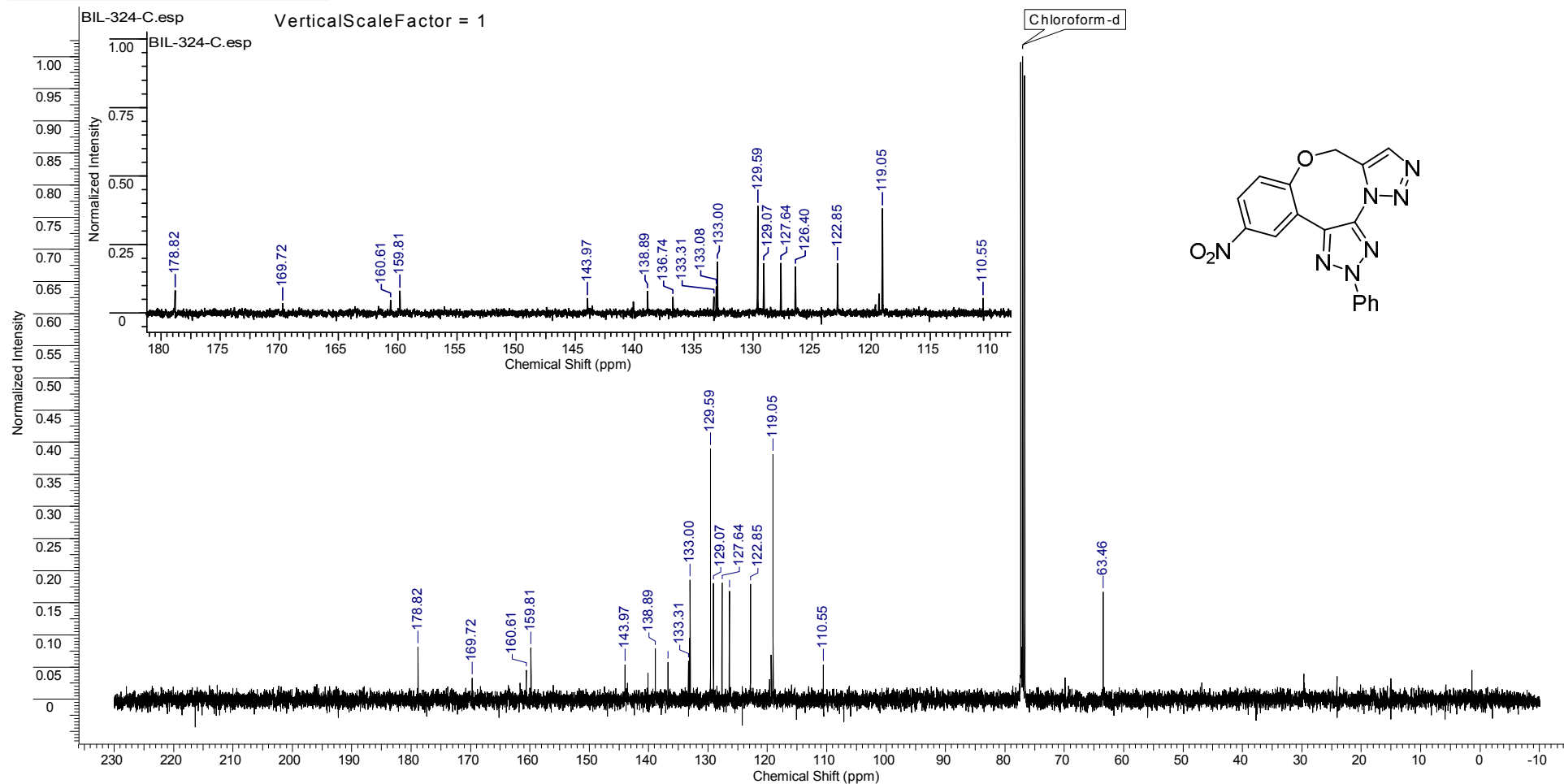
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	21 May 2019 12:41:36
Date Stamp	21 May 2019 12:41:36				
File Name				Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	538	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	DMSO-d6	Receiver Gain	13004.00
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11025.6758
				Sweep Width (Hz)	24154.41

¹³C NMR spectrum of **4c** (100.6 MHz, CDCl₃)

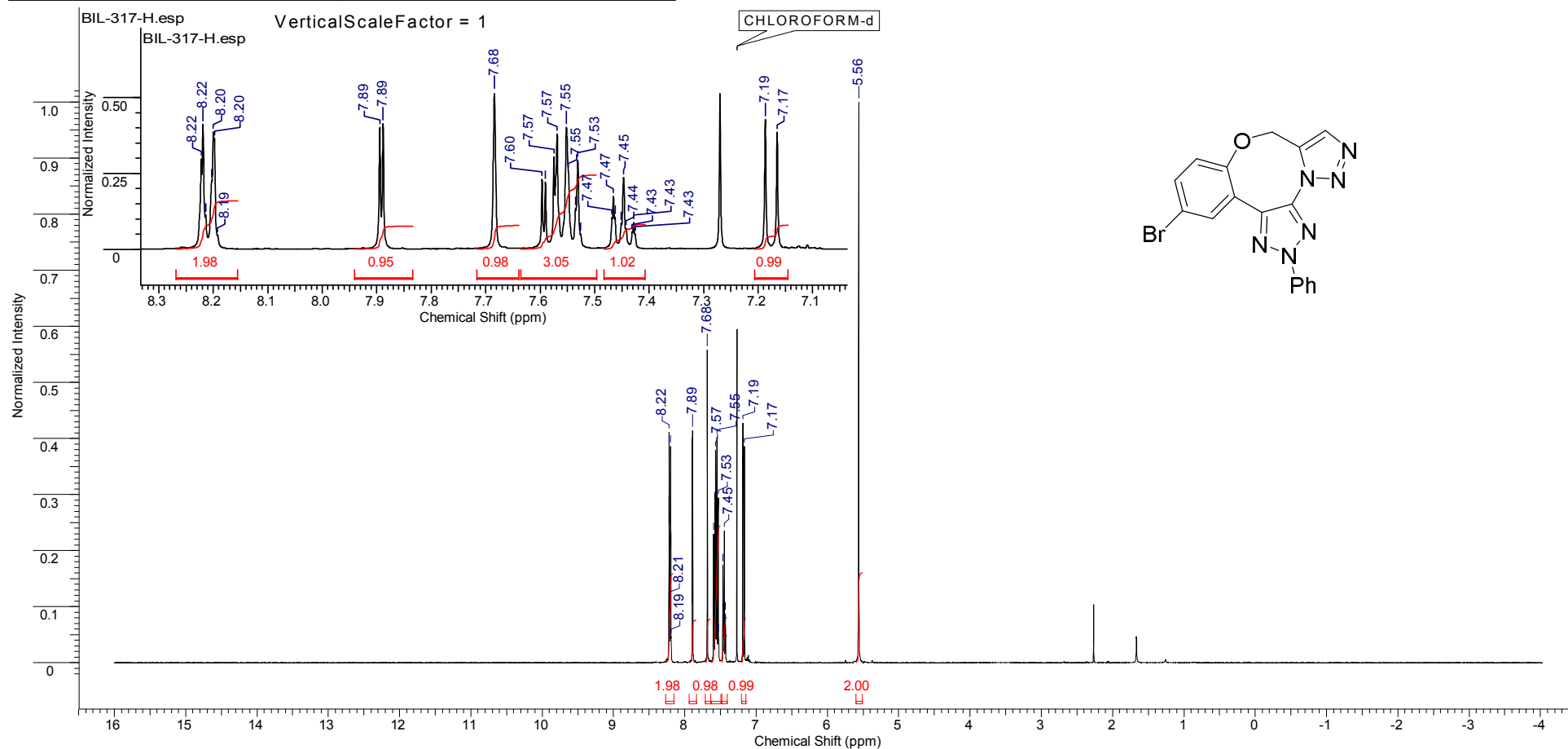
Acquisition Time (sec)	4.0894	Comment	5 mm QNP 1H/13C/31P/19F Z3182/0165	Date	26 Nov 2019 10:50:40
Date Stamp	26 Nov 2019 10:50:40				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	3595.9880
Temperature (degree C)	27.000			Receiver Gain	1290.20
				Sweep Width (Hz)	8012.76

¹H NMR spectrum of **4d** (400.1 MHz, CDCl₃)

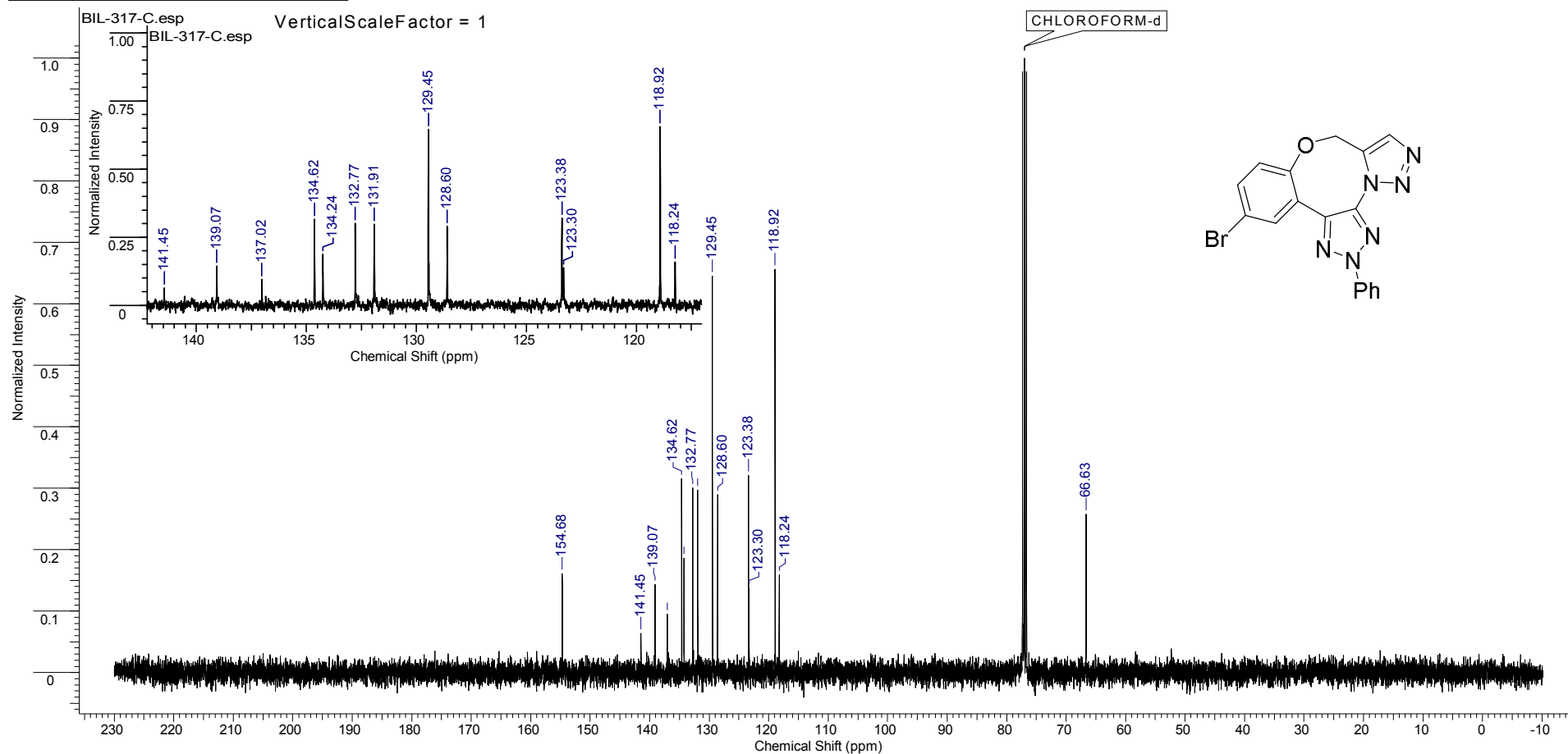
Acquisition Time (sec)	0.6783	Comment	Imported from UXNMR.	Date	20 Feb 2019 17:49:58
File Name				Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	217	Points Count	131072
Pulse Sequence	zgpg30	Solvent	Chloroform-d	Spectrum Offset (Hz)	11063.8789
Temperature (degree C)	27.000			Sweep Width (Hz)	24154.59

¹³C NMR spectrum of **4d** (100.6 MHz, CDCl₃)

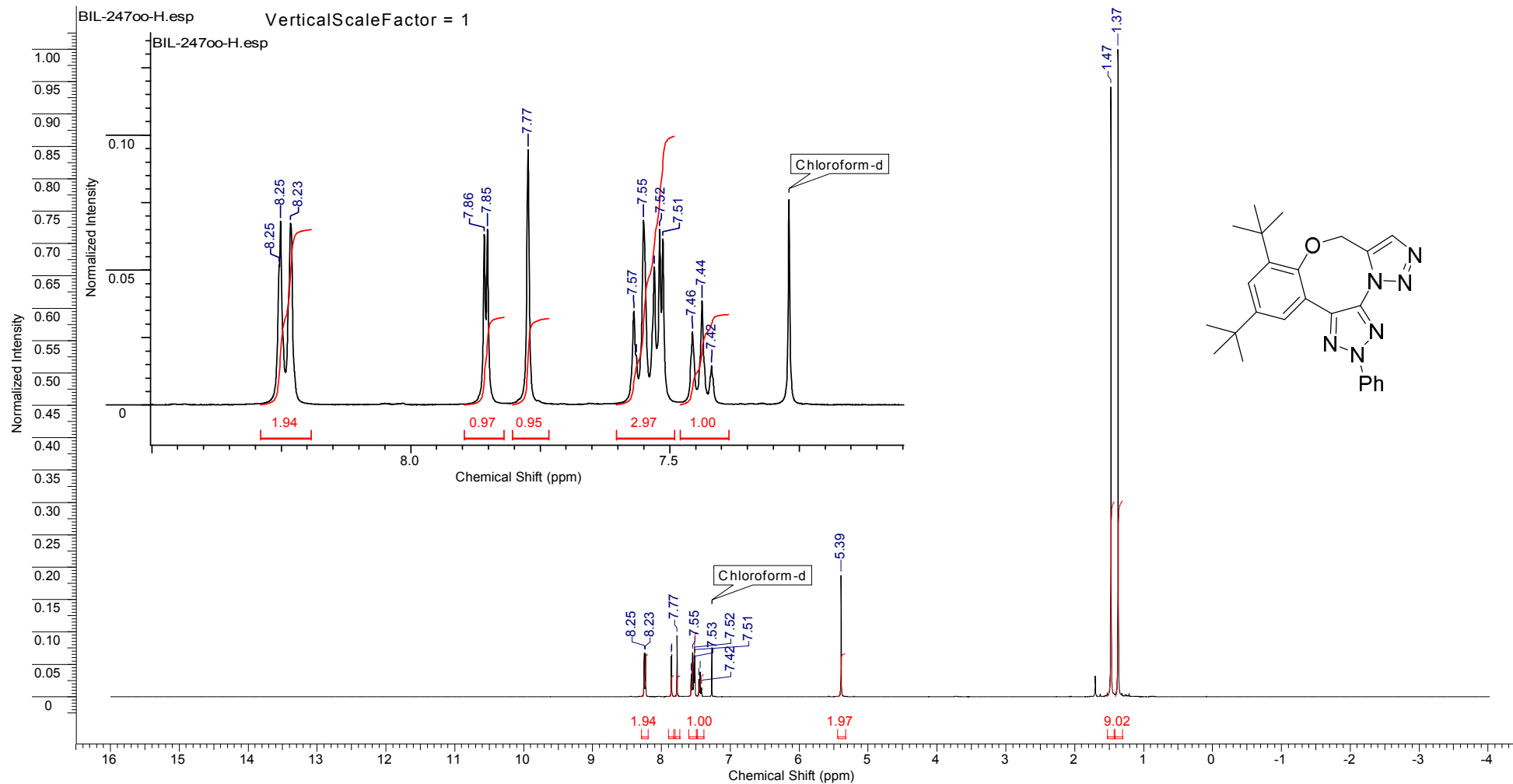
Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	12 Feb 2019 11:44:00
Date Stamp	12 Feb 2019 11:44:00				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	203.20
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.8254

¹H NMR spectrum of **4e** (400.1 MHz, CDCl₃)

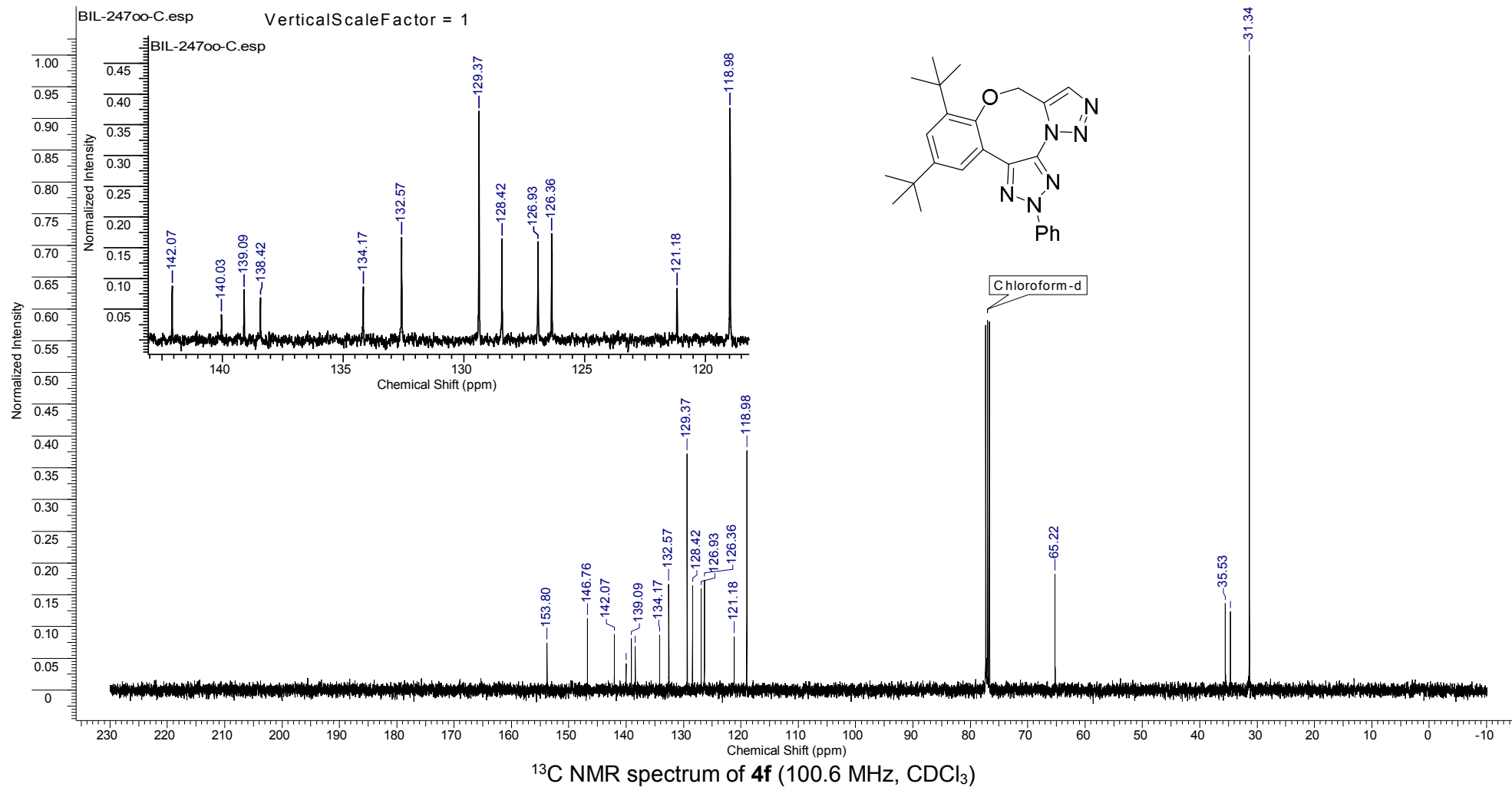
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	12 Feb 2019 11:46:08
Date Stamp	12 Feb 2019 11:46:08				
File Name				Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	123	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	14596.50
Temperature (degree C)	27.000	Spectrum Offset (Hz)	11061.0898	Sweep Width (Hz)	24154.41

¹³C NMR spectrum of **4e** (100.6 MHz, CDCl₃)

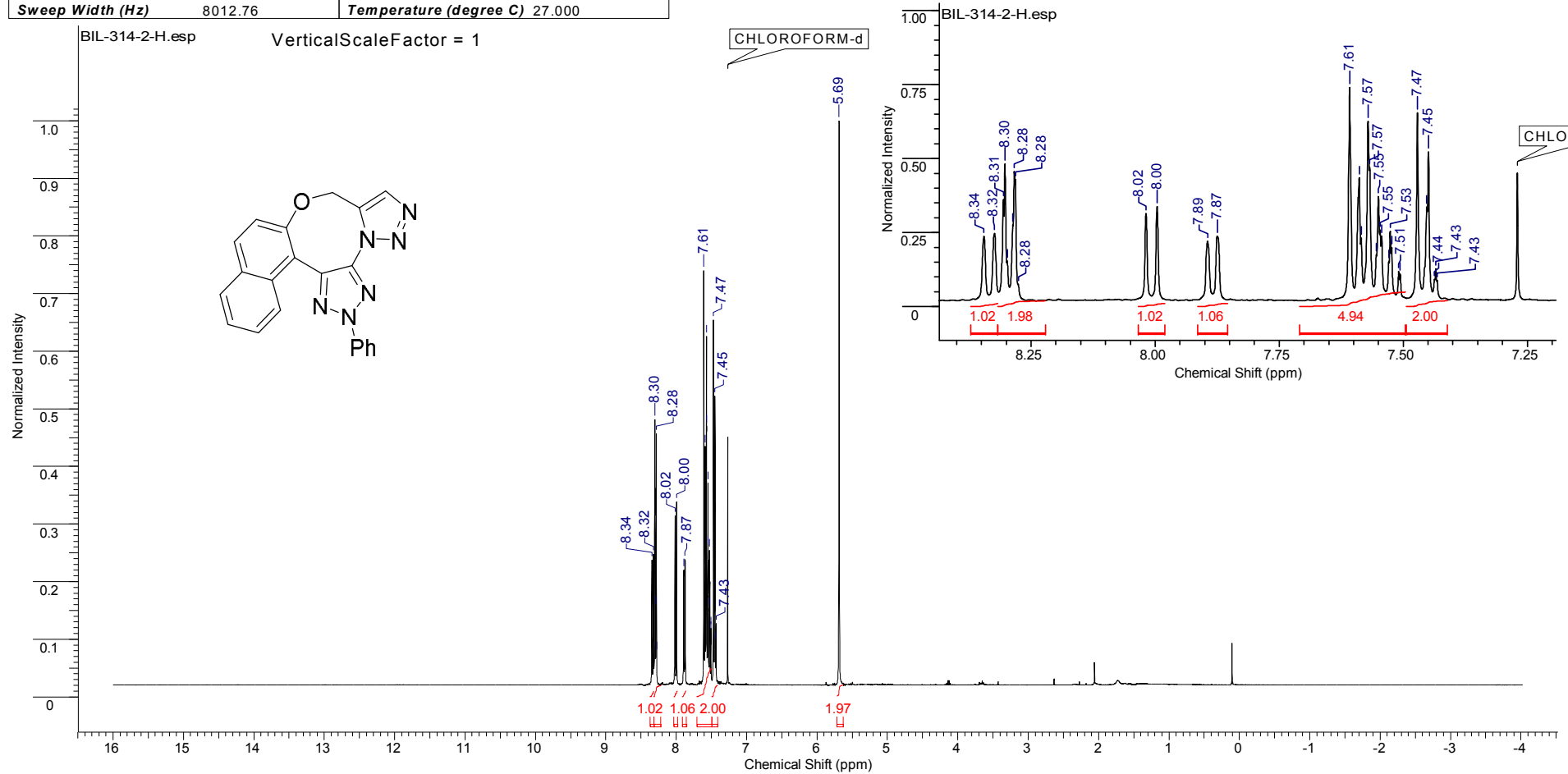
Acquisition Time (sec) 4.0894		Comment Imported from UXNMR.		Date 21 Jun 2019 15:46:48	
File Name		Frequency (MHz) 400.13		Nucleus 1H	
Original Points Count 32768		Pulse Sequence zg30		Number of Transients 4	
Points Count 131072		Solvent CHLOROFORM-d			
Spectrum Offset (Hz) 2395.8828		Temperature (degree C) 27.000			
Sweep Width (Hz) 8012.82					



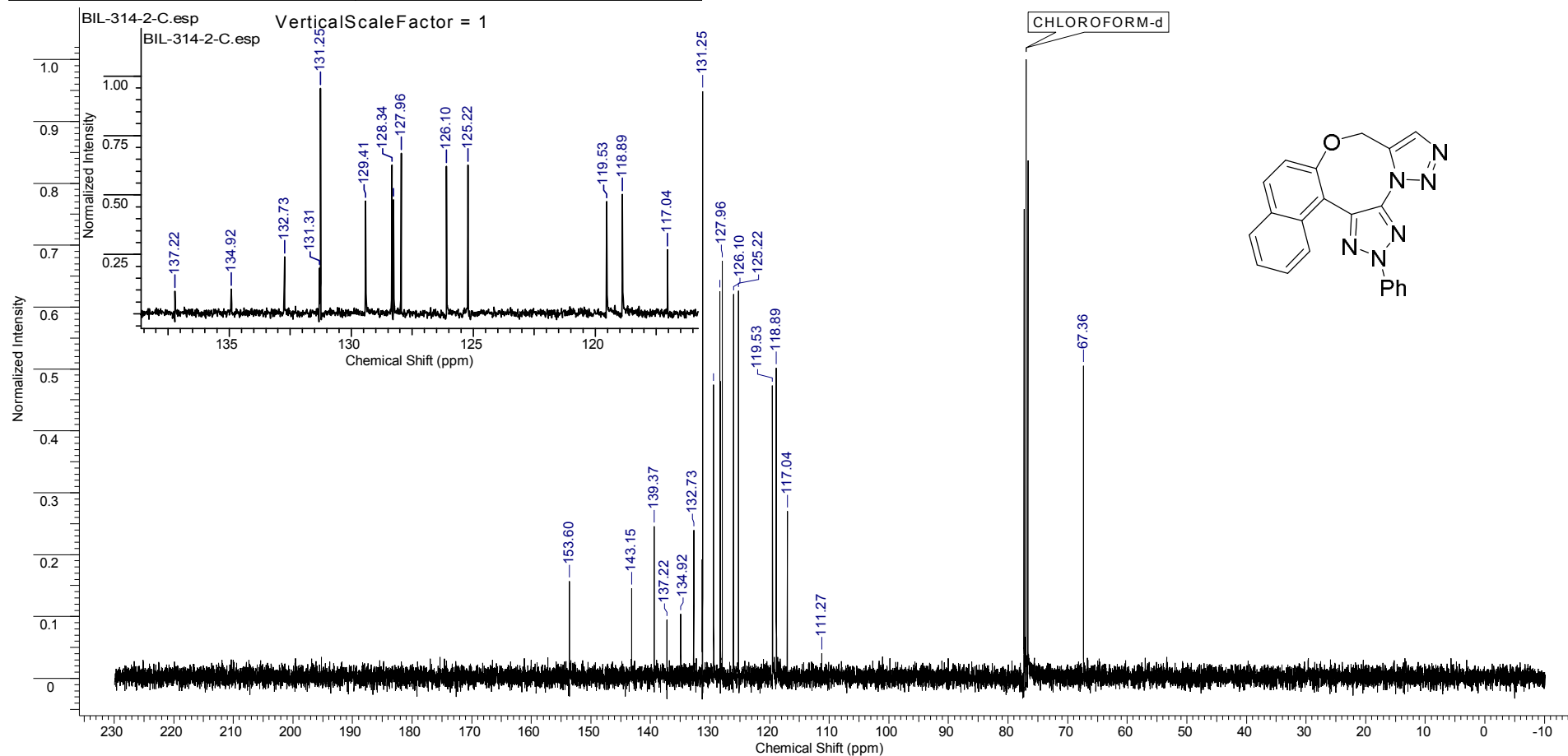
Acquisition Time (sec)	0.6783	Comment	Imported from UXMNR.		Date	21 Jun 2019 15:54:22			
File Name			Frequency (MHz)	100.61	Nucleus	¹³ C	Number of Transients	185	
Original Points Count	16384	Points Count	131072	Pulse Sequence	zgpg30	Solvent	Chloroform-d	Spectrum Offset (Hz)	11062.0352
Sweep Width (Hz)	24154.59	Temperature (degree C)	27.000						



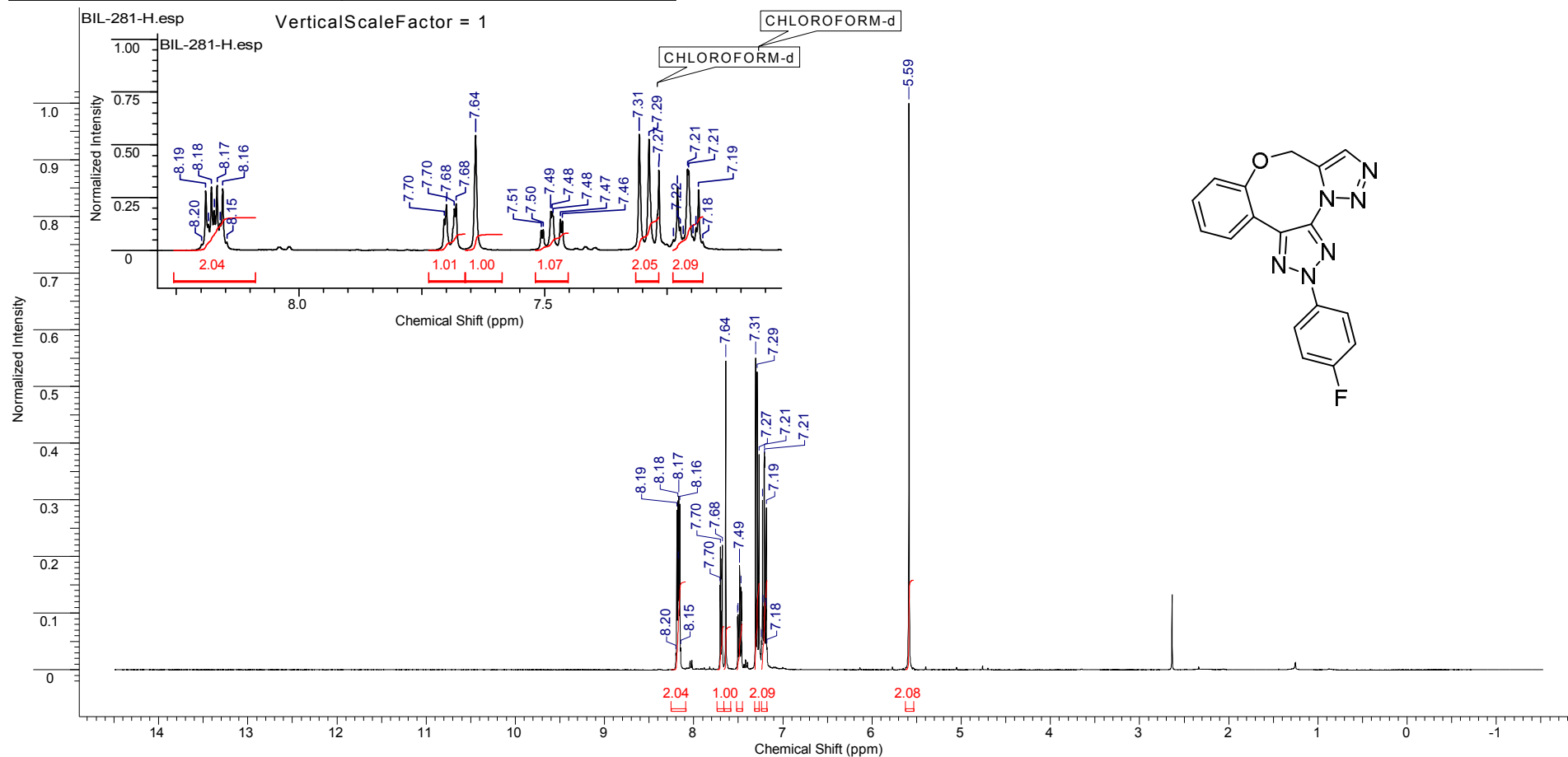
Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	12 Mar 2019 11:24:48
Date Stamp	12 Mar 2019 11:24:48				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	143.70
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.8254

¹H NMR spectrum of **4g** (400.1 MHz, CDCl₃)

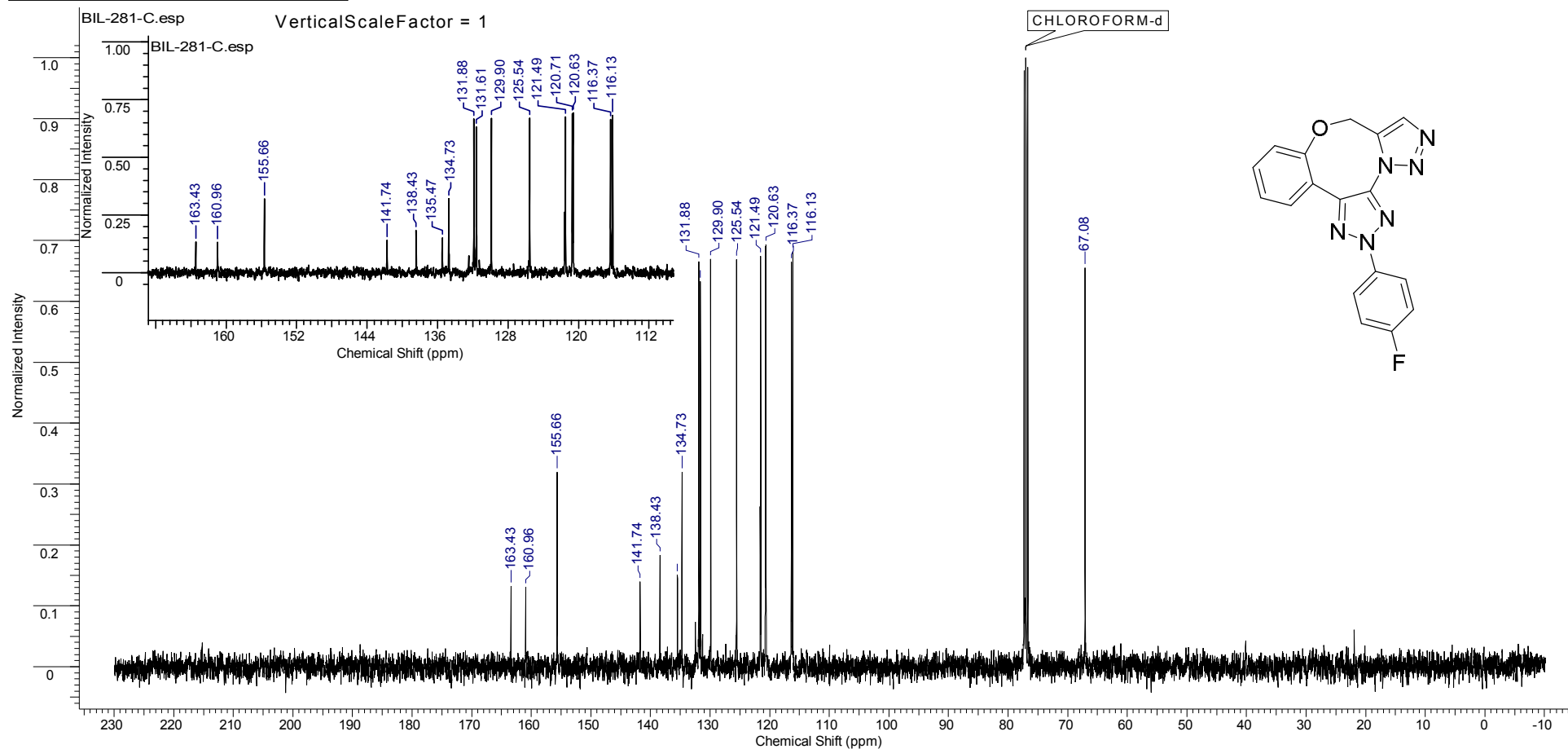
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	12 Mar 2019 11:29:04
Date Stamp	12 Mar 2019 11:29:04				
File Name					
Frequency (MHz)	100.62	Nucleus	¹³ C	Number of Transients	218
Original Points Count	16384	Owner	root	Points Count	16384
Receiver Gain	16384.00	SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d
Sweep Width (Hz)	24153.11	Temperature (degree C)	27.000	Spectrum Offset (Hz)	11058.5283

¹³C NMR spectrum of **4g** (100.6 MHz, CDCl₃)

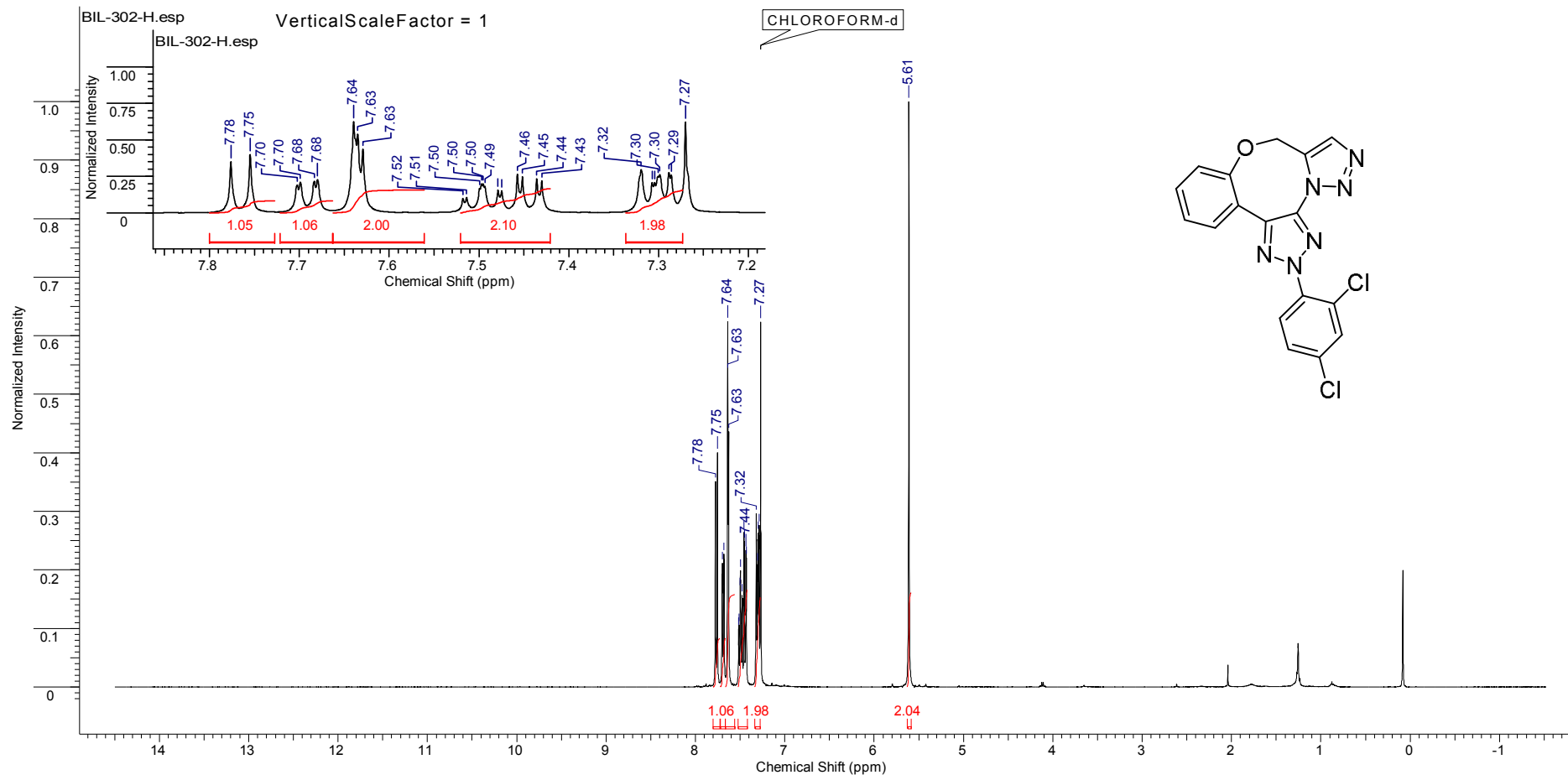
Acquisition Time (sec)	2.5559	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	01 Nov 2018 08:29:52
Date Stamp	01 Nov 2018 08:29:52				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	5	Origin	spect
Owner	root	Points Count	65536	Pulse Sequence	zg30
SW(cyclical) (Hz)	6410.26	Solvent	CHLOROFORM-d	Receiver Gain	114.00
Sweep Width (Hz)	6410.16	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2594.6238

¹H NMR spectrum of 4h (400.1 MHz, CDCl₃)

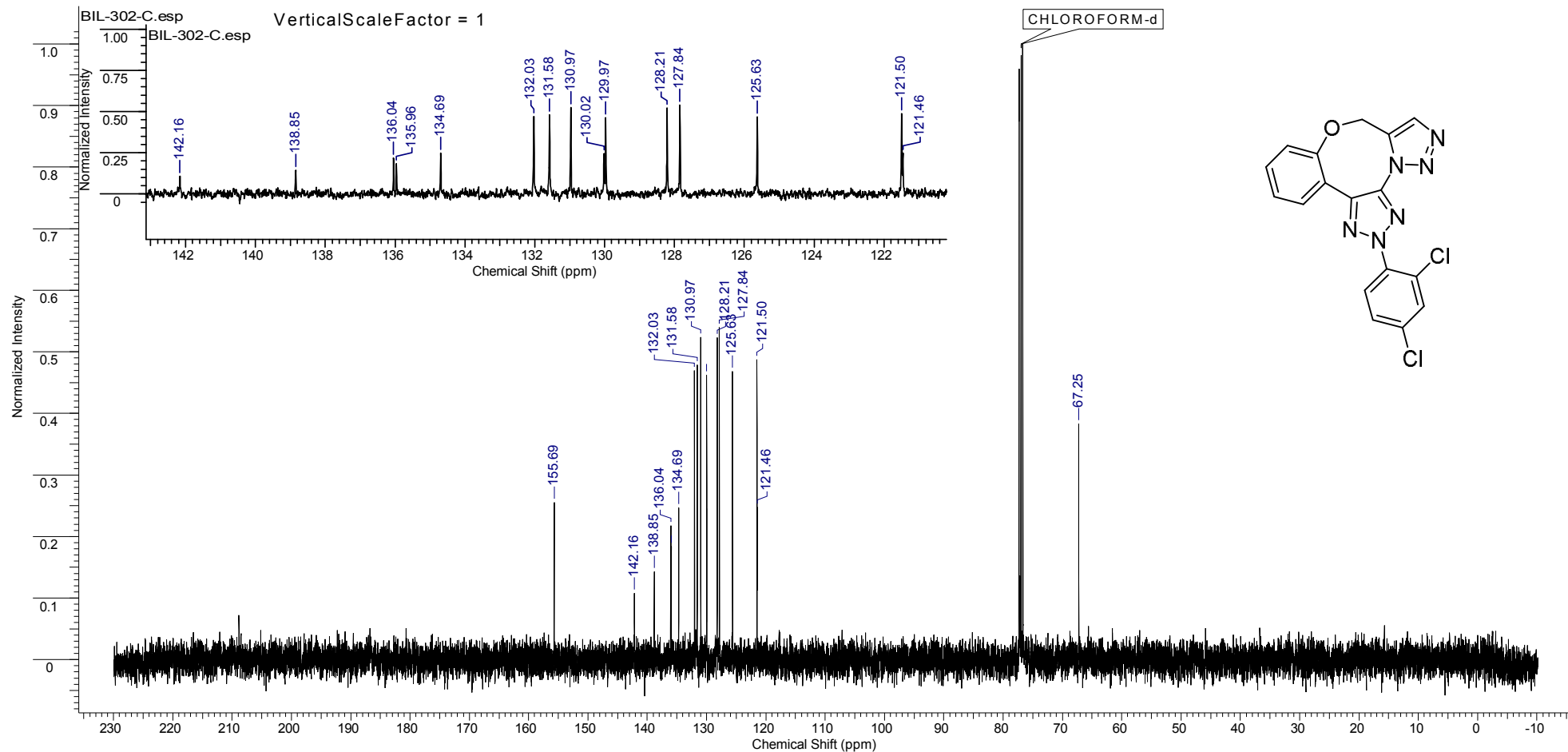
Acquisition Time (sec)	0.4999	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	01 Nov 2018 08:32:00
Date Stamp	01 Nov 2018 08:32:00				
File Name				Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	129	Origin	spect
Owner	root	Points Count	65536	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	8192.00
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11056.7578
				Sweep Width (Hz)	24154.22

¹³C NMR spectrum of **4h** (100.6 MHz, CDCl₃)

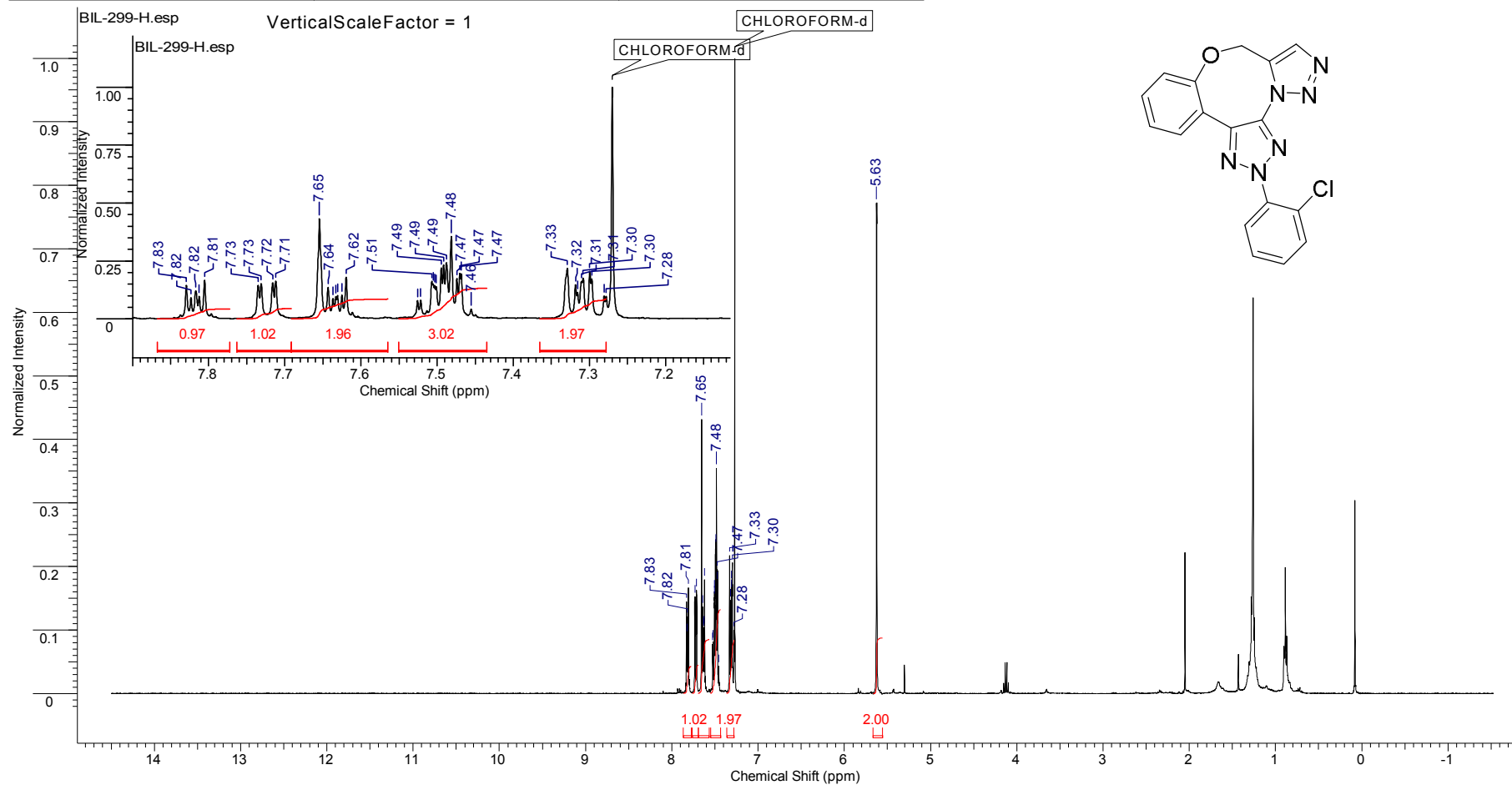
Acquisition Time (sec)	2.5559	Comment	5 mm BBO BB-1H/D Z3918/0123		Date	17 Dec 2018 12:16:00	
Date Stamp	17 Dec 2018 12:16:00		File Name		Frequency (MHz)	400.13	
Nucleus	1H	Number of Transients	4	Origin	spect	Owner	root
Points Count	65536	Pulse Sequence	zg30	Receiver Gain	143.70	SW(cyclical) (Hz)	6410.26
Spectrum Offset (Hz)	2595.9934	Sweep Width (Hz)	6410.16	Temperature (degree C)	27.000	Solvent	CHLOROFORM-d

¹H NMR spectrum of **4i** (400.1 MHz, CDCl₃)

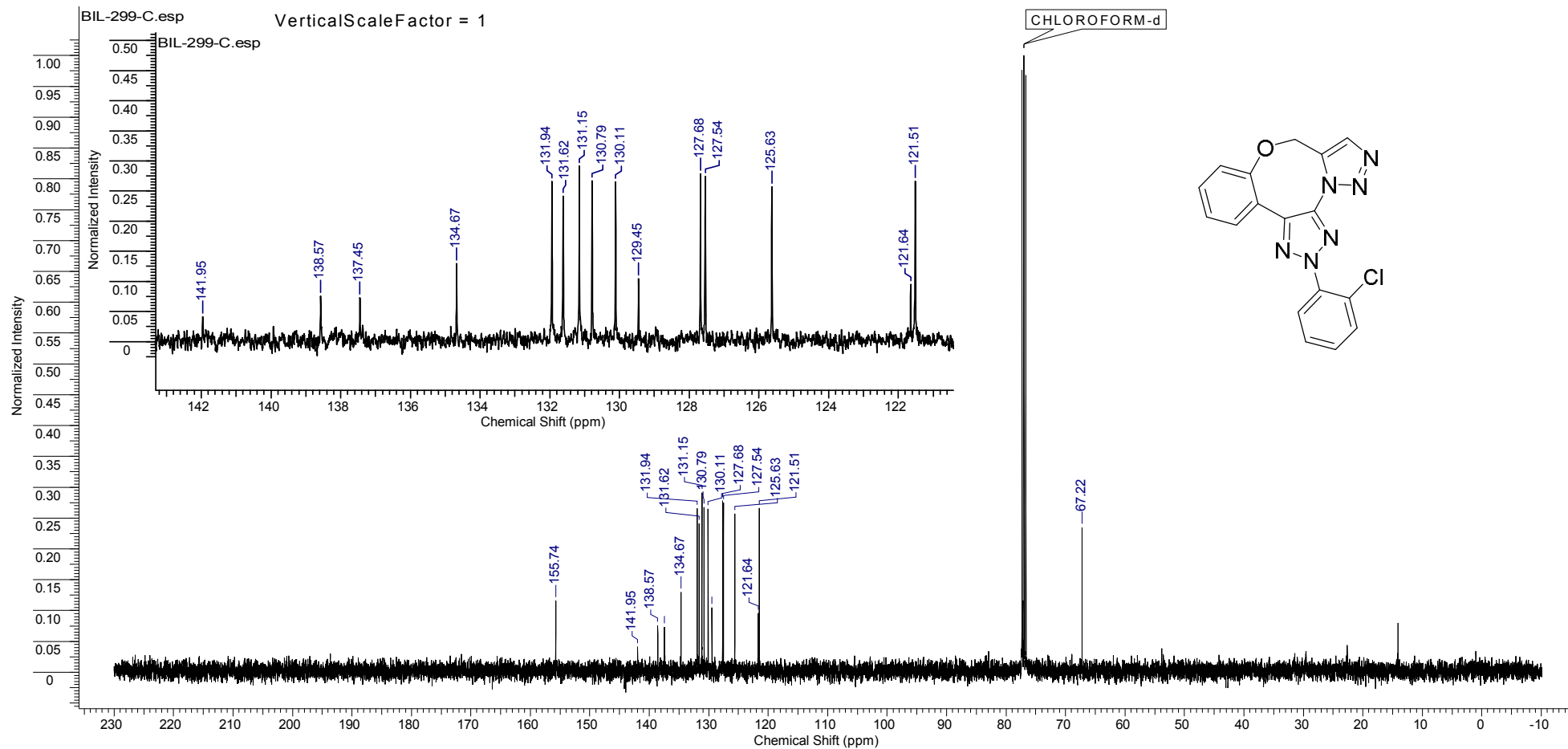
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	17 Dec 2018 12:18:08
Date Stamp	17 Dec 2018 12:18:08	File Name			
Frequency (MHz)	100.61	Nucleus	¹³ C	Number of Transients	43
Original Points Count	16384	Owner	root	Points Count	131072
Receiver Gain	13004.00	SW (cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d
Spectrum Offset (Hz)	11057.2197	Sweep Width (Hz)	24154.41	Temperature (degree C)	27.000

¹³C NMR spectrum of **4i** (100.6 MHz, CDCl₃)

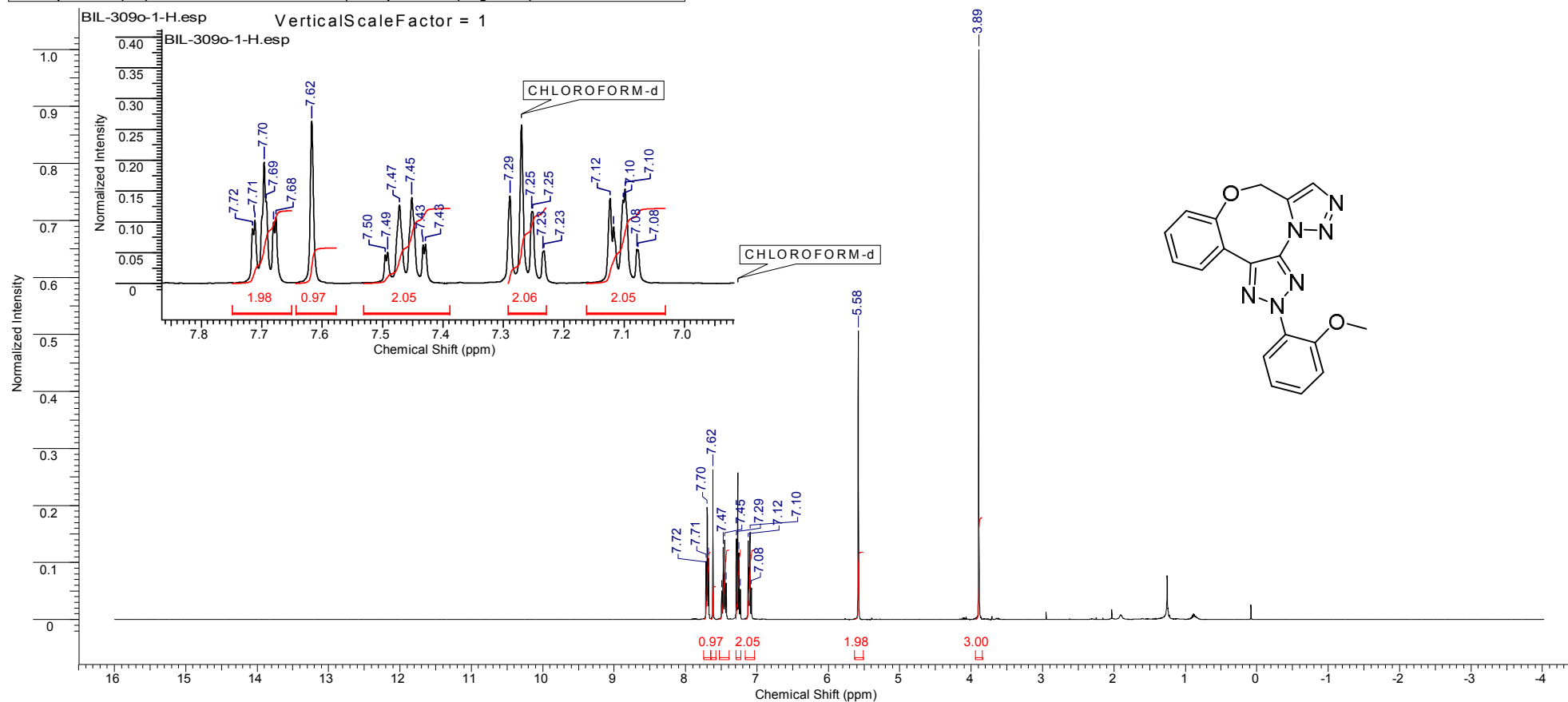
Acquisition Time (sec)	2.5559	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	10 Dec 2018 12:50:08
Date Stamp	10 Dec 2018 12:50:08	File Name			
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	4
Original Points Count	16384	Owner	root	Points Count	65536
Receiver Gain	228.10	SW(cyclical) (Hz)	6410.26	Solvent	CHLOROFORM-d
Spectrum Offset (Hz)	2595.7979	Sweep Width (Hz)	6410.16	Temperature (degree C)	27.000

¹H NMR spectrum of **4j** (400.1 MHz, CDCl₃)

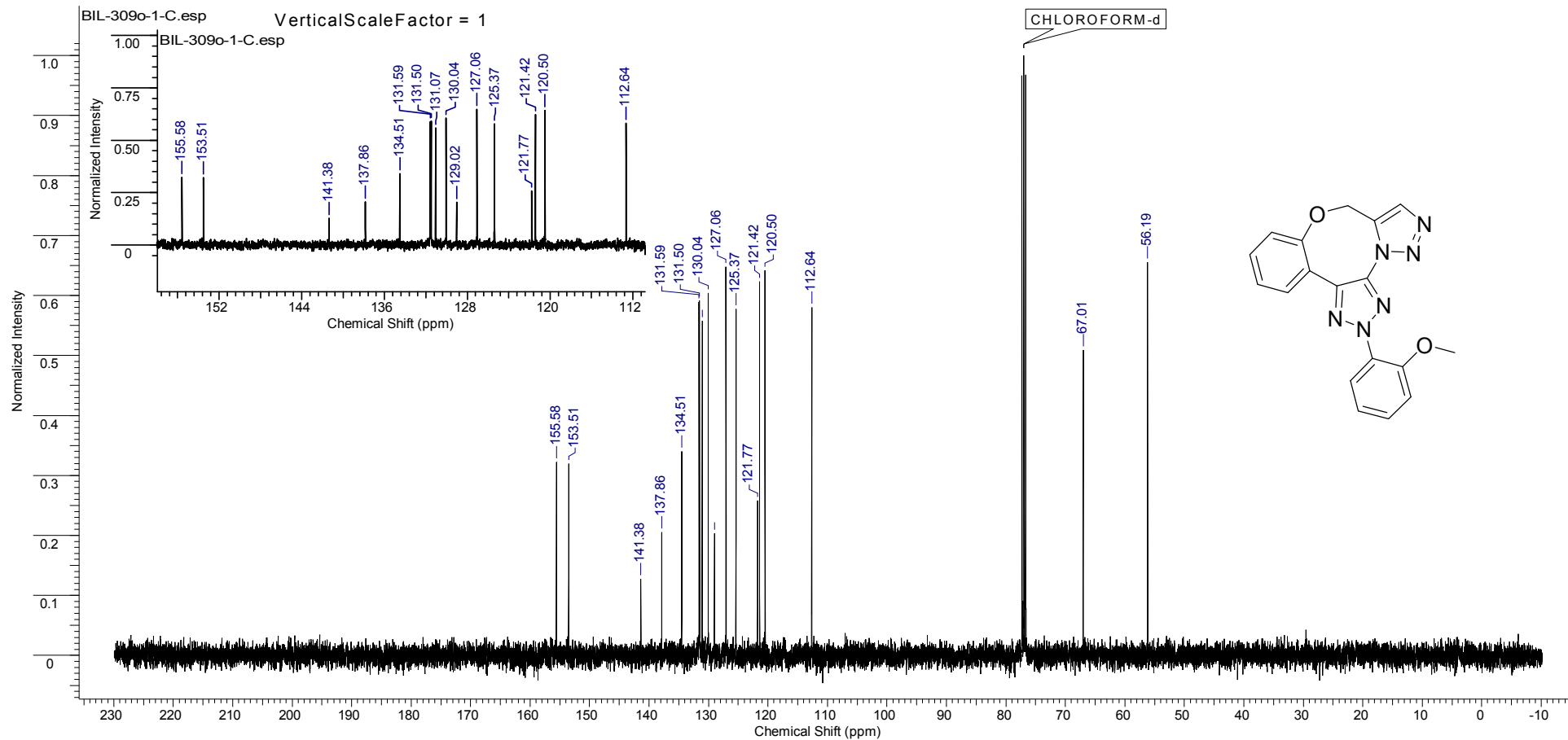
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	10 Dec 2018 12:52:16
Date Stamp	10 Dec 2018 12:52:16	File Name			
Frequency (MHz)	100.61	Nucleus	13C	Number of Transients	194
Original Points Count	16384	Owner	root	Points Count	131072
Receiver Gain	13004.00	SW (cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d
Spectrum Offset (Hz)	11062.0107	Sweep Width (Hz)	24154.41	Temperature (degree C)	27.000

¹³C NMR spectrum of **4j** (100.6 MHz, CDCl₃)

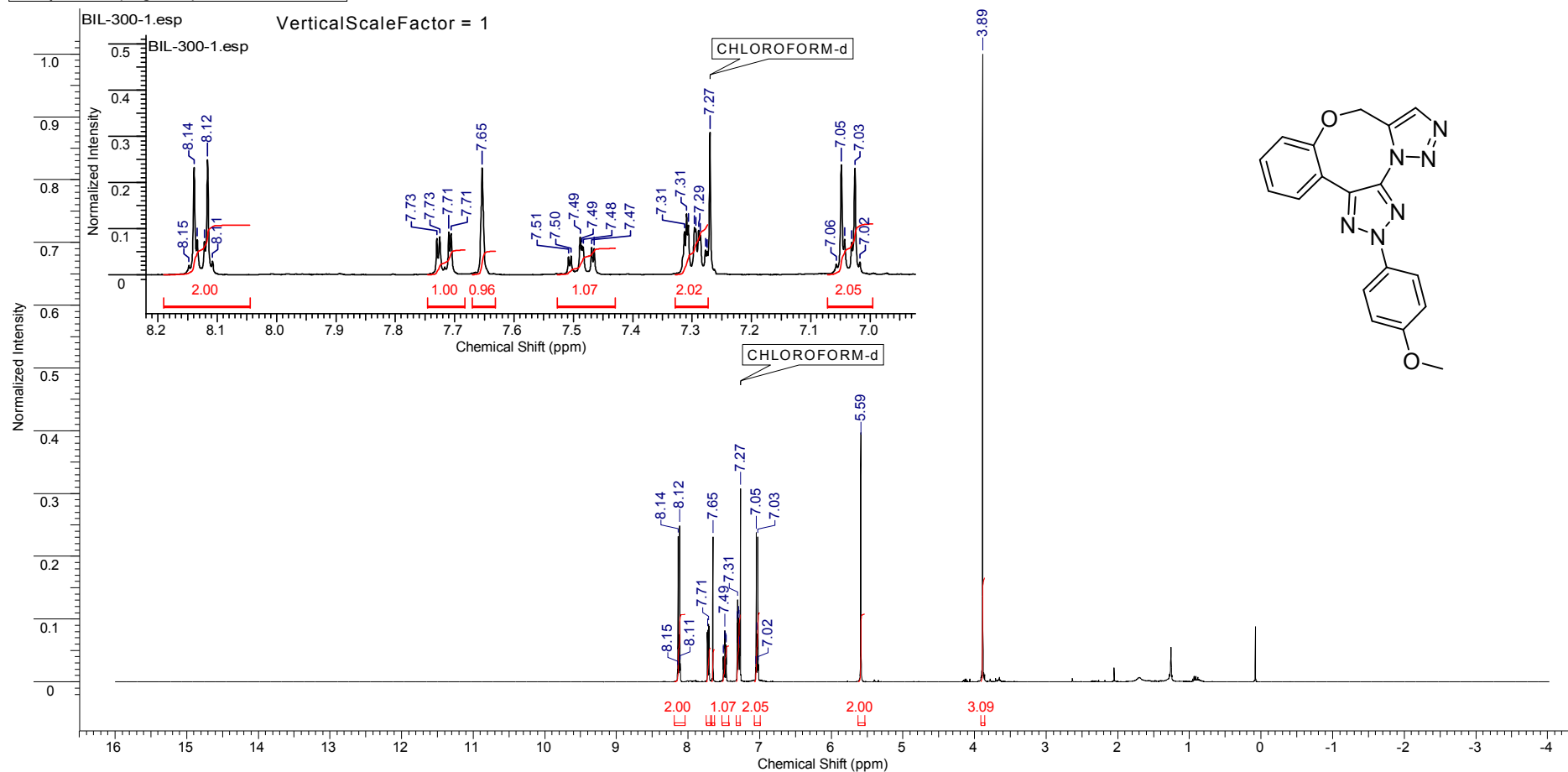
Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123		Date	17 Jun 2019 12:20:16	
Date Stamp	17 Jun 2019 12:20:16						
File Name							
Frequency (MHz)	400.13	Nucleus	1H	Number of Transients	4	Origin	spect
Original Points Count	32768	Owner	root	Points Count	131072	Pulse Sequence	zg30
Receiver Gain	114.00	SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	2395.8870
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000				

¹H NMR spectrum of **4k** (400.1 MHz, CDCl₃)

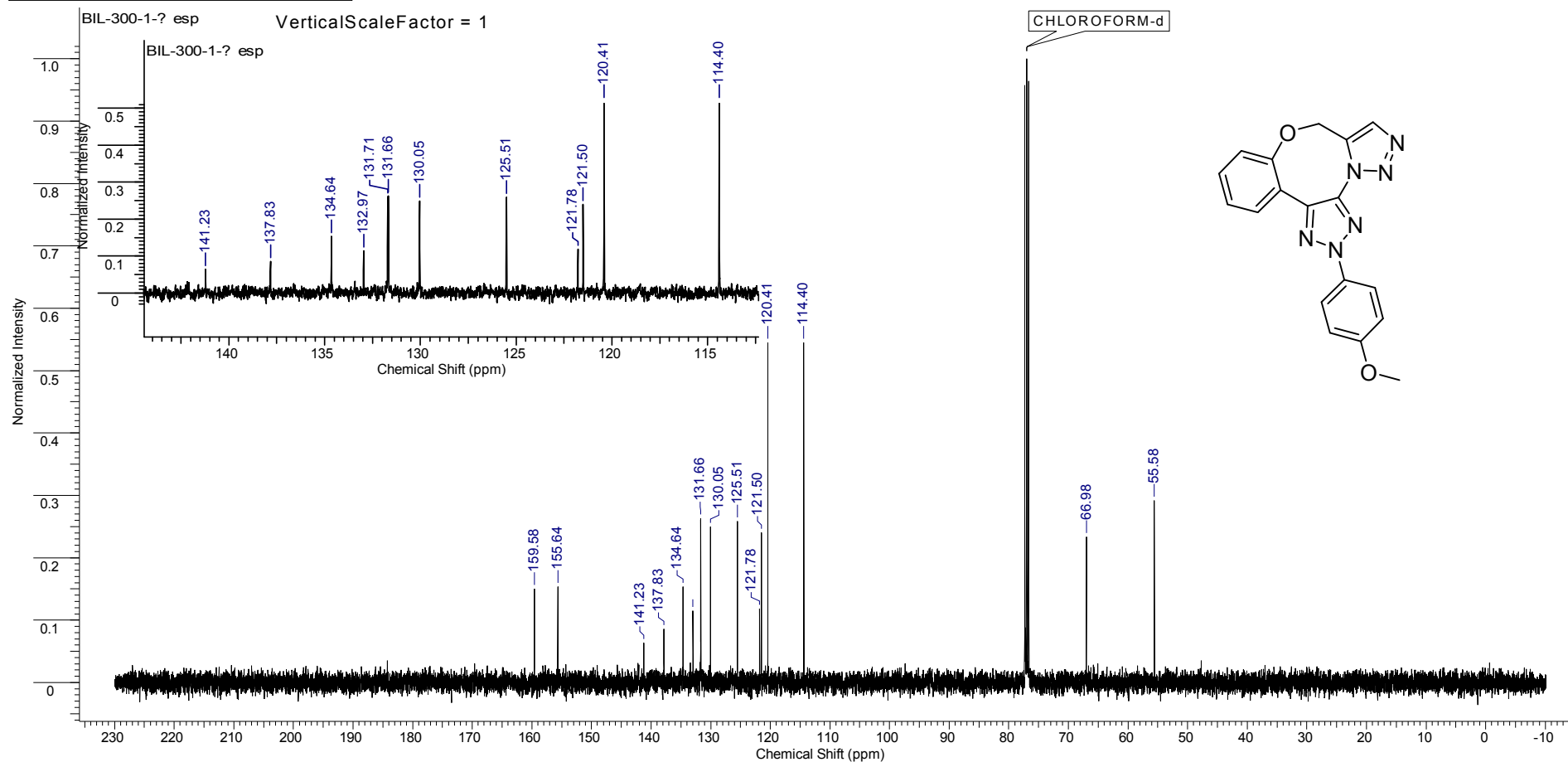
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	17 Jun 2019 12:22:24
Date Stamp	17 Jun 2019 12:22:24				
File Name				Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	65	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	9195.20
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11053.7178
				Sweep Width (Hz)	24154.41

¹³C NMR spectrum of **4k** (100.6 MHz, CDCl₃)

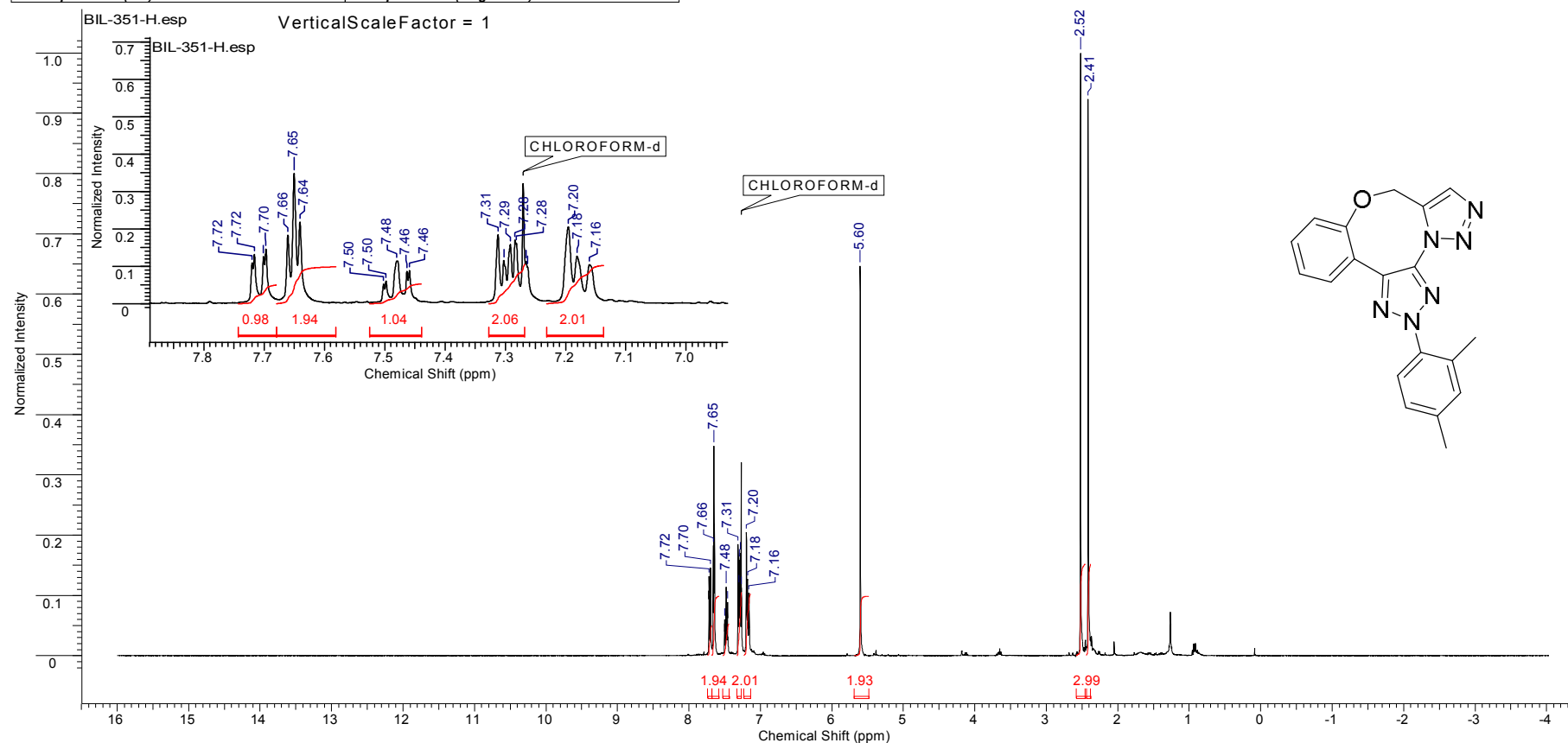
Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	25 May 2019 17:25:20
Date Stamp	25 May 2019 17:25:20				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	203.20
Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.7031	Sweep Width (Hz)	8012.76

¹H NMR spectrum of **4l** (400.1 MHz, CDCl₃)

Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	27 May 2019 12:48:00
Date Stamp	27 May 2019 12:48:00				
File Name				Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	117	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	13004.00
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11060.7207
				Sweep Width (Hz)	24154.41

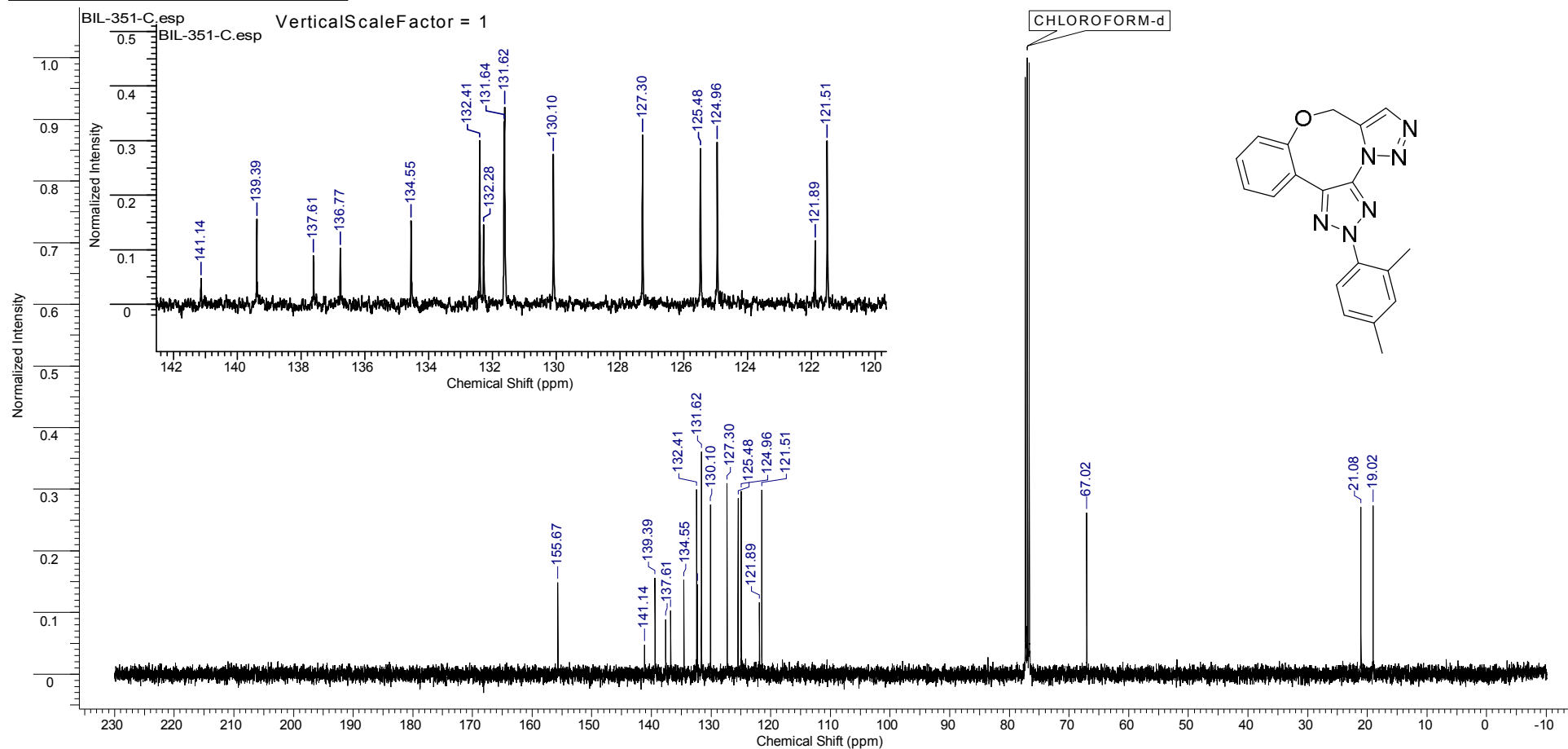
¹³C NMR spectrum of **4I** (100.6 MHz, CDCl₃)

Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	16 Apr 2019 11:52:32
Date Stamp	16 Apr 2019 11:52:32				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	203.20
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.6421

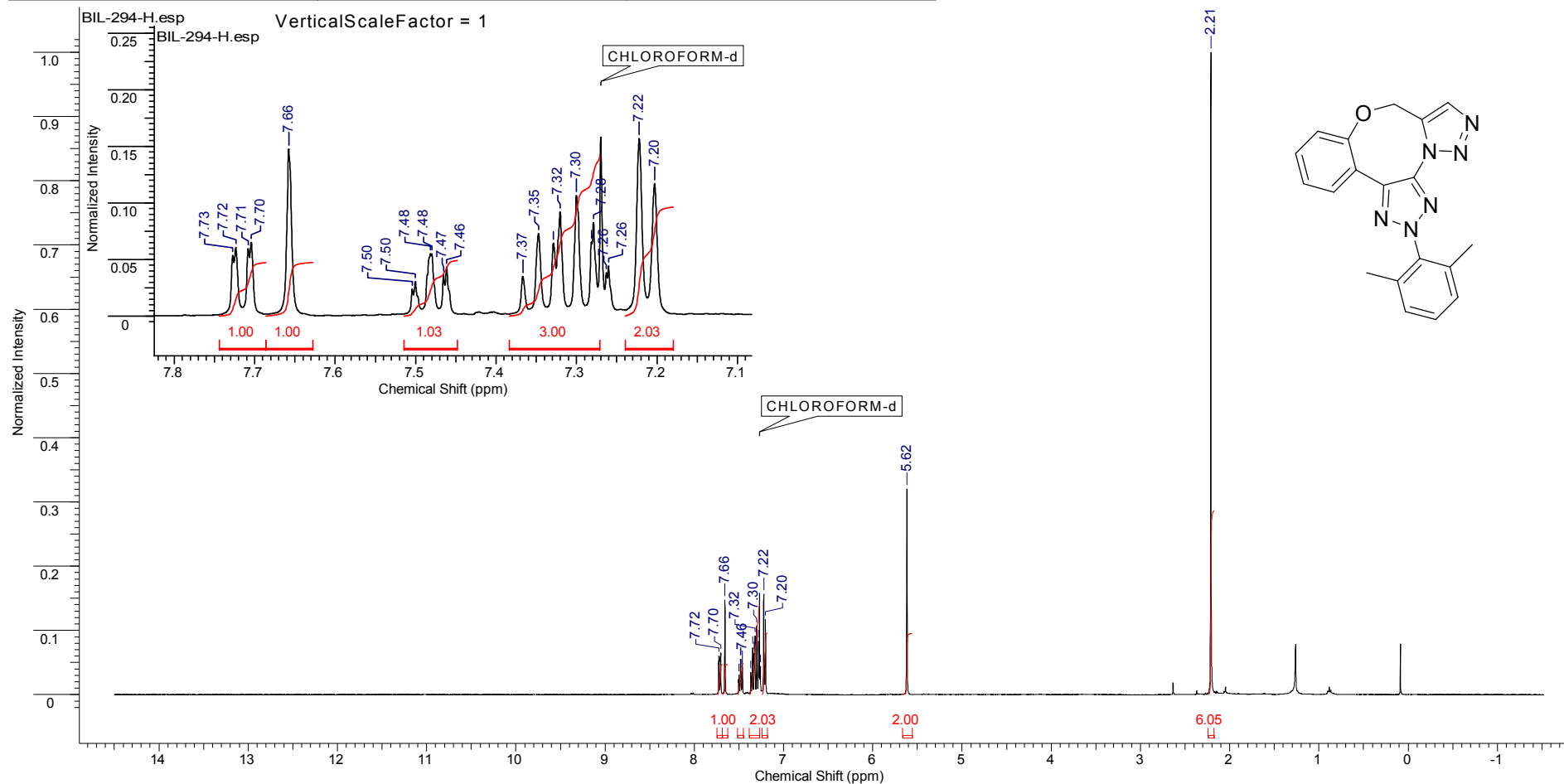


^1H NMR spectrum of **4m** (400.1 MHz, CDCl_3)

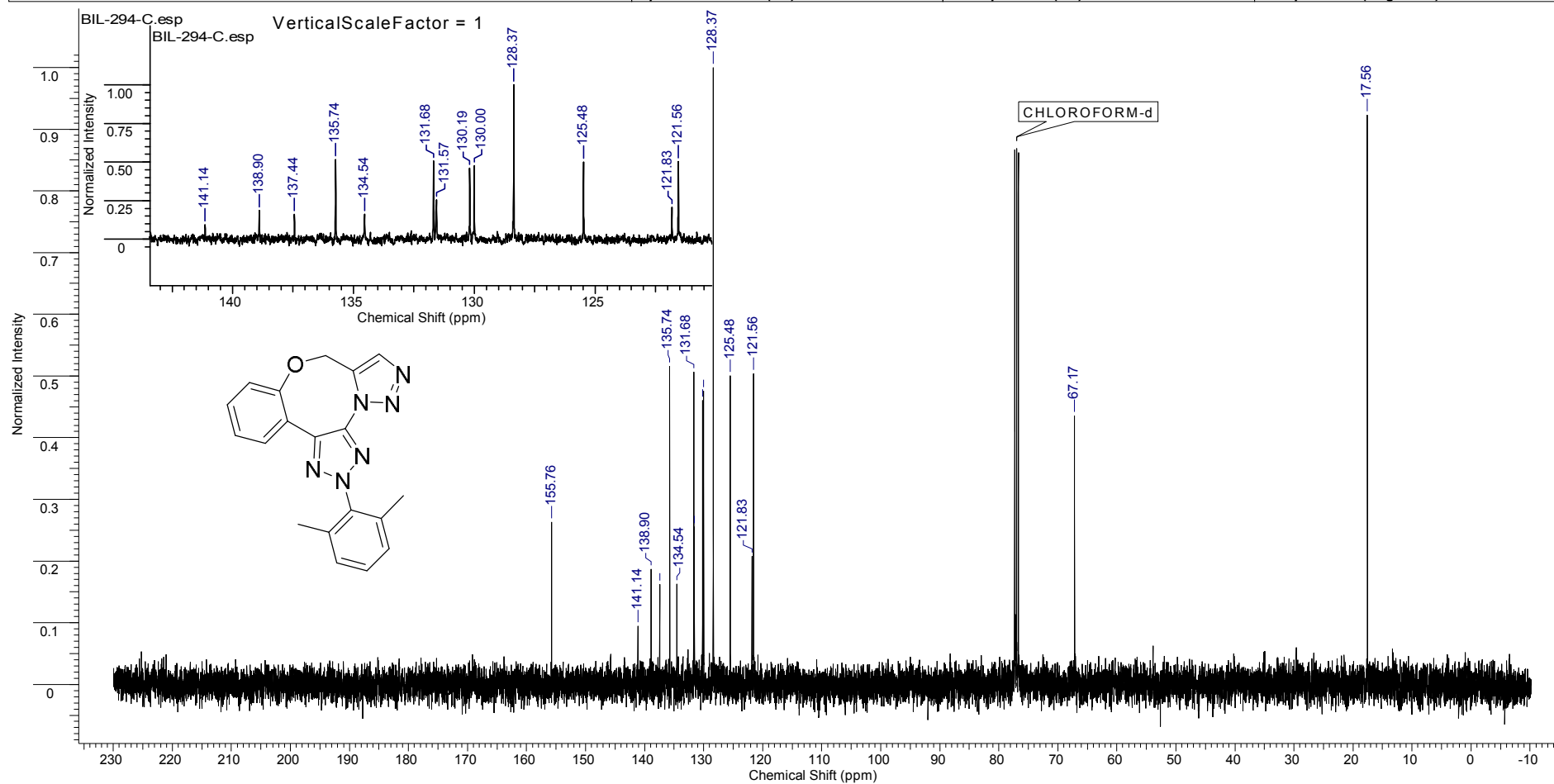
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	16 Apr 2019 11:52:32
Date Stamp	16 Apr 2019 11:52:32				
File Name				Frequency (MHz)	100.61
Nucleus	¹³ C	Number of Transients	218	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	9195.20
Temperature (degree C)	27.000	Spectrum Offset (Hz)	11061.8262	Sweep Width (Hz)	24154.41

¹³C NMR spectrum of **4m** (100.6 MHz, CDCl₃)

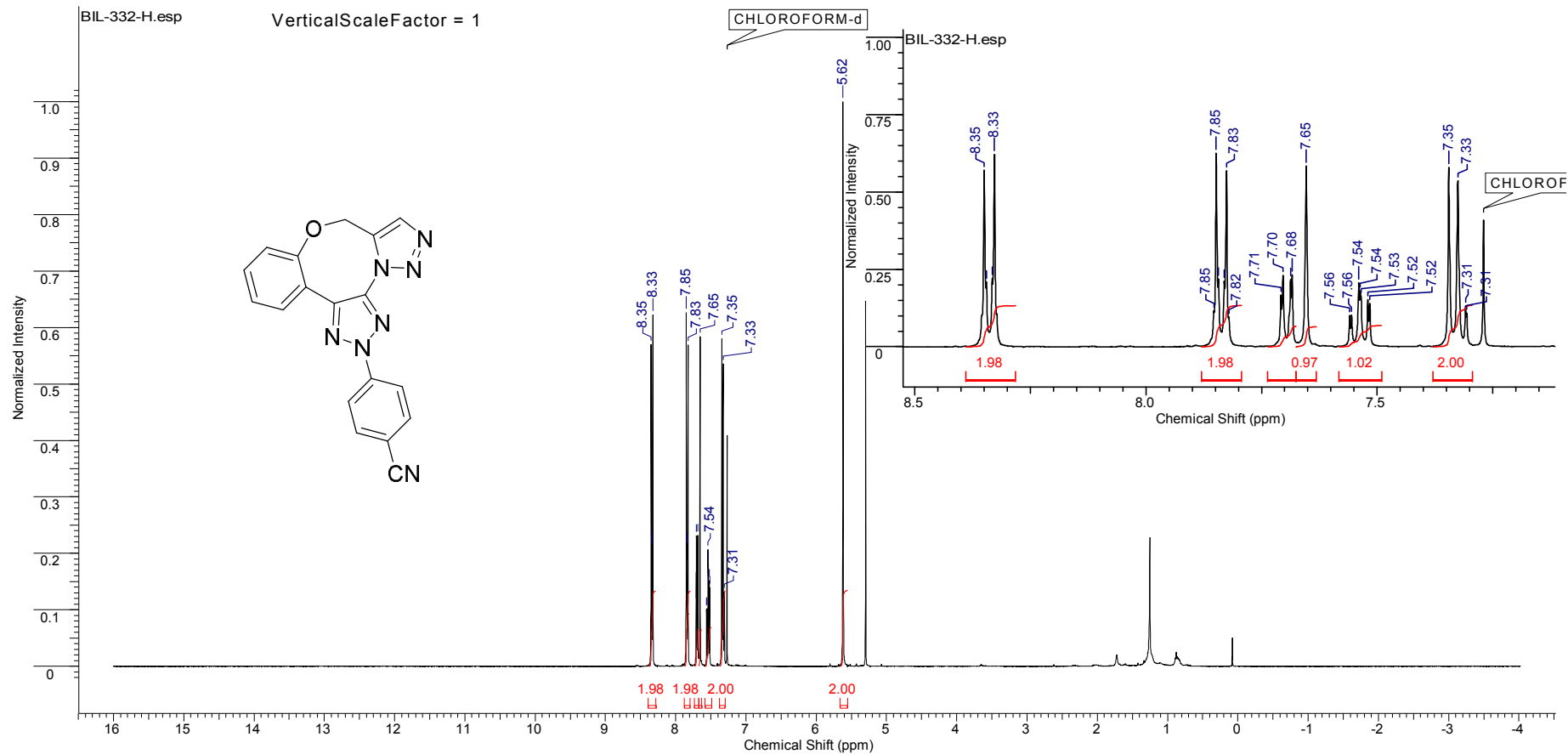
Acquisition Time (sec)	2.5559	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	01 Dec 2018 11:18:24
Date Stamp	01 Dec 2018 11:18:24	File Name		Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Points Count	65536	Pulse Sequence	zg30	Receiver Gain	161.30
Spectrum Offset (Hz)	2595.7000	Sweep Width (Hz)	6410.16	Original Points Count	16384
		Temperature (degree C)	27.000	SW(cyclical) (Hz)	6410.26
				Owner	root
				Solvent	CHLOROFORM-d

¹H NMR spectrum of **4n** (400.1 MHz, CDCl₃)

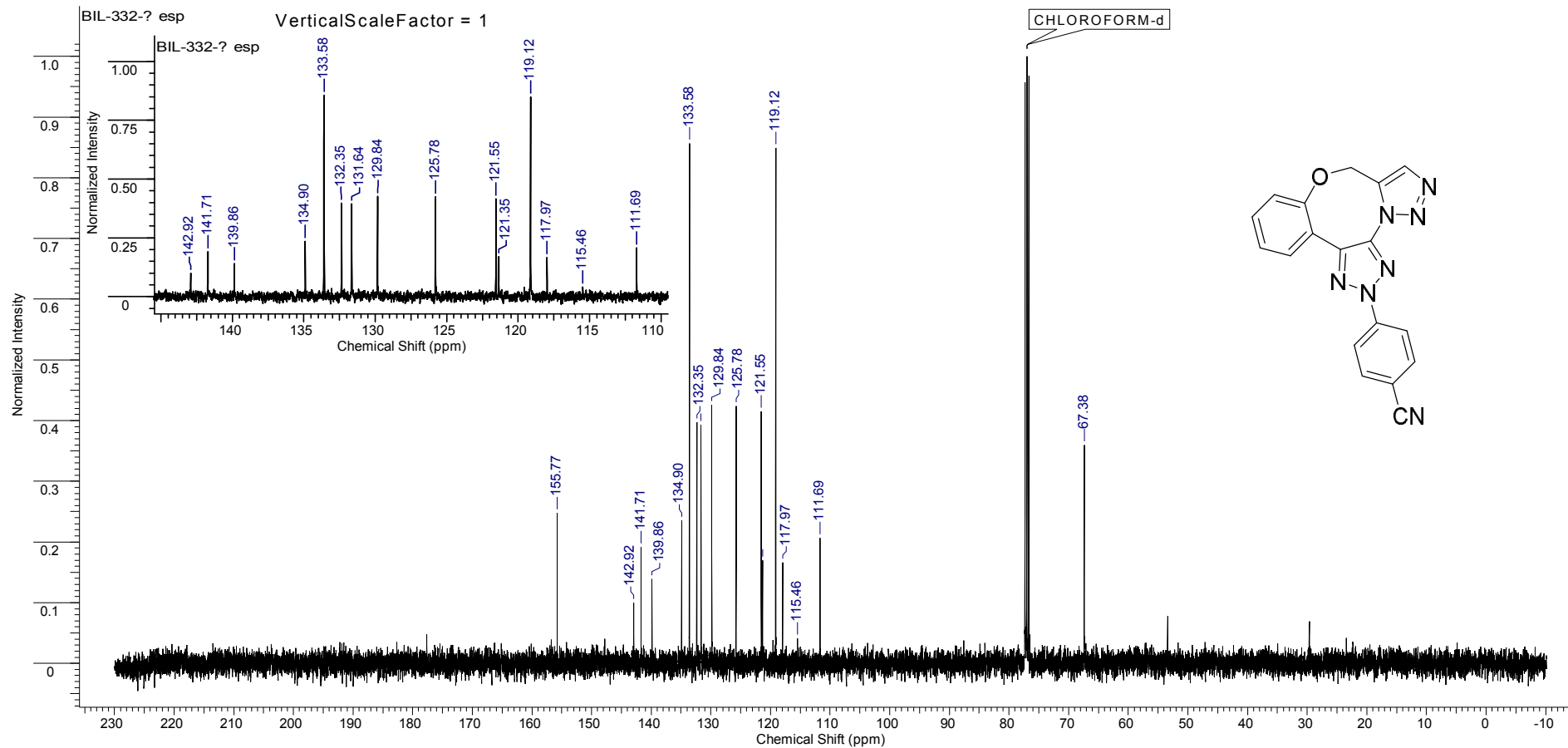
Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123		Date	01 Dec 2018 11:20:32	
Date Stamp	01 Dec 2018 11:20:32	File Name			Frequency (MHz)	100.61	
Nucleus	¹³ C	Number of Transients	76	Origin	spect	Original Points Count	16384
Points Count	131072	Pulse Sequence	zgpg30	Receiver Gain	9195.20	SW(cyclical) (Hz)	24154.59
Solvent	CHLOROFORM-d	Spectrum Offset (Hz)	11058.1406	Sweep Width (Hz)	24154.41	Temperature (degree C)	27.000

¹³C NMR spectrum of **4n** (100.6 MHz, CDCl₃)

Acquisition Time (sec)	4.0894	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	13 Mar 2019 14:15:28
Date Stamp	13 Mar 2019 14:15:28				
File Name				Frequency (MHz)	400.13
Nucleus	1H	Number of Transients	4	Origin	spect
Owner	root	Points Count	131072	Pulse Sequence	zg30
SW(cyclical) (Hz)	8012.82	Solvent	CHLOROFORM-d	Receiver Gain	161.30
Sweep Width (Hz)	8012.76	Temperature (degree C)	27.000	Spectrum Offset (Hz)	2395.8870

¹H NMR spectrum of **4o** (400.1 MHz, CDCl₃)

Acquisition Time (sec)	0.6783	Comment	5 mm BBO BB-1H/D Z3918/0123	Date	13 Mar 2019 14:17:36
Date Stamp	13 Mar 2019 14:17:36				
File Name				Frequency (MHz)	100.61
Nucleus	13C	Number of Transients	73	Original Points Count	16384
Owner	root	Points Count	131072	Pulse Sequence	zgpg30
SW(cyclical) (Hz)	24154.59	Solvent	CHLOROFORM-d	Receiver Gain	16384.00
Temperature (degree C)	27.000			Spectrum Offset (Hz)	11058.8779
				Sweep Width (Hz)	24154.41

¹³C NMR spectrum of **4o** (100.6 MHz, CDCl₃)