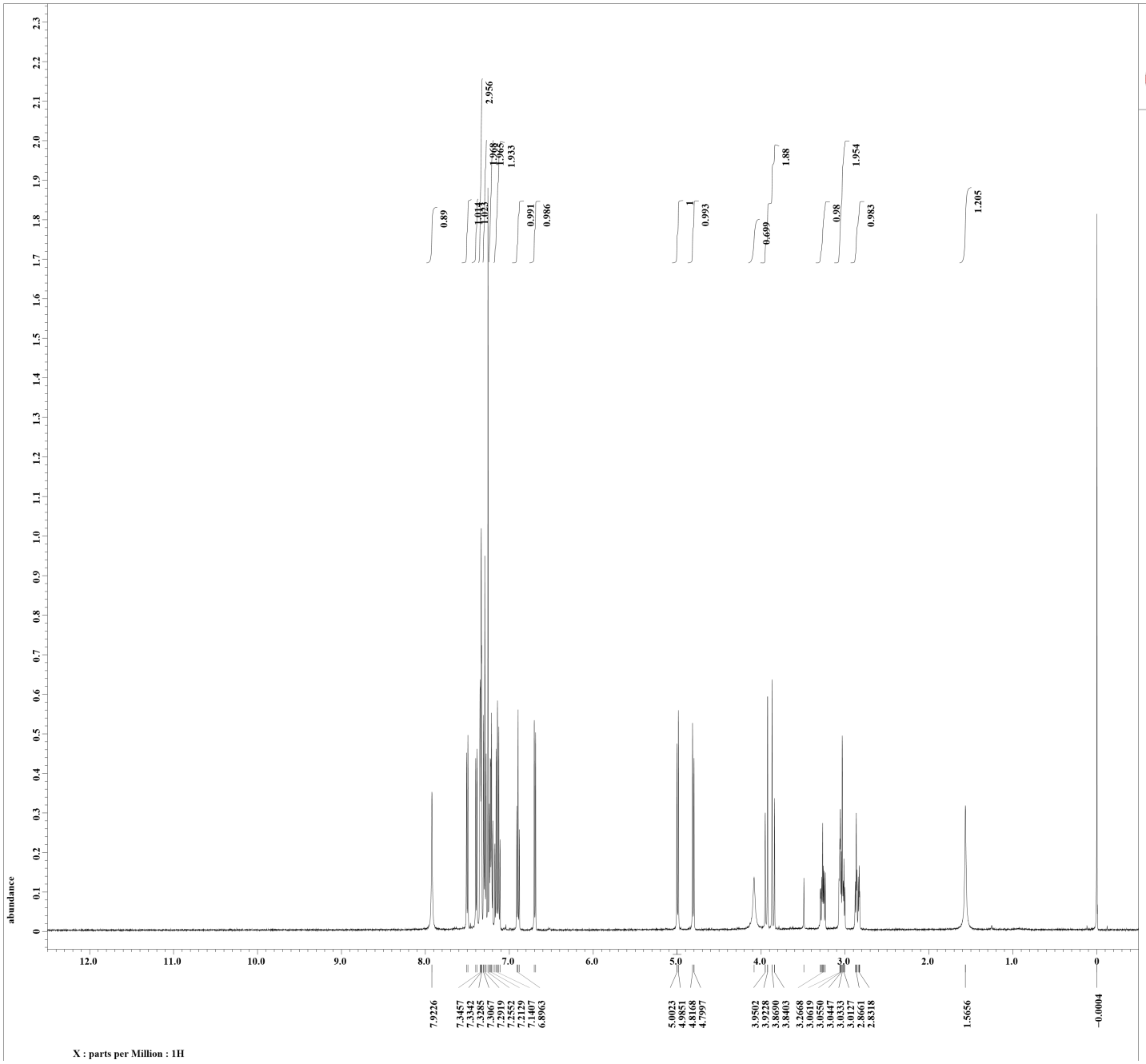
Biomimetic Synthesis of Iheyamine A from Spirocyclic Oxindoles

Takumi Abe*, Syuhei Satake, and Koji Yamada*
Faculty of Pharmaceutical Sciences, Health Sciences University of Hokkaido,
Ishikari-tobetsu, Hokkaido 0610293, Japan
E-mail: abe-t@hoku-iryo-u.ac.jp
E-mail: kyamada@hoku-iryo-u.ac.jp

SUPPORTING INFORMATION

Contents



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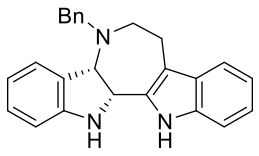
Author = delta
Experiment = single_pulse.ex2
Sample_id = S#625226
Solvent = CHLOROFORM-D
Creation_time = 17-NOV-2016 17:15:58
Revision_time = 31-JUL-2018 16:21:20
Current_time = 31-JUL-2018 16:21:44

Content = single_pulse
Data_format = 1D COMPLEX
Dim_size = 13107
Dim_title = 1H
Dim_units = [ppm]
Dimensions = X
Site = ECA 500
Spectrometer = DELTA2_NMR

Field_strength = 11.62926421[T] (500[M
X_acq_duration = 1.76422912[s]
X_domain = 1H
X_freq = 495.13191398[MHz]
X_offset = 5[ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.5668198[Hz]
X_sweep = 9.28677563[kHz]
Irr_domain = 1H
Irr_freq = 495.13191398[MHz]
Irr_offset = 5[ppm]
Tri_domain = 1H
Tri_freq = 495.13191398[MHz]
Tri_offset = 5[ppm]
Clipped = FALSE
Mod_return = 1
Scans = 8
Total_scans = 8

X_90_width = 12.7[us]
X_acq_time = 1.76422912[s]
X_angle = 45[deg]
X_atn = 3.6[dB]
X_pulse = 6.35[us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1[s]
Recvr_gain = 44
Relaxation_delay = 5[s]
Repetition_time = 6.76422912[s]
Temp_get = 20.5[dC]



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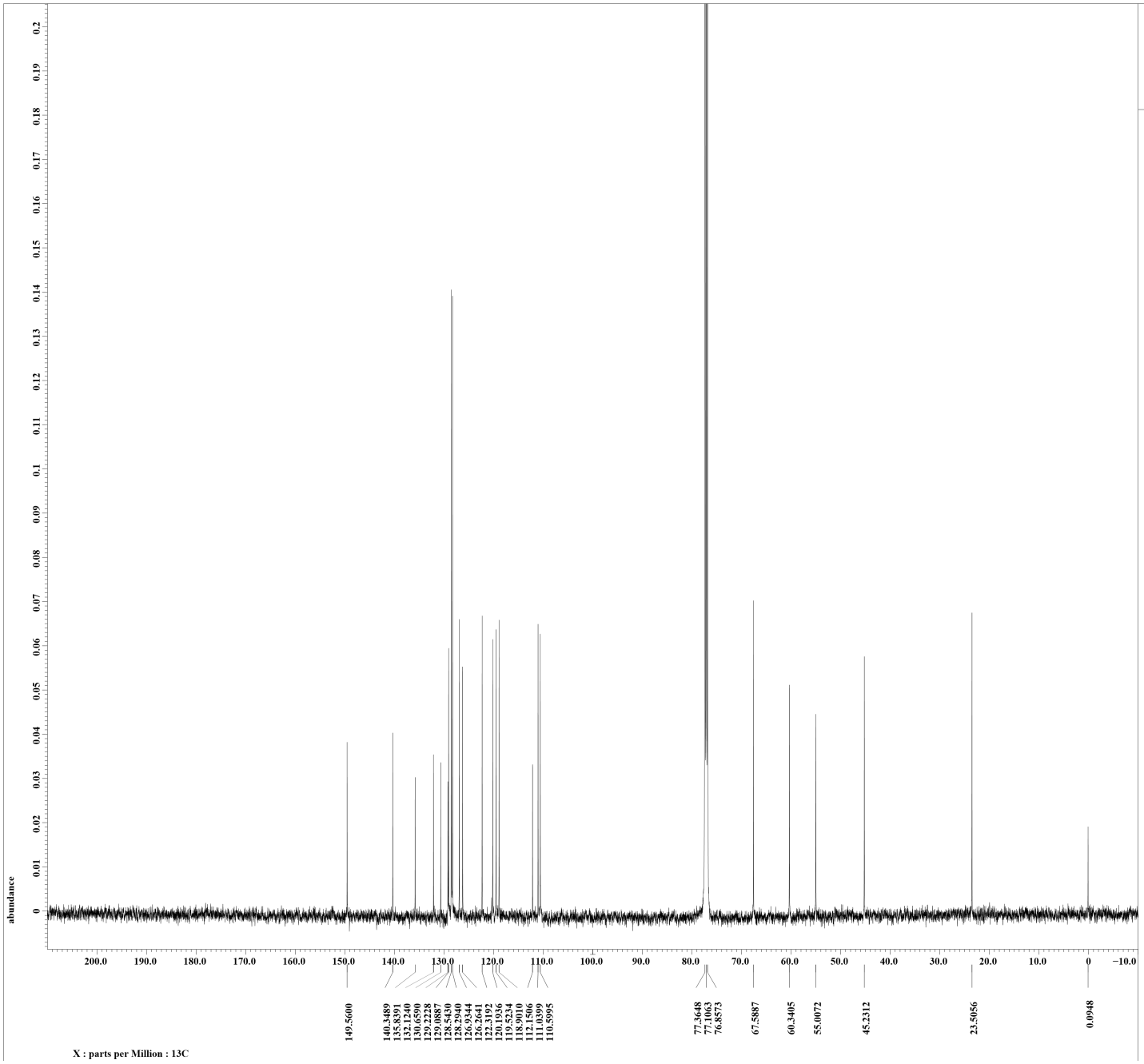

JEOL

```
Filename          = yama-16-11-17-11.jdf
Author            = delta
Experiment        = single_pulse_dec
Sample_id         = S#626003
Solvent           = CHLOROFORM-D
Creation_time     = 18-NOV-2016 07:24:32
Revision_time     = 31-JUL-2018 16:17:00
Current_time      = 31-JUL-2018 16:18:05

Content           = single pulse decouple
Data_format       = 1D COMPLEX
Dim_size          = 26214
Dim_title         = 13C
Dim_units         = [ppm]
Dimensions        = X
Site              = ECA 500
Spectrometer      = DELTA2_NMR

Field_strength    = 11.62926421[T] (500[M
X_acq_duration    = 0.8388608[s]
X_domain          = 13C
X_freq            = 124.5010059[MHz]
X_offset          = 100[ppm]
X_points          = 32768
X_prescans        = 4
X_resolution      = 1.1920929[Hz]
X_sweep           = 39.0625[kHz]
Irr_domain        = 1H
Irr_freq          = 495.13191398[MHz]
Irr_offset        = 5[ppm]
Clipped           = FALSE
Mod_return        = 1
Scans             = 17895
Total_scans       = 17895

X_90_width        = 10.6[us]
X_acq_time        = 0.8388608[s]
X_angle           = 30[deg]
X_atn             = 9.8[dB]
X_pulse           = 3.53333333[us]
Irr_atn_dec       = 20.8[dB]
Irr_atn_noe       = 20.8[dB]
Irr_noise         = WALTZ
Decoupling        = TRUE
Initial_wait      = 1[s]
Noe               = TRUE
Noe_time          = 2[s]
Recvr_gain        = 60
Relaxation_delay  = 2[s]
Repetition_time   = 2.8388608[s]
Temp_get          = 22.4[dC]
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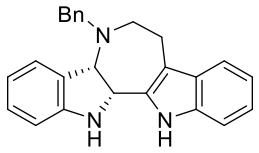

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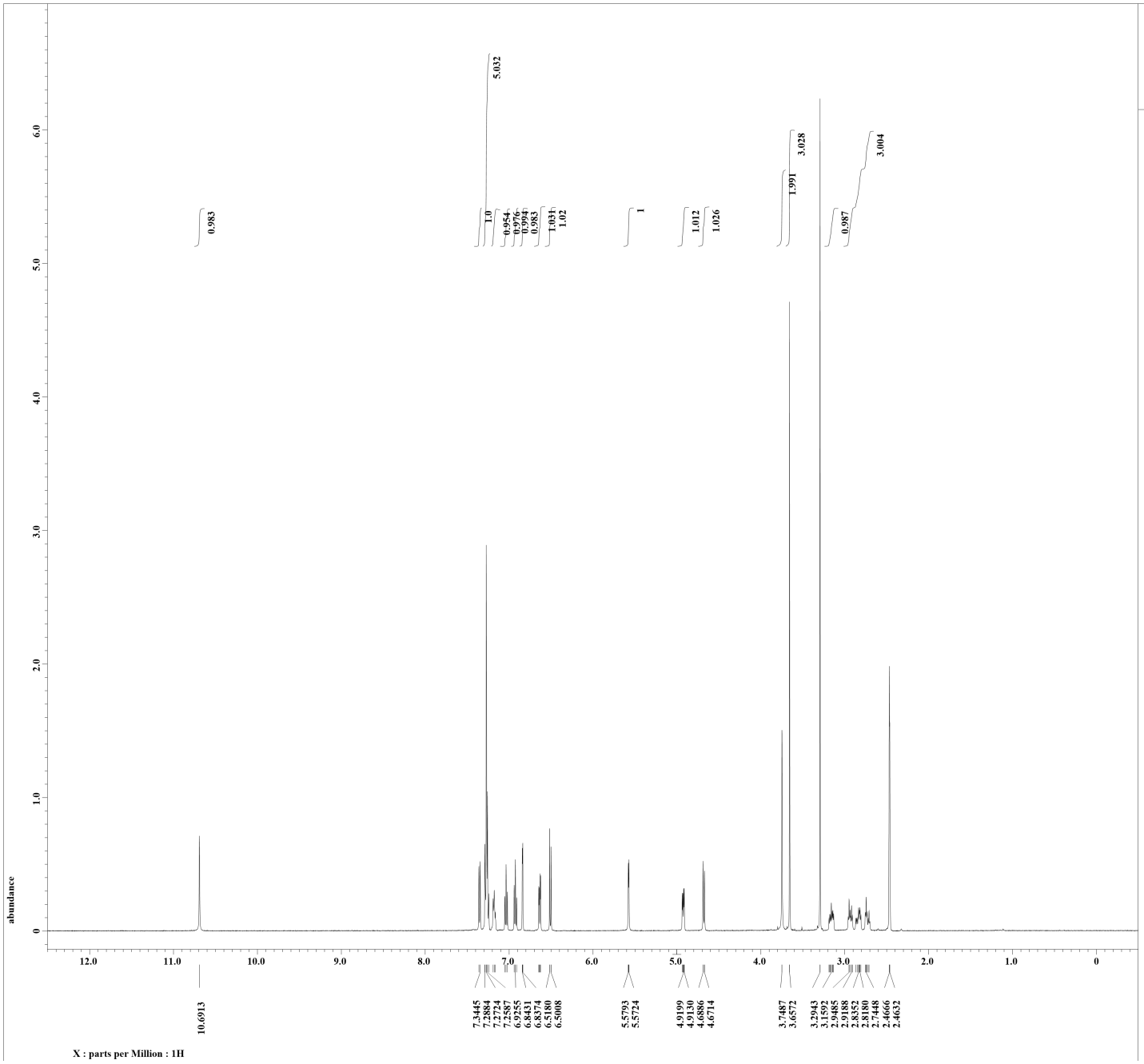

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Filename          = yama-18-07-31-2-4.jdf
Author            = delta
Experiment        = single_pulse.ex2
Sample_id         = S#671161
Solvent           = DMSO-D6
Creation_time     = 31-JUL-2018 17:42:35
Revision_time     = 31-JUL-2018 18:49:42
Current_time      = 31-JUL-2018 18:52:15

Content           = single_pulse
Data_format       = 1D COMPLEX
Dim_size          = 13107
Dim_title         = 1H
Dim_units         = [ppm]
Dimensions        = X
Site              = ECA 500
Spectrometer      = DELTA2_NMR

Field_strength    = 11.62926421[T] (500[M
X_acq_duration    = 1.76422912[s]
X_domain          = 1H
X_freq            = 495.13191398[MHz]
X_offset          = 5[ppm]
X_points          = 16384
X_prescans        = 1
X_resolution      = 0.5668198[Hz]
X_sweep           = 9.28677563[kHz]
Irr_domain        = 1H
Irr_freq          = 495.13191398[MHz]
Irr_offset        = 5[ppm]
Tri_domain        = 1H
Tri_freq          = 495.13191398[MHz]
Tri_offset        = 5[ppm]
Clipped           = FALSE
Mod_return        = 1
Scans             = 8
Total_scans       = 8

X_90_width        = 12.63[us]
X_acq_time        = 1.76422912[s]
X_angle           = 45[deg]
X_atn             = 3.3[dB]
X_pulse           = 6.315[us]
Irr_mode          = Off
Tri_mode          = Off
Dante_presat      = FALSE
Initial_wait      = 1[s]
Recvr_gain        = 44
Relaxation_delay  = 5[s]
Repetition_time   = 6.76422912[s]
Temp_get          = 23.1[dC]
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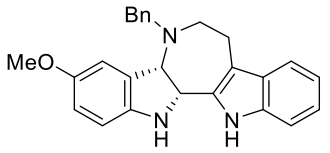

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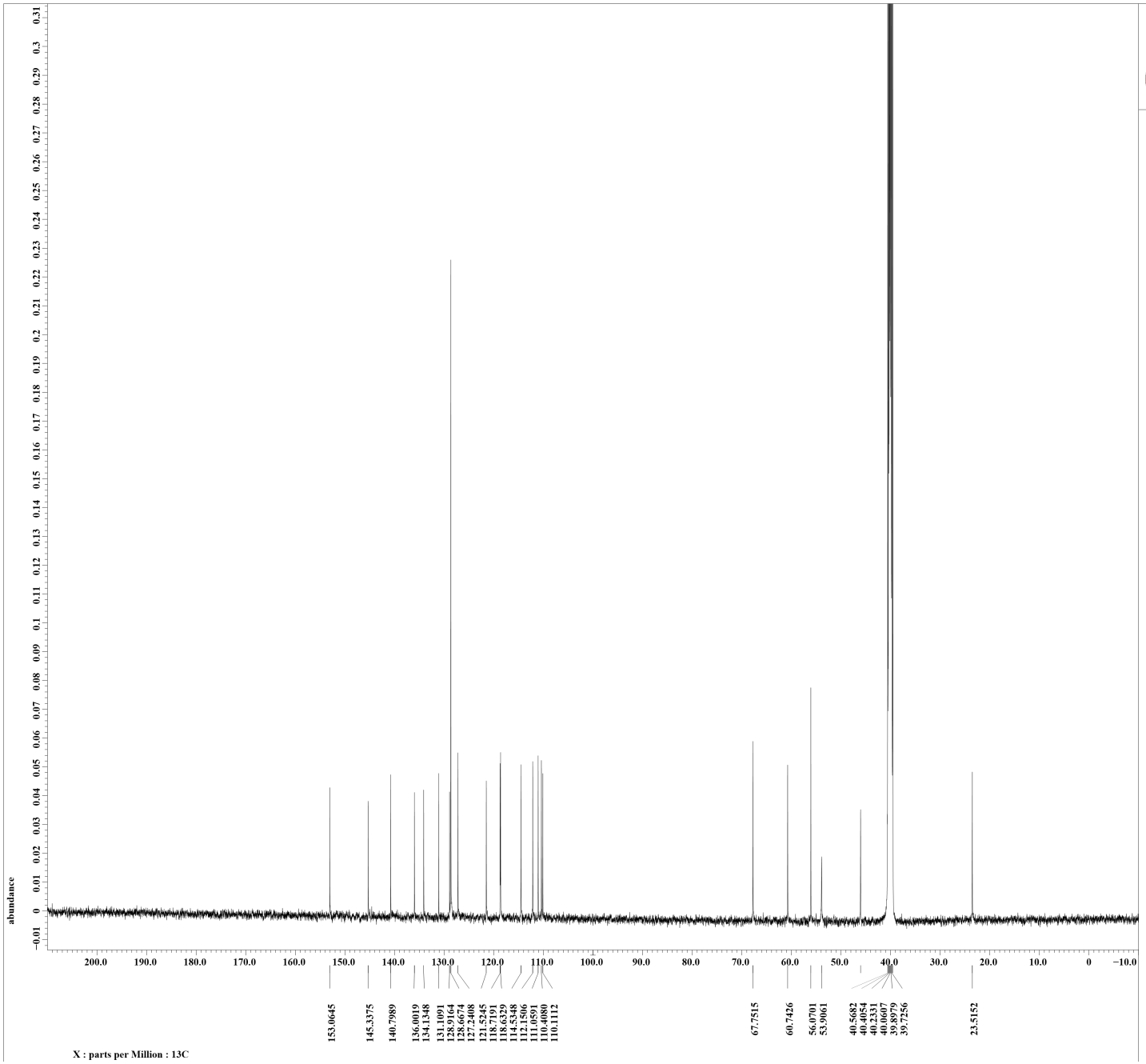
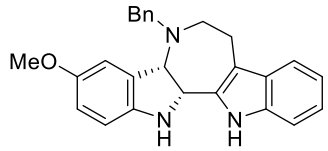


Filename = yama-18-07-31-2-6.jdf
Author = delta
Experiment = single_pulse_dec
Sample_id = S#673769
Solvent = DMSO-D6
Creation_time = 1-AUG-2018 07:50:15
Revision_time = 1-AUG-2018 08:50:41
Current_time = 1-AUG-2018 08:51:59

Content = single pulse decouple
Data_format = 1D COMPLEX
Dim_size = 26214
Dim_title = 13C
Dim_units = [ppm]
Dimensions = X
Site = ECA 500
Spectrometer = DELTA2_NMR

Field_strength = 11.62926421[T] (500[M
X_acq_duration = 0.8388608[s]
X_domain = 13C
X_freq = 124.5010059[MHz]
X_offset = 100[ppm]
X_points = 32768
X_prescans = 4
X_resolution = 1.1920929[Hz]
X_sweep = 39.0625[kHz]
Irr_domain = 1H
Irr_freq = 495.13191398[MHz]
Irr_offset = 5[ppm]
Clipped = TRUE
Mod_return = 1
Scans = 17841
Total_scans = 17841

X_90_width = 10.83[us]
X_acq_time = 0.8388608[s]
X_angle = 30[deg]
X_atn = 9.5[dB]
X_pulse = 3.61[us]
Irr_atn_dec = 20.548[dB]
Irr_atn_noe = 20.548[dB]
Irr_noise = WALTZ
Decoupling = TRUE
Initial_wait = 1[s]
Noe = TRUE
Noe_time = 2[s]
Recvr_gain = 60
Relaxation_delay = 2[s]
Repetition_time = 2.8388608[s]
Temp_get = 24.9[dC]



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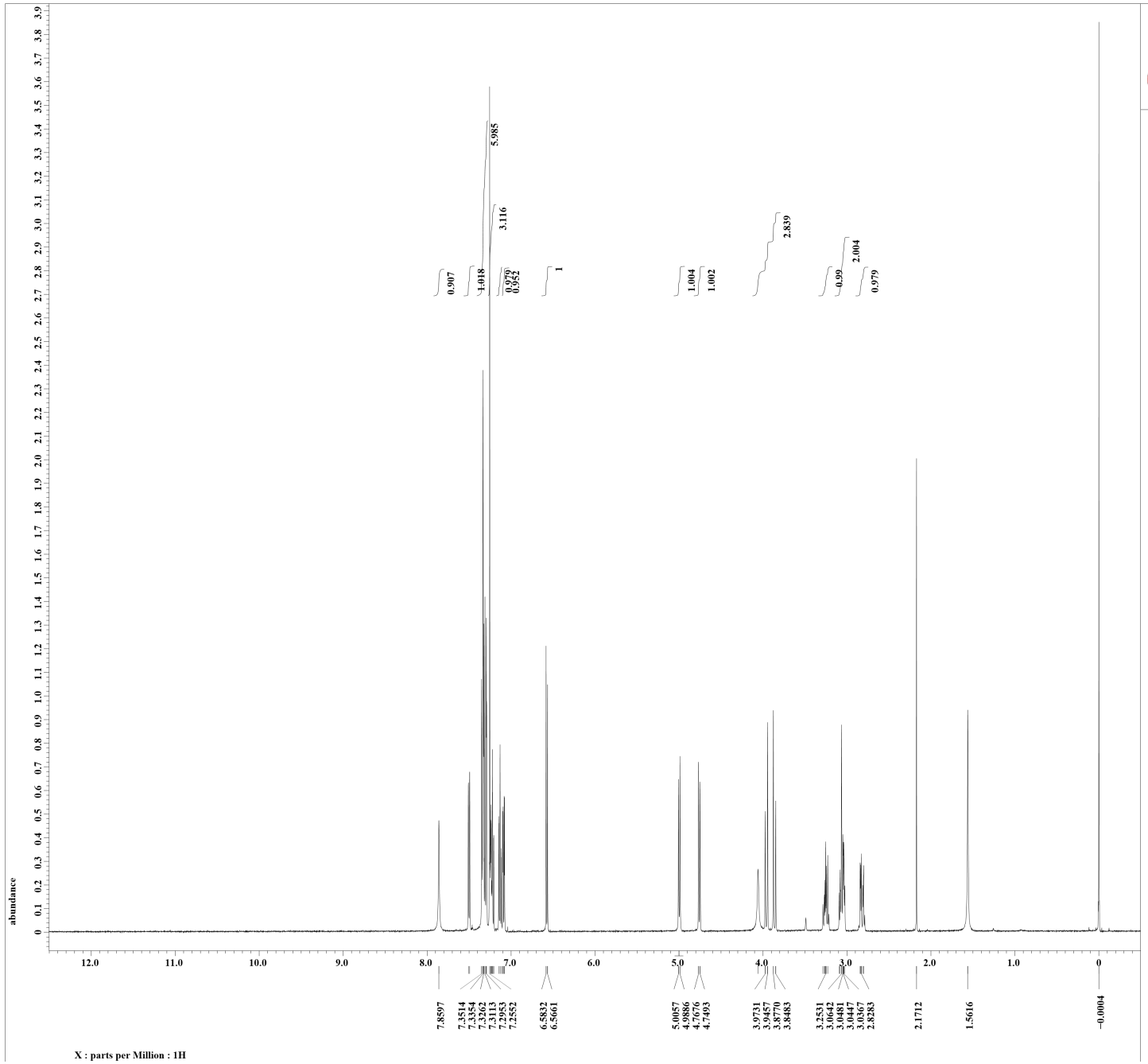
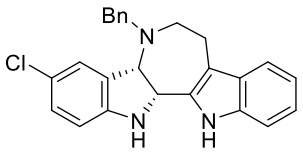


Filename = SS-18-07-06-01-4.jdf
Author = delta
Experiment = single_pulse.ex2
Sample_id = S#495808
Solvent = CHLOROFORM-D
Creation_time = 6-JUL-2018 13:01:07
Revision_time = 6-JUL-2018 18:58:50
Current_time = 6-JUL-2018 19:01:46

Content = single_pulse
Data_format = 1D COMPLEX
Dim_size = 13107
Dim_title = 1H
Dim_units = [ppm]
Dimensions = X
Site = ECA 500
Spectrometer = DELTA2_NMR

Field_strength = 11.62926421[T] (500[M
X_acq_duration = 1.76422912[s]
X_domain = 1H
X_freq = 495.13191398[MHz]
X_offset = 5[ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.5668198[Hz]
X_sweep = 9.28677563[kHz]
Irr_domain = 1H
Irr_freq = 495.13191398[MHz]
Irr_offset = 5[ppm]
Tri_domain = 1H
Tri_freq = 495.13191398[MHz]
Tri_offset = 5[ppm]
Clipped = FALSE
Mod_return = 1
Scans = 8
Total_scans = 8

X_90_width = 12.63[us]
X_acq_time = 1.76422912[s]
X_angle = 45[deg]
X_atn = 3.3[dB]
X_pulse = 6.315[us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1[s]
Recvr_gain = 46
Relaxation_delay = 5[s]
Repetition_time = 6.76422912[s]
Temp_get = 23.4[dC]



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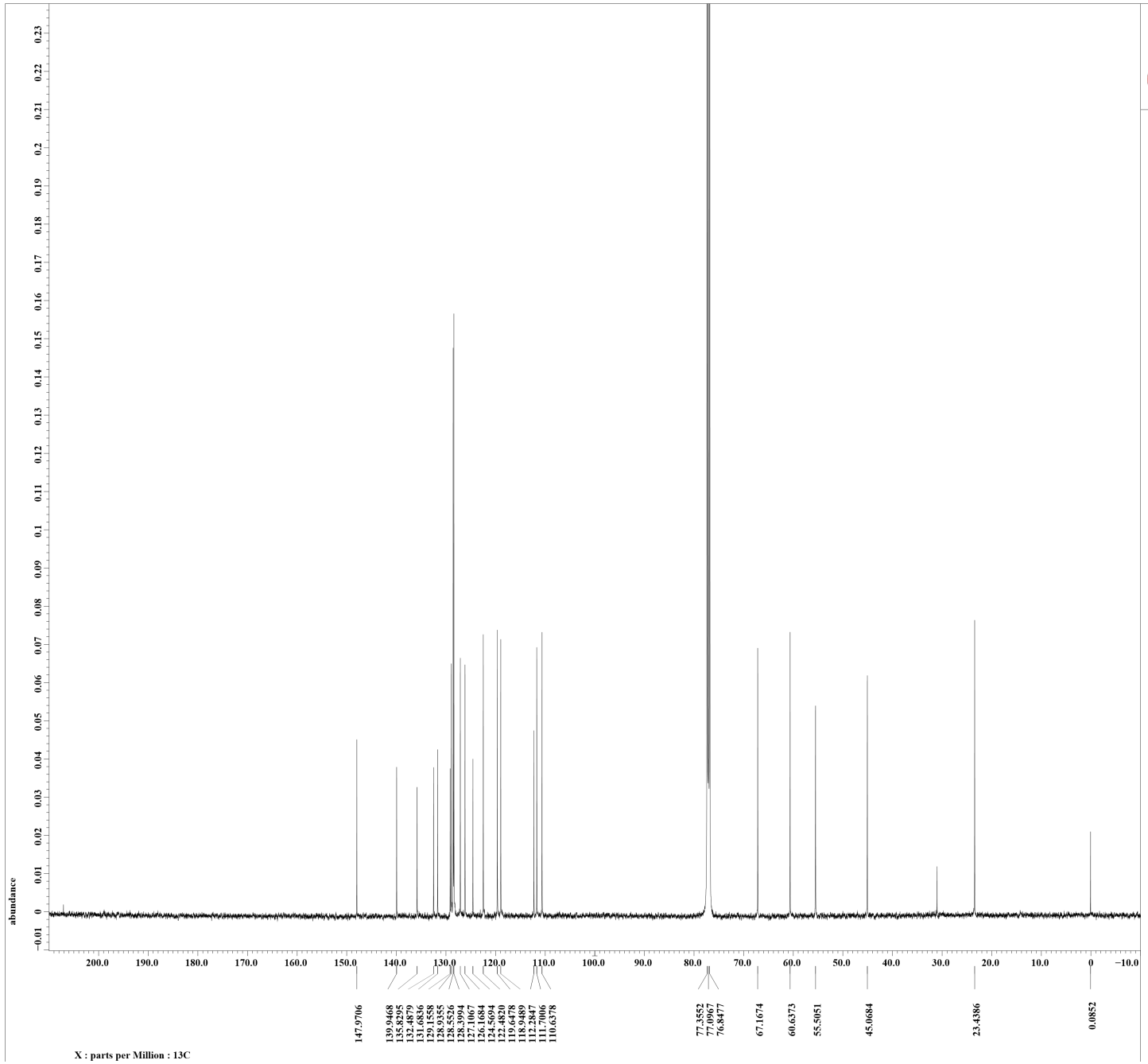

JEOL

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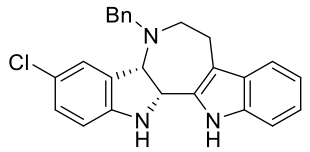
Filename          = SS-18-07-06-01-7.jdf
Author            = delta
Experiment        = single_pulse_dec
Sample_id         = S#682593
Solvent           = CHLOROFORM-D
Creation_time     =  9-JUL-2018 06:59:28
Revision_time     =  9-JUL-2018 07:49:26
Current_time      =  9-JUL-2018 07:50:05

Content           = single pulse decouple
Data_format       = 1D COMPLEX
Dim_size          = 26214
Dim_title         = 13C
Dim_units         = [ppm]
Dimensions        = X
Site              = ECA 500
Spectrometer      = DELTA2_NMR

Field_strength    = 11.62926421[T] (500[M
X_acq_duration    = 0.8388608[s]
X_domain          = 13C
X_freq            = 124.5010059[MHz]
X_offset          = 100[ppm]
X_points          = 32768
X_prescans        = 4
X_resolution      = 1.1920929[Hz]
X_sweep           = 39.0625[kHz]
Irr_domain        = 1H
Irr_freq          = 495.13191398[MHz]
Irr_offset        = 5[ppm]
Clipped           = TRUE
Mod_return        = 1
Scans             = 77099
Total_scans       = 77099

X_90_width        = 10.83[us]
X_acq_time        = 0.8388608[s]
X_angle           = 30[deg]
X_atn             = 9.5[dB]
X_pulse           = 3.61[us]
Irr_atn_dec       = 20.548[dB]
Irr_atn_noe       = 20.548[dB]
Irr_noise         = WALTZ
Decoupling        = TRUE
Initial_wait      = 1[s]
Noe               = TRUE
Noe_time          = 2[s]
Recvr_gain        = 60
Relaxation_delay  = 2[s]
Repetition_time   = 2.8388608[s]
Temp_get          = 24.6[dC]
```



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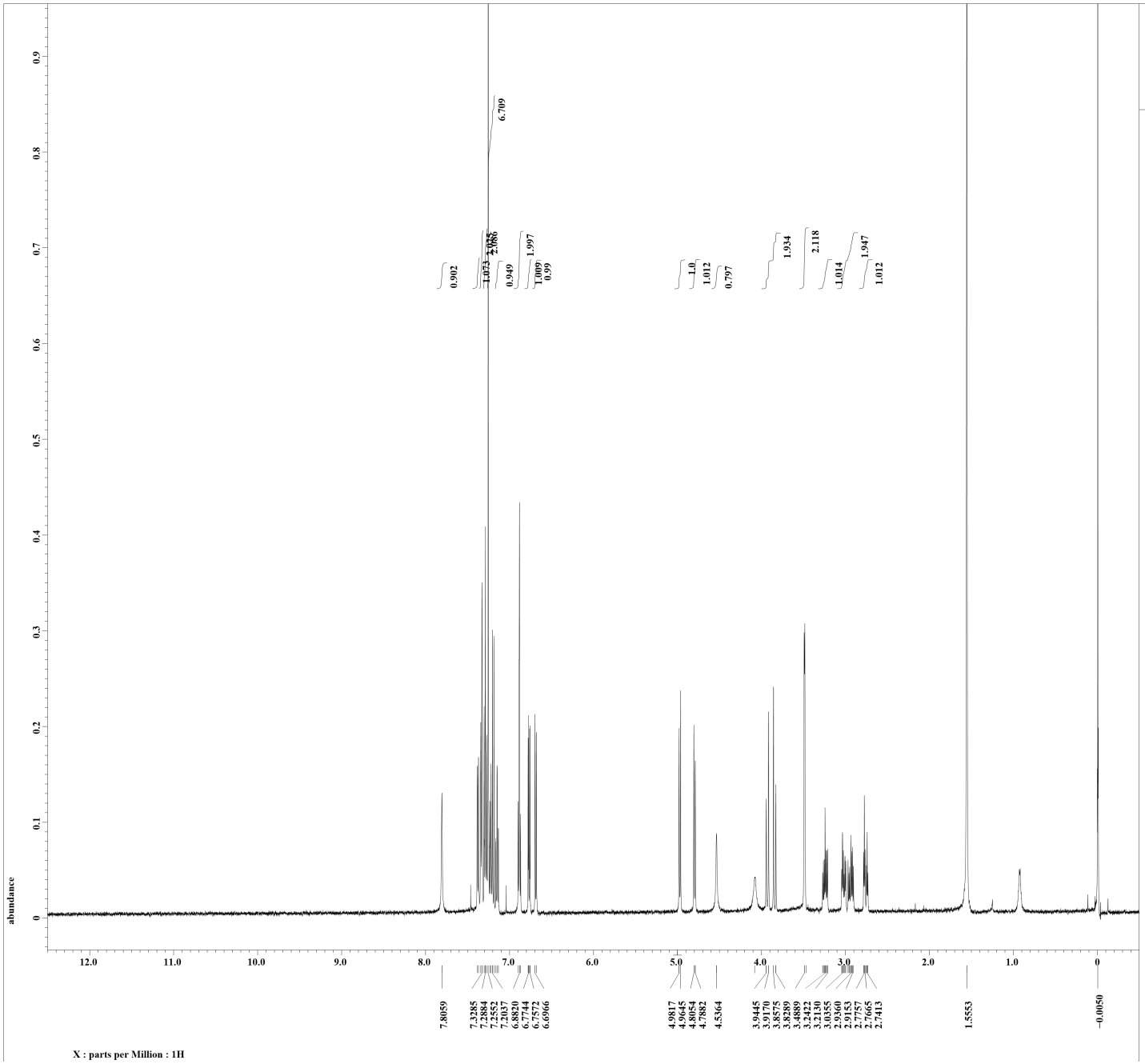

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Filename          = SS-18-07-12-04-4.jdf
Author            = delta
Experiment        = single_pulse.ex2
Sample_id         = S#67945?
Solvent           = CHLOROFORM-D
Creation_time     = 12-JUL-2018 18:06:17
Revision_time     = 12-JUL-2018 18:58:15
Current_time      = 12-JUL-2018 18:59:14

Content           = single_pulse
Data_format       = 1D COMPLEX
Dim_size          = 13107
Dim_title         = 1H
Dim_units         = [ppm]
Dimensions        = X
Site              = ECA 500
Spectrometer      = DELTA2_NMR

Field_strength    = 11.62926421[T] (500[M
X_acq_duration    = 1.76422912[s]
X_domain          = 1H
X_freq            = 495.13191398[MHz]
X_offset          = 5[ppm]
X_points          = 16384
X_prescans        = 1
X_resolution      = 0.5668198[Hz]
X_sweep           = 9.28677563[kHz]
Irr_domain        = 1H
Irr_freq          = 495.13191398[MHz]
Irr_offset        = 5[ppm]
Tri_domain        = 1H
Tri_freq          = 495.13191398[MHz]
Tri_offset        = 5[ppm]
Clipped           = FALSE
Mod_return        = 1
Scans             = 8
Total_scans       = 8

X_90_width        = 12.63[us]
X_acq_time        = 1.76422912[s]
X_angle           = 45[deg]
X_atn             = 3.3[dB]
X_pulse           = 6.315[us]
Irr_mode          = Off
Tri_mode          = Off
Dante_presat      = FALSE
Initial_wait      = 1[s]
Recvr_gain        = 46
Relaxation_delay  = 5[s]
Repetition_time   = 6.76422912[s]
Temp_get          = 23.6[dC]
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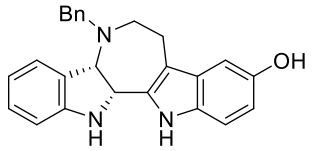

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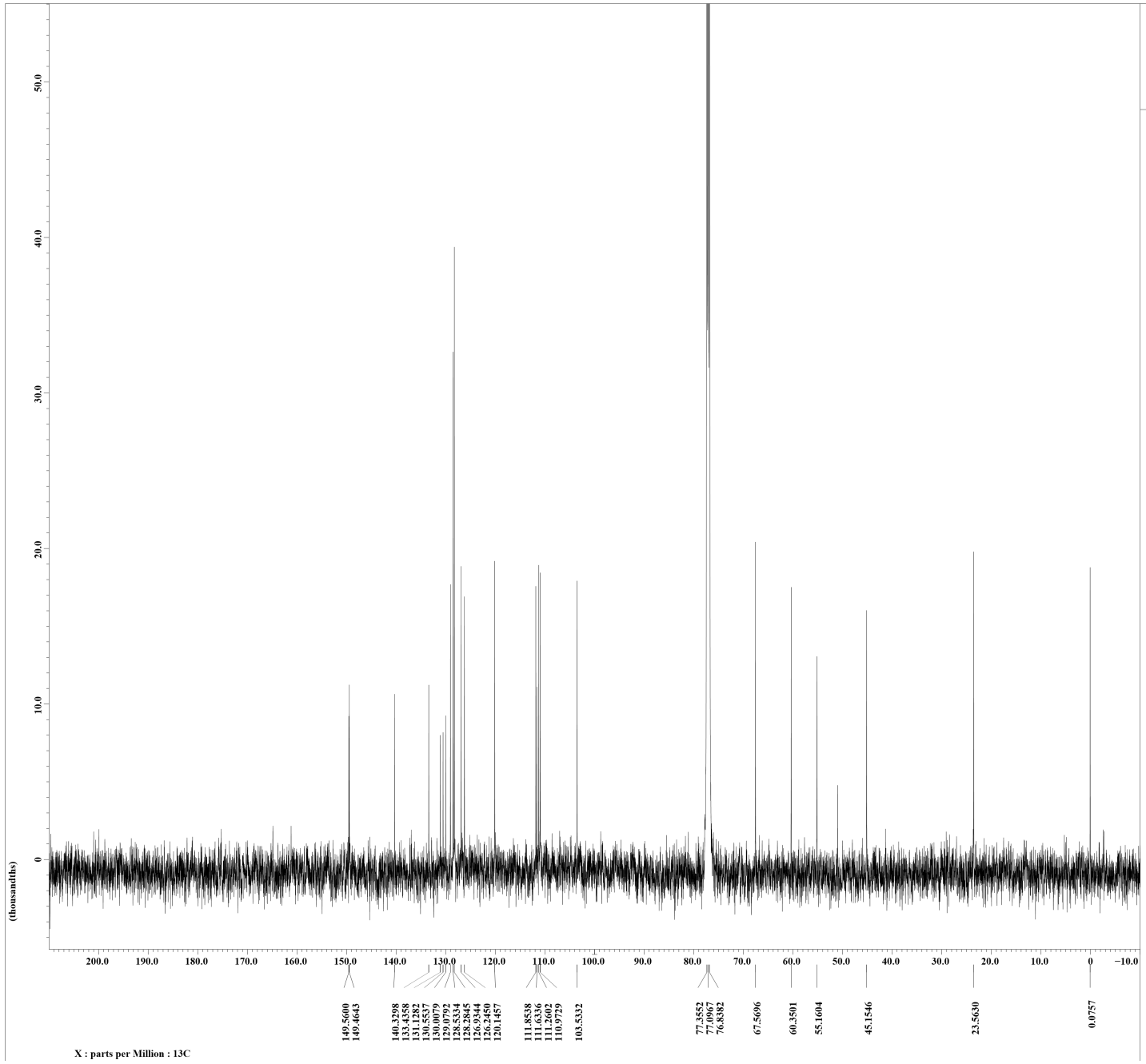

JEOL

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Filename          = SS-18-07-12-04-5.jdf
Author            = delta
Experiment        = single_pulse_dec
Sample_id         = S#680823
Solvent           = CHLOROFORM-D
Creation_time     = 13-JUL-2018 06:58:30
Revision_time     = 13-JUL-2018 07:50:48
Current_time      = 13-JUL-2018 07:51:07

Content           = single pulse decouple
Data_format       = 1D COMPLEX
Dim_size          = 26214
Dim_title         = 13C
Dim_units         = [ppm]
Dimensions        = X
Site              = ECA 500
Spectrometer      = DELTA2_NMR

Field_strength    = 11.62926421[T] (500[M
X_acq_duration    = 0.8388608[s]
X_domain          = 13C
X_freq            = 124.5010059[MHz]
X_offset          = 100[ppm]
X_points          = 32768
X_prescans        = 4
X_resolution      = 1.1920929[Hz]
X_sweep           = 39.0625[kHz]
Irr_domain        = 1H
Irr_freq          = 495.13191398[MHz]
Irr_offset        = 5[ppm]
Clipped           = FALSE
Mod_return        = 1
Scans             = 16291
Total_scans       = 16291

X_90_width        = 10.83[us]
X_acq_time        = 0.8388608[s]
X_angle           = 30[deg]
X_atn             = 9.5[dB]
X_pulse           = 3.61[us]
Irr_atn_dec       = 20.548[dB]
Irr_atn_noe       = 20.548[dB]
Irr_noise         = WALTZ
Decoupling        = TRUE
Initial_wait      = 1[s]
Noe               = TRUE
Noe_time          = 2[s]
RecVr_gain        = 60
Relaxation_delay  = 2[s]
Repetition_time   = 2.8388608[s]
Temp_get          = 24.3[dC]
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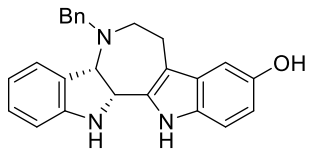

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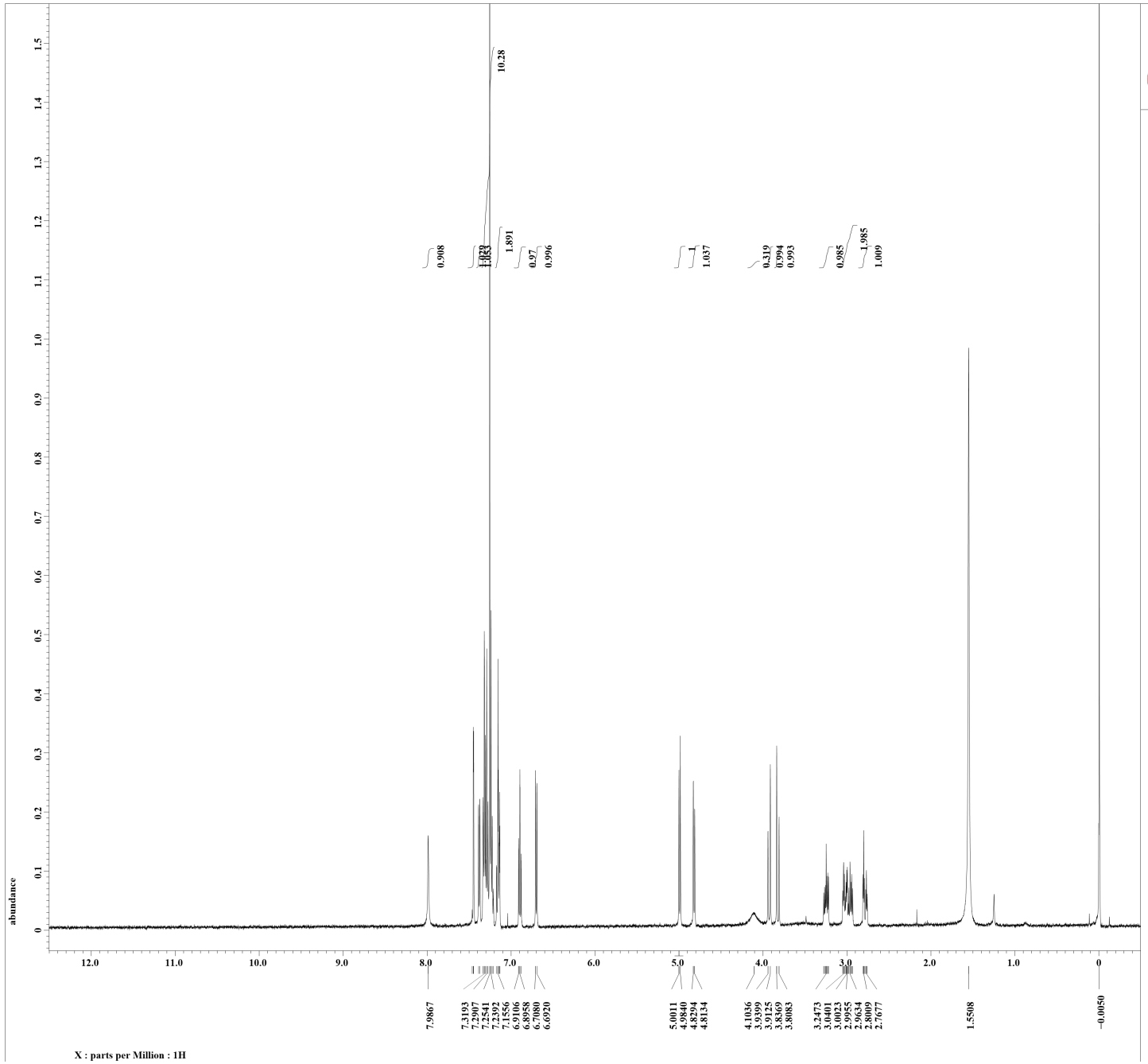

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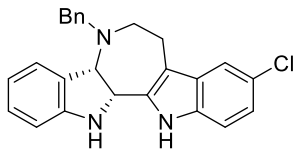
Author = delta
Experiment = single_pulse.ex2
Sample_id = S#468067
Solvent = CHLOROFORM-D
Creation_time = 10-JUL-2018 12:14:08
Revision_time = 10-JUL-2018 15:13:29
Current_time = 10-JUL-2018 15:14:53

Content = single_pulse
Data_format = 1D COMPLEX
Dim_size = 13107
Dim_title = 1H
Dim_units = [ppm]
Dimensions = X
Site = ECA 500
Spectrometer = DELTA2_NMR

Field_strength = 11.62926421[T] (500[M
X_acq_duration = 1.76422912[s]
X_domain = 1H
X_freq = 495.13191398[MHz]
X_offset = 5[ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.5668198[Hz]
X_sweep = 9.28677563[kHz]
Irr_domain = 1H
Irr_freq = 495.13191398[MHz]
Irr_offset = 5[ppm]
Tri_domain = 1H
Tri_freq = 495.13191398[MHz]
Tri_offset = 5[ppm]
Clipped = FALSE
Mod_return = 1
Scans = 8
Total_scans = 8

X_90_width = 12.63[us]
X_acq_time = 1.76422912[s]
X_angle = 45[deg]
X_atn = 3.3[dB]
X_pulse = 6.315[us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1[s]
Recvr_gain = 48
Relaxation_delay = 5[s]
Repetition_time = 6.76422912[s]
Temp_get = 23.4[dC]



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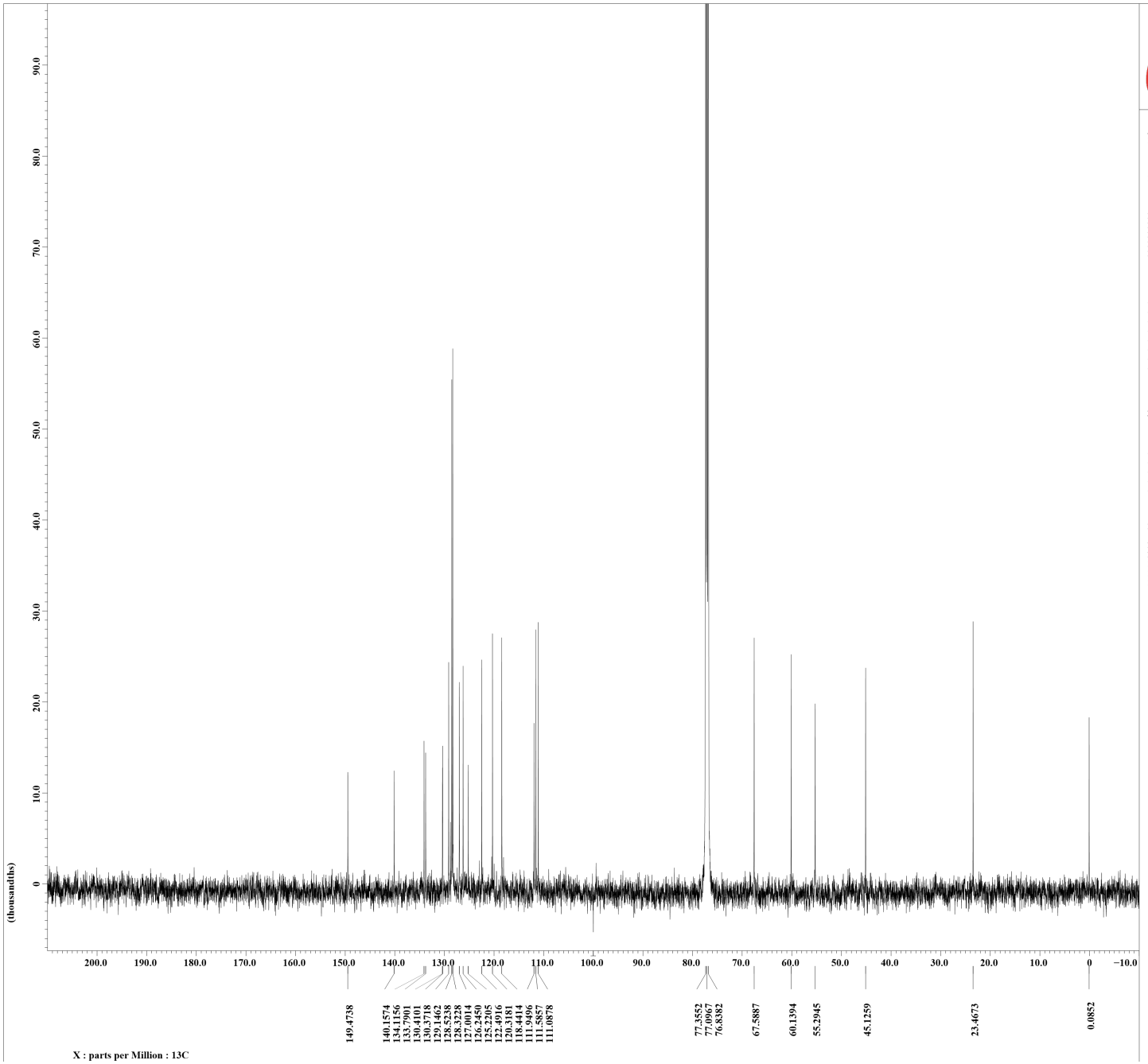

JEOL

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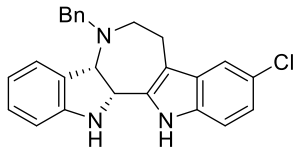
Filename          = SS-18-07-10-03-6.jdf
Author            = delta
Experiment        = single_pulse_dec
Sample_id         = S#657465
Solvent           = CHLOROFORM-D
Creation_time     = 11-JUL-2018 06:58:51
Revision_time     = 11-JUL-2018 07:49:14
Current_time      = 11-JUL-2018 07:49:40

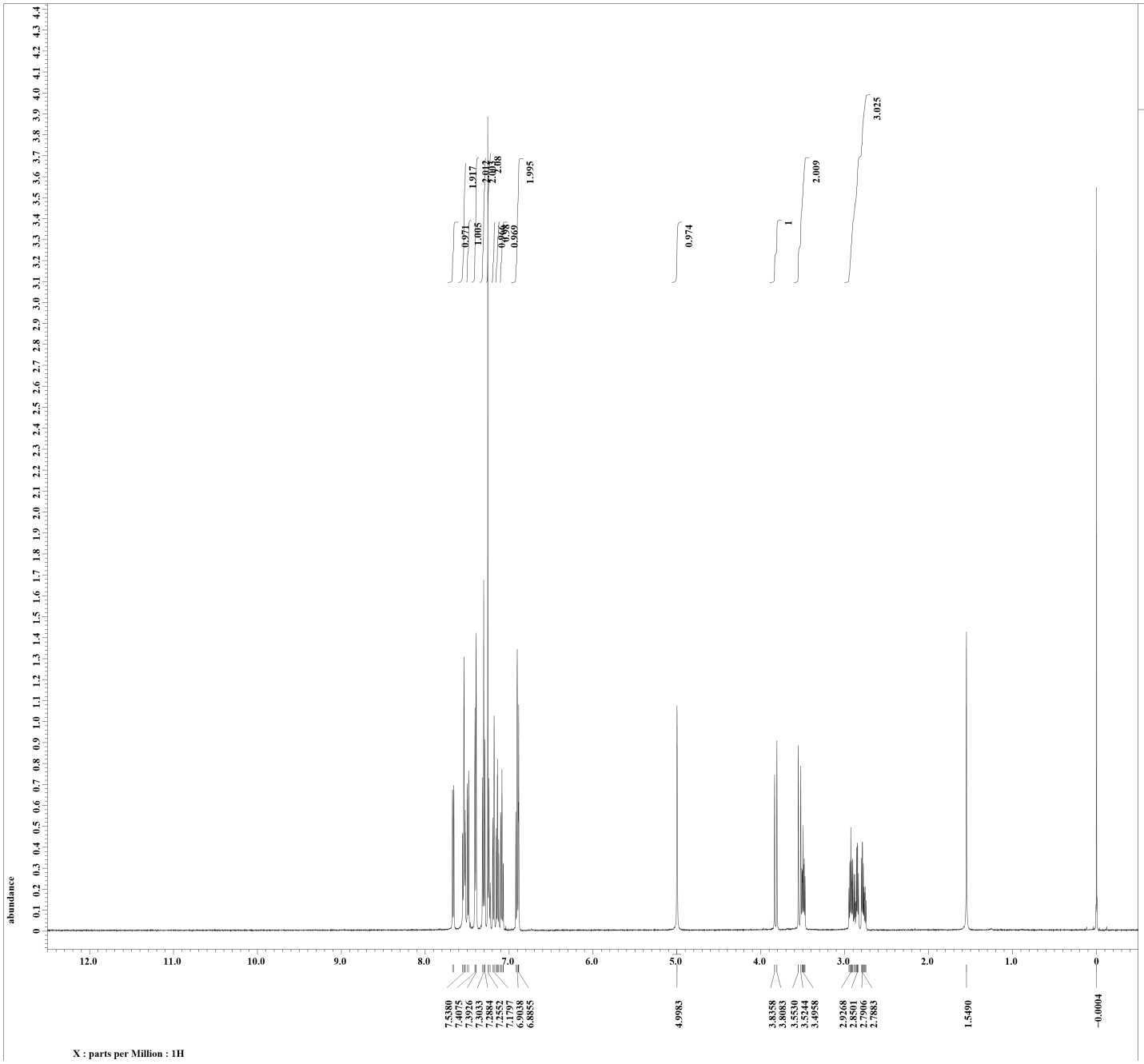
Content           = single pulse decouple
Data_format       = 1D COMPLEX
Dim_size          = 26214
Dim_title         = 13C
Dim_units         = [ppm]
Dimensions        = X
Site              = ECA 500
Spectrometer      = DELTA2_NMR

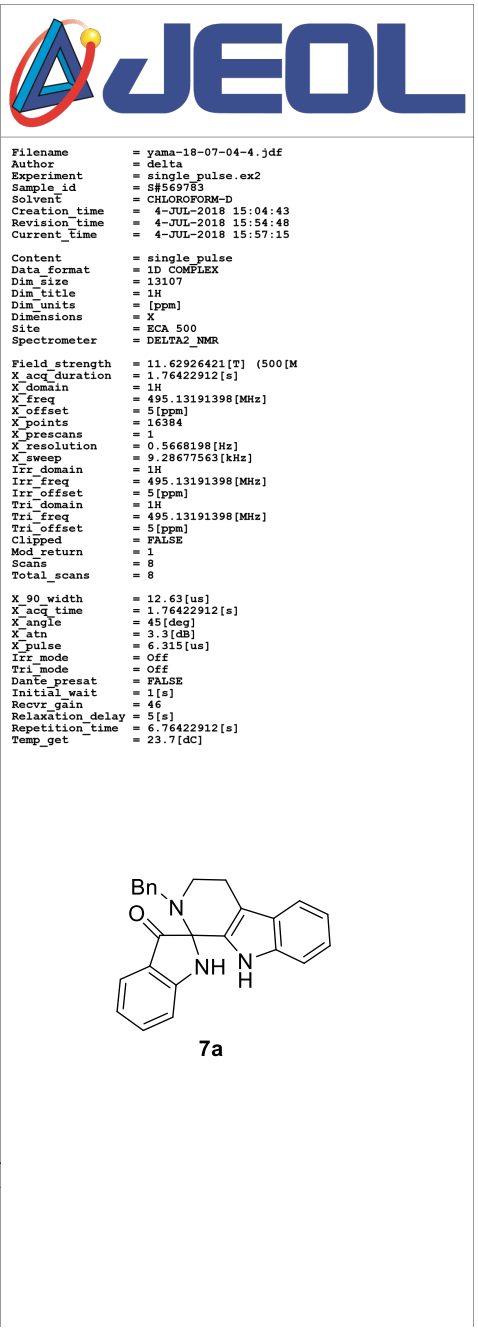
Field_strength    = 11.62926421[T] (500[M
X_acq_duration    = 0.8388608[s]
X_domain          = 13C
X_freq            = 124.5010059[MHz]
X_offset          = 100[ppm]
X_points          = 32768
X_prescans        = 4
X_resolution      = 1.1920929[Hz]
X_sweep           = 39.0625[kHz]
Irr_domain        = 1H
Irr_freq          = 495.13191398[MHz]
Irr_offset        = 5[ppm]
Clipped           = FALSE
Mod_return        = 1
Scans             = 17075
Total_scans       = 17075

X_90_width        = 10.83[us]
X_acq_time        = 0.8388608[s]
X_angle           = 30[deg]
X_atn             = 9.5[dB]
X_pulse           = 3.61[us]
Irr_atn_dec       = 20.548[dB]
Irr_atn_noe       = 20.548[dB]
Irr_noise         = WALTZ
Decoupling        = TRUE
Initial_wait      = 1[s]
Noe               = TRUE
Noe_time          = 2[s]
Recvr_gain        = 60
Relaxation_delay  = 2[s]
Repetition_time   = 2.8388608[s]
Temp_get          = 24.8[dC]
```



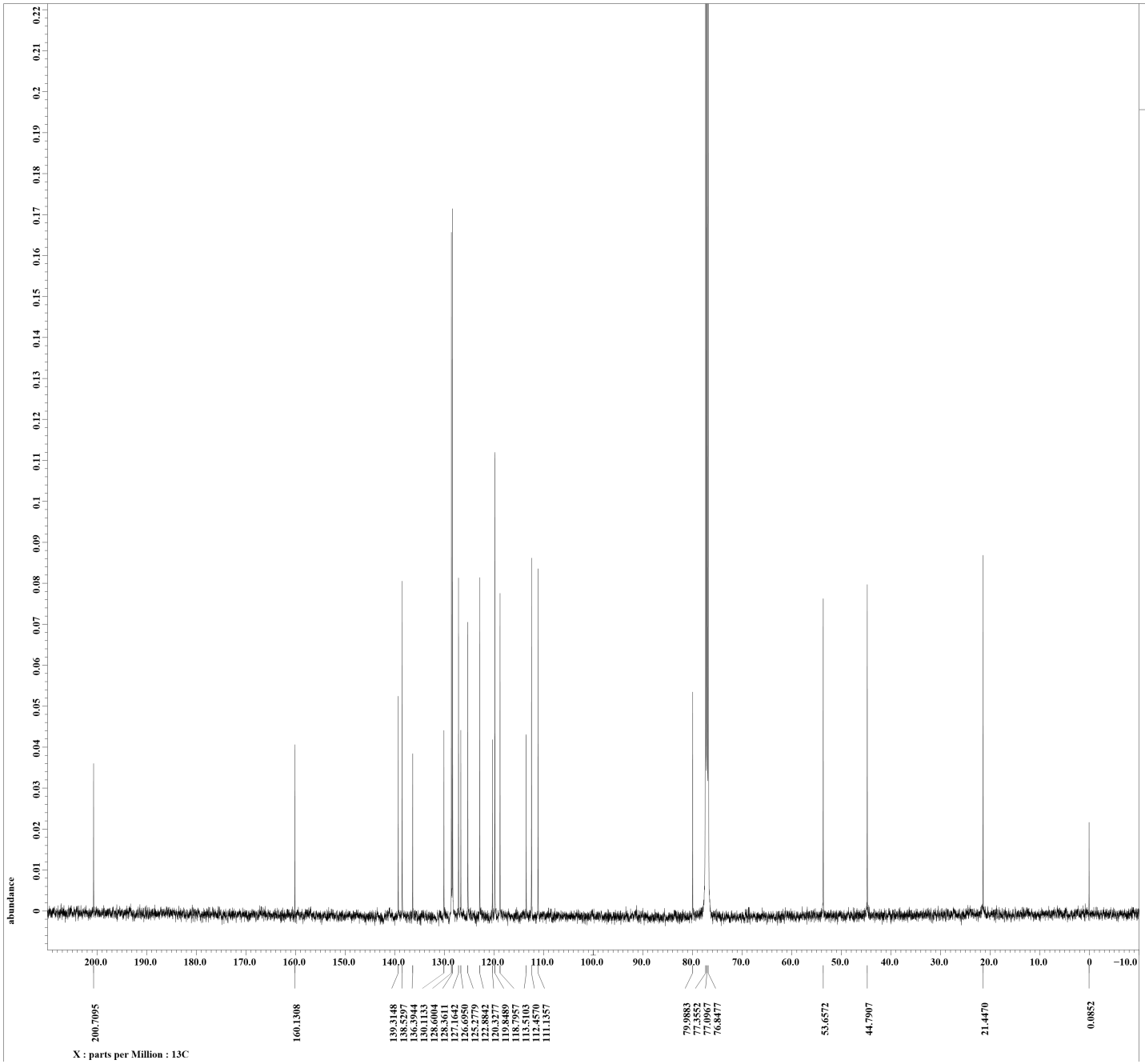
11e


abundance
0.971
1.005
1.917
2.013
2.018
2.08
1.995
0.974
1
2.009
3.025
0.966
0.978
0.969
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0
7.5380
7.4075
7.3926
7.3033
7.2884
7.2452
7.1797
6.9038
6.8855
4.9983
3.8358
3.8083
3.5530
3.5244
3.4958
2.9268
2.8501
2.7906
2.7883
1.5490
−0.0004
X : parts per Million : 1H


JEOL
Filename = yama-18-07-04-4.jdf
Author = delta
Experiment = single_pulse.ex2
Sample_id = S#56978
Solvent = CHLOROFORM-D
Creation_time = 4-JUL-2018 15:04:43
Revision_time = 4-JUL-2018 15:54:48
Current_time = 4-JUL-2018 15:57:15
Content = single_pulse
Data_format = 1D COMPLEX
Dim_size = 13107
Dim_title = 1H
Dim_units = [ppm]
Dimensions = X
Site = ECA 500
Spectrometer = DELTA2_NMR
Field_strength = 11.62926421[T] (500[M
X_acq_duration = 1.76422912[s]
X_domain = 1H
X_freq = 495.13191398[MHz]
X_offset = 5[ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.5668198[Hz]
X_sweep = 9.28677563[kHz]
Irr_domain = 1H
Irr_freq = 495.13191398[MHz]
Irr_offset = 5[ppm]
Tri_domain = 1H
Tri_freq = 495.13191398[MHz]
Tri_offset = 5[ppm]
Clipped = FALSE
Mod_return = 1
Scans = 8
Total_scans = 8
X_90_width = 12.63[us]
X_acq_time = 1.76422912[s]
X_angle = 45[deg]
X_atn = 3.3[dB]
X_pulse = 6.315[us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1[s]
Recvr_gain = 46
Relaxation_delay = 5[s]
Repetition_time = 6.76422912[s]
Temp_get = 23.7[dC]

Bn
N
O
NH
N
H

7a



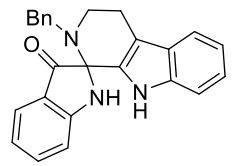
JEOL

```
Filename          = yama-18-07-04-6.jdf
Author            = delta
Experiment        = single_pulse_dec
Sample_id         = S#571682
Solvent           = CHLOROFORM-D
Creation_time     =  5-JUL-2018 07:11:34
Revision_time     =  5-JUL-2018 07:59:26
Current_time      =  5-JUL-2018 07:59:52

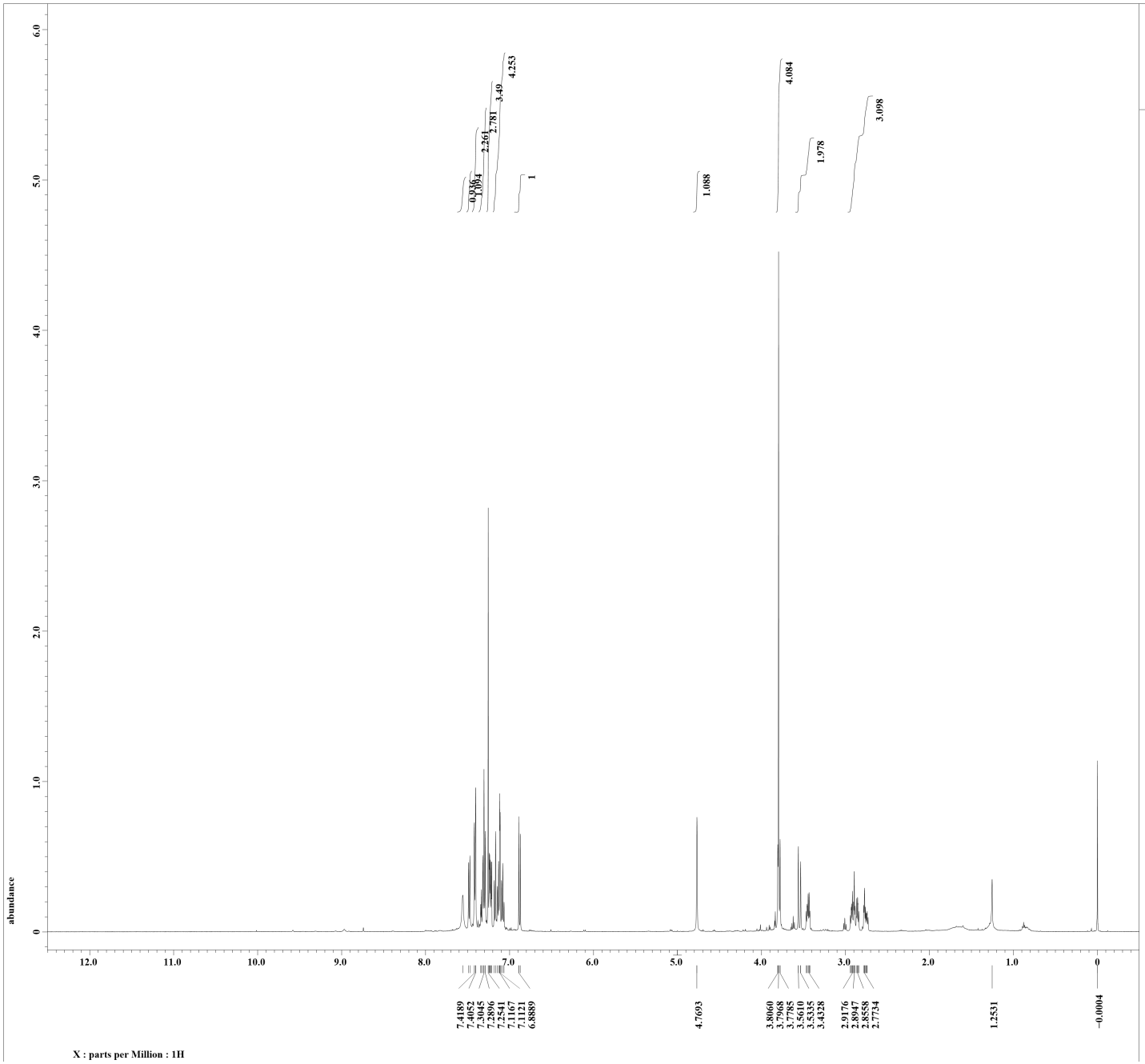
Content           = single pulse decouple
Data_format       = 1D COMPLEX
Dim_size          = 26214
Dim_title         = 13C
Dim_units         = [ppm]
Dimensions        = X
Site              = ECA 500
Spectrometer      = DELTA2_NMR

Field_strength    = 11.62926421[T] (500[M
X_acq_duration    = 0.8388608[s]
X_domain          = 13C
X_freq            = 124.5010059[MHz]
X_offset          = 100[ppm]
X_points          = 32768
X_prescans        = 4
X_resolution      = 1.1920929[Hz]
X_sweep           = 39.0625[kHz]
Irr_domain        = 1H
Irr_freq          = 495.13191398[MHz]
Irr_offset        = 5[ppm]
Clipped           = FALSE
Mod_return        = 1
Scans             = 20386
Total_scans       = 20386

X_90_width        = 10.83[us]
X_acq_time        = 0.8388608[s]
X_angle           = 30[deg]
X_atn             = 9.5[dB]
X_pulse           = 3.61[us]
Irr_atn_dec       = 20.548[dB]
Irr_atn_noe       = 20.548[dB]
Irr_noise         = WALTZ
Decoupling        = TRUE
Initial_wait      = 1[s]
Noe               = TRUE
Noe_time          = 2[s]
RecVr_gain        = 60
Relaxation_delay  = 2[s]
Repetition_time   = 2.8388608[s]
Temp_get          = 24.8[dC]
```



7a

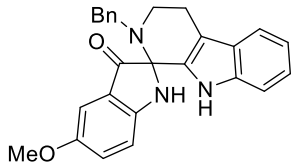



```
Filename          = yama-17-09-26-5.jdf
Author            = delta
Experiment        = single_pulse.ex2
Sample_id         = S#331458
Solvent           = CHLOROFORM-D
Creation_time     = 26-SEP-2017 09:11:02
Revision_time     = 26-SEP-2017 09:20:58
Current_time      = 26-SEP-2017 09:21:30

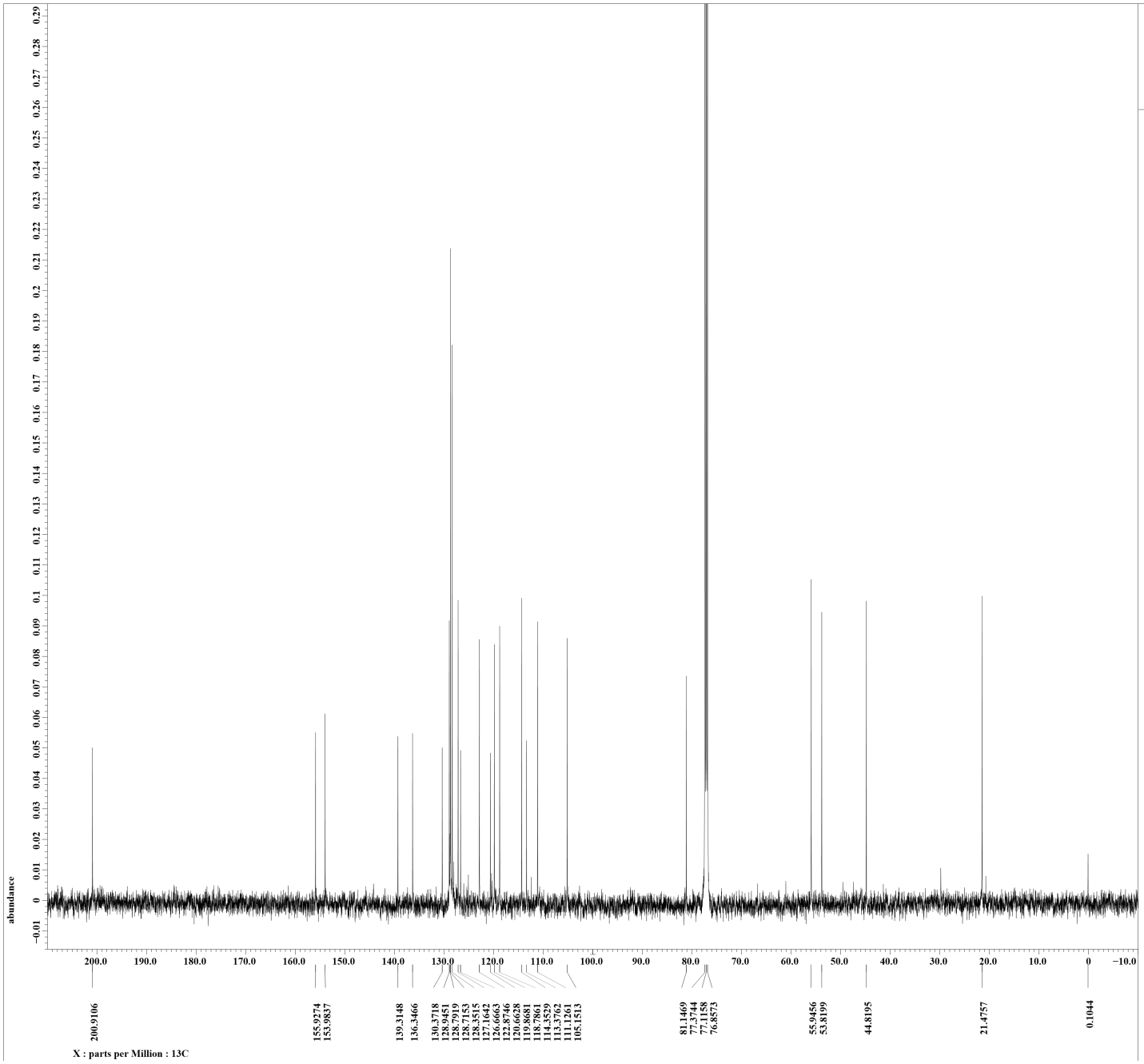
Content           = single_pulse
Data_format       = 1D COMPLEX
Dim_size          = 13107
Dim_title         = 1H
Dim_units         = [ppm]
Dimensions        = X
Site              = ECA 500
Spectrometer      = DELTA2_NMR

Field_strength    = 11.62926421[T] (500[M
X_acq_duration    = 1.76422912[s]
X_domain          = 1H
X_freq            = 495.13191398[MHz]
X_offset          = 5[ppm]
X_points          = 16384
X_prescans        = 1
X_resolution      = 0.5668198[Hz]
X_sweep           = 9.28677563[kHz]
Irr_domain        = 1H
Irr_freq          = 495.13191398[MHz]
Irr_offset        = 5[ppm]
Tri_domain        = 1H
Tri_freq          = 495.13191398[MHz]
Tri_offset        = 5[ppm]
Clipped           = FALSE
Mod_return        = 1
Scans             = 32
Total_scans       = 32

X_90_width        = 12.63[us]
X_acq_time        = 1.76422912[s]
X_angle           = 45[deg]
X_atn             = 3.3[dB]
X_pulse           = 6.315[us]
Irr_mode          = Off
Tri_mode          = Off
Dante_presat      = FALSE
Initial_wait      = 1[s]
Recvr_gain        = 42
Relaxation_delay  = 5[s]
Repetition_time   = 6.76422912[s]
Temp_get          = 21.7[dC]
```



7b



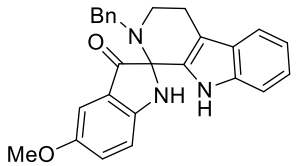
JEOL

```
Filename          = yama-17-09-26-8.jdf
Author            = delta
Experiment        = single_pulse_dec
Sample_id         = S#334906
Solvent           = CHLOROFORM-D
Creation_time     = 26-SEP-2017 11:39:33
Revision_time     = 26-SEP-2017 11:48:18
Current_time      = 26-SEP-2017 11:49:11

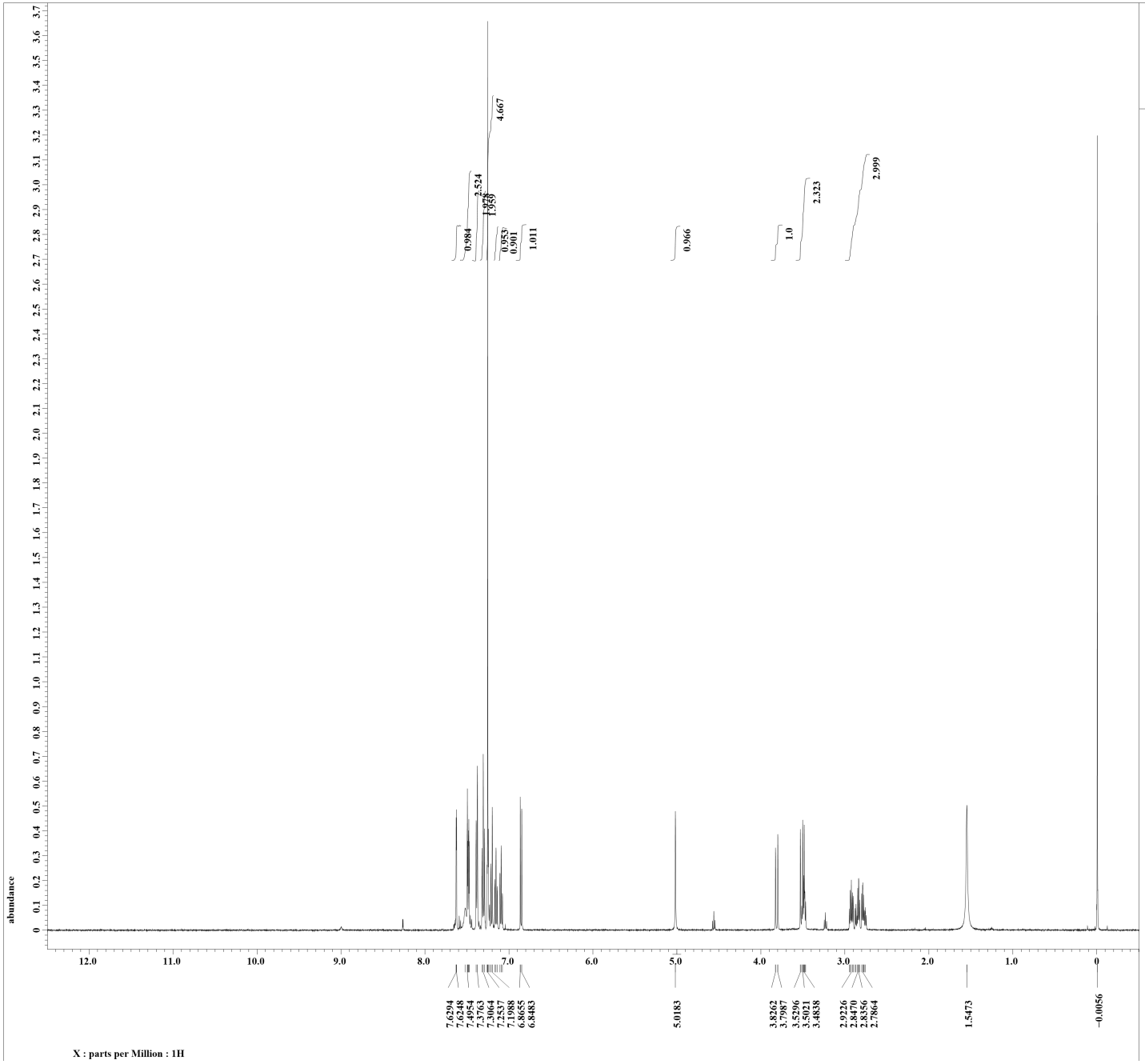
Content           = single pulse decouple
Data_format       = 1D COMPLEX
Dim_size          = 26214
Dim_title         = 13C
Dim_units         = [ppm]
Dimensions        = X
Site              = ECA 500
Spectrometer      = DELTA2_NMR

Field_strength    = 11.62926421[T] (500[M
X_acq_duration    = 0.8388608[s]
X_domain          = 13C
X_freq            = 124.5010059[MHz]
X_offset          = 100[ppm]
X_points          = 32768
X_prescans        = 4
X_resolution      = 1.1920929[Hz]
X_sweep           = 39.0625[kHz]
Irr_domain        = 1H
Irr_freq          = 495.13191398[MHz]
Irr_offset        = 5[ppm]
Clipped           = FALSE
Mod_return        = 1
Scans             = 3098
Total_scans       = 3098

X_90_width        = 10.83[us]
X_acq_time        = 0.8388608[s]
X_angle           = 30[deg]
X_atn             = 9.5[dB]
X_pulse           = 3.61[us]
Irr_atn_dec       = 20.548[dB]
Irr_atn_noe       = 20.548[dB]
Irr_noise         = WALTZ
Decoupling        = TRUE
Initial_wait      = 1[s]
Noe               = TRUE
Noe_time          = 2[s]
RecVr_gain        = 60
Relaxation_delay  = 2[s]
Repetition_time   = 2.8388608[s]
Temp_get          = 21.8[dC]
```



7b

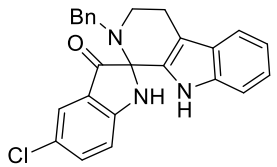


Filename = yama-18-07-10-4.jdf
Author = delta
Experiment = single_pulse.ex2
Sample_id = S#634968
Solvent = CHLOROFORM-D
Creation_time = 3-JUL-2018 04:37:55
Revision_time = 2-AUG-2018 08:41:21
Current_time = 2-AUG-2018 08:42:17

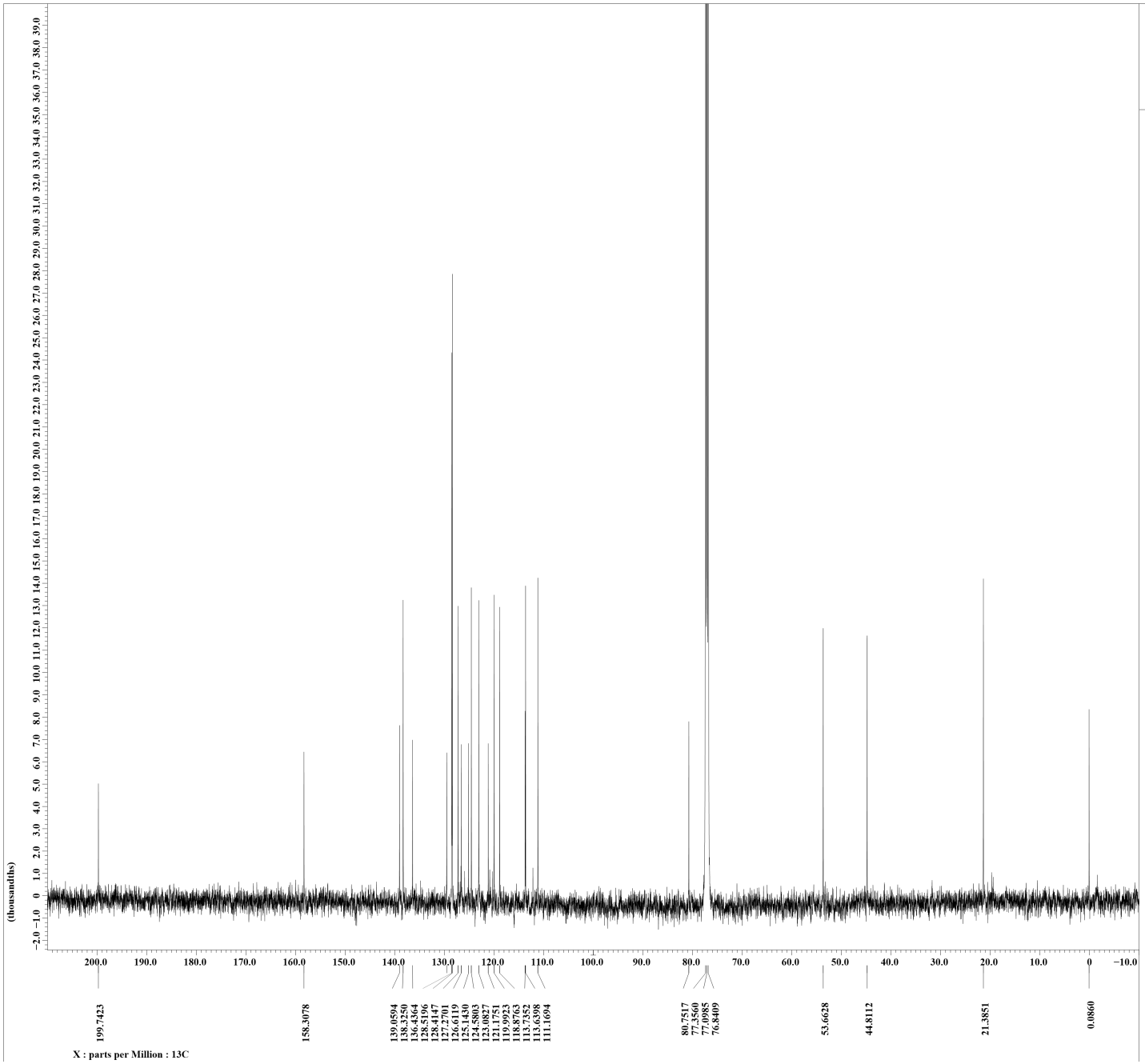
Content = single_pulse
Data_format = 1D COMPLEX
Dim_size = 13107
Dim_title = 1H
Dim_units = [ppm]
Dimensions = X
Site = ECA500
Spectrometer = DELTA2_NMR

Field_strength = 11.7473579[T] (500[MH
X_acq_duration = 1.74587904[s]
X_domain = 1H
X_freq = 500.15991521[MHz]
X_offset = 5.0[ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.57277737[Hz]
X_sweep = 9.38438438[kHz]
Irr_domain = 1H
Irr_freq = 500.15991521[MHz]
Irr_offset = 5.0[ppm]
Tri_domain = 1H
Tri_freq = 500.15991521[MHz]
Tri_offset = 5.0[ppm]
Clipped = FALSE
Mod_return = 1
Scans = 8
Total_scans = 8

X_90_width = 12.39[us]
X_acq_time = 1.74587904[s]
X_angle = 45[deg]
X_atn = 3.4[dB]
X_pulse = 6.195[us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1[s]
Recvr_gain = 50
Relaxation_delay = 5[s]
Repetition_time = 6.74587904[s]
Temp_get = 21.9[dC]



7c

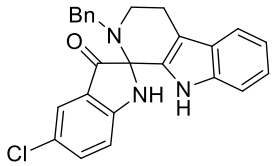


Filename = yama-18-07-10-3.jdf
Author = delta
Experiment = single_pulse_dec
Sample_id = S#638276
Solvent = CHLOROFORM-D
Creation_time = 3-JUL-2018 18:12:21
Revision_time = 15-JUL-2018 12:51:40
Current_time = 15-JUL-2018 12:52:16

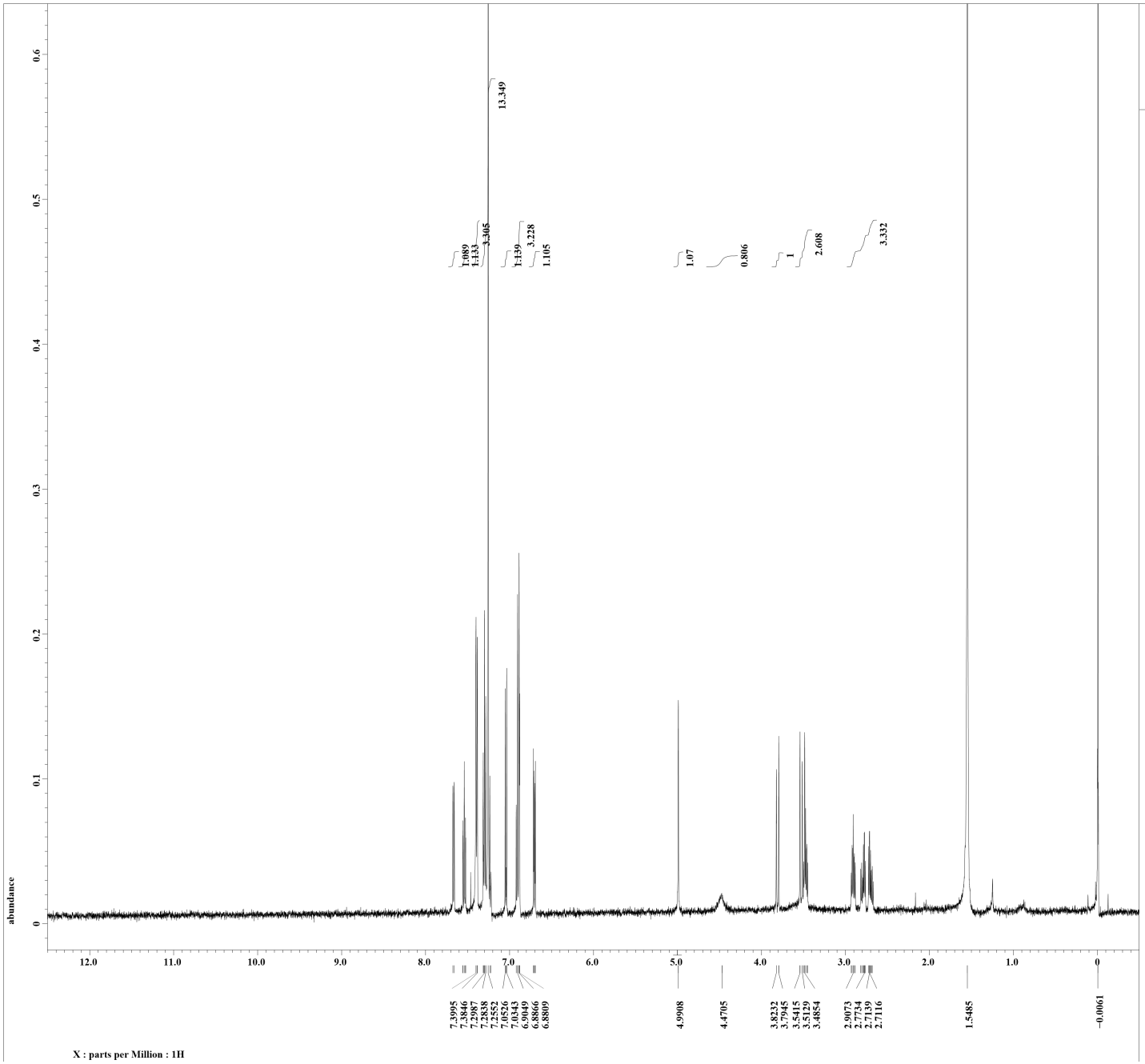
Content = single pulse decouple
Data_format = 1D COMPLEX
Dim_size = 26214
Dim_title = 13C
Dim_units = [ppm]
Dimensions = X
Site = ECA500
Spectrometer = DELTA2_NMR

Field_strength = 11.7473579[T] (500[MH
X_acq_duration = 0.83361792[s]
X_domain = 13C
X_freq = 125.76529768[MHz]
X_offset = 100[ppm]
X_points = 32768
X_prescans = 4
X_resolution = 1.19959034[Hz]
X_sweep = 39.3081761[kHz]
Irr_domain = 1H
Irr_freq = 500.15991521[MHz]
Irr_offset = 5.0[ppm]
Clipped = FALSE
Mod_return = 1
Scans = 17138
Total_scans = 17138

X_90_width = 11.43[us]
X_acq_time = 0.83361792[s]
X_angle = 30[deg]
X_atn = 5.3[dB]
X_pulse = 3.81[us]
Irr_atn_dec = 20.81[dB]
Irr_atn_noe = 20.81[dB]
Irr_noise = WALTZ
Decoupling = TRUE
Initial_wait = 1[s]
Noe = TRUE
Noe_time = 2[s]
Recvr_gain = 54
Relaxation_delay = 2[s]
Repetition_time = 2.83361792[s]
Temp_get = 23.1[dC]



7c

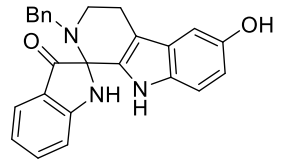


Filename = SS-18-07-15-02-13.jdf
Author = delta
Experiment = single_pulse.ex2
Sample_id = S#379614
Solvent = CHLOROFORM-D
Creation_time = 17-JUL-2018 09:45:32
Revision_time = 17-JUL-2018 10:42:06
Current_time = 17-JUL-2018 10:42:43

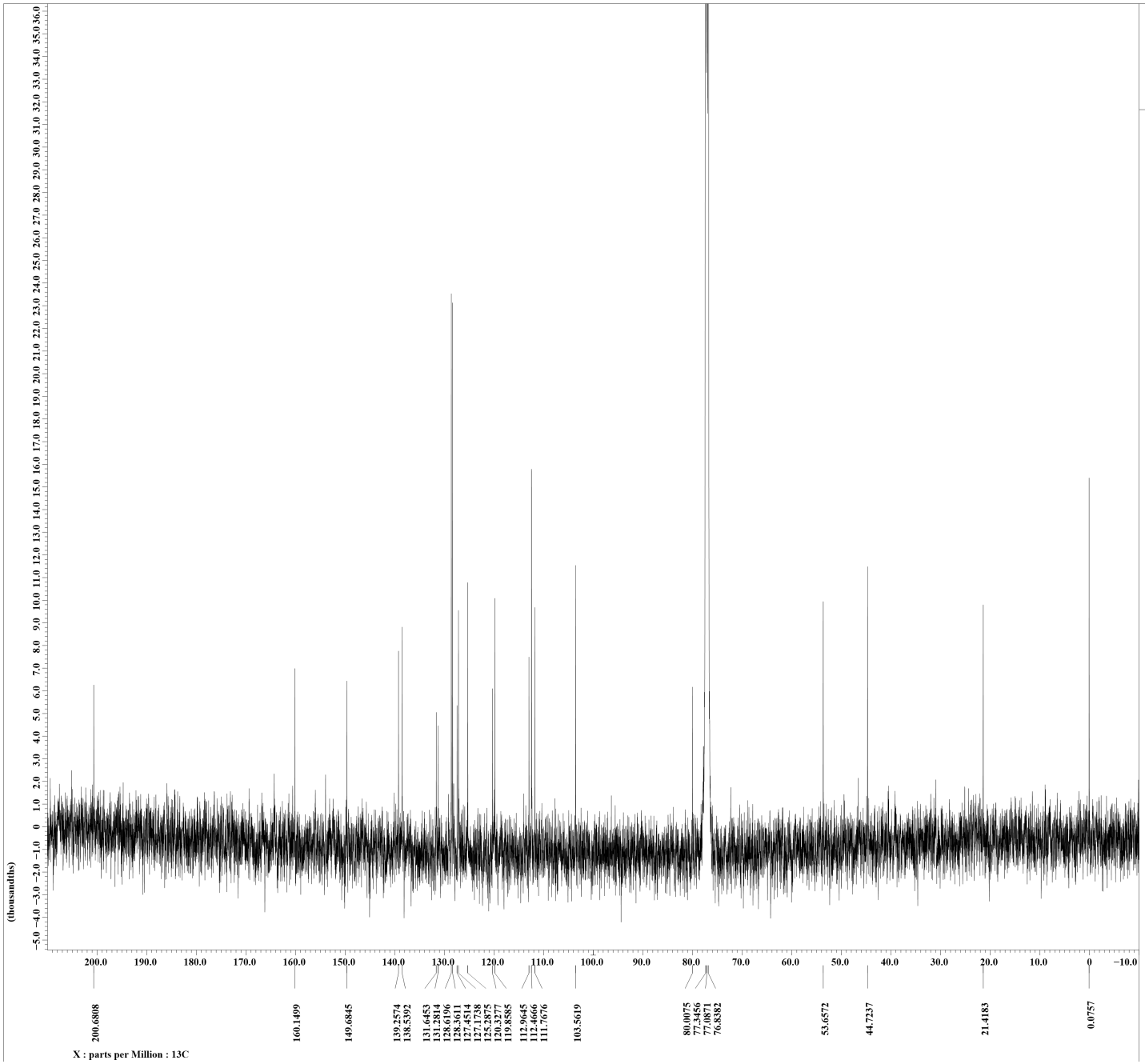
Content = single_pulse
Data_format = 1D COMPLEX
Dim_size = 13107
Dim_title = 1H
Dim_units = [ppm]
Dimensions = X
Site = ECA 500
Spectrometer = DELTA2_NMR

Field_strength = 11.62926421[T] (500[M
X_acq_duration = 1.76422912[s]
X_domain = 1H
X_freq = 495.13191398[MHz]
X_offset = 5[ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.5668198[Hz]
X_sweep = 9.28677563[kHz]
Irr_domain = 1H
Irr_freq = 495.13191398[MHz]
Irr_offset = 5[ppm]
Tri_domain = 1H
Tri_freq = 495.13191398[MHz]
Tri_offset = 5[ppm]
Clipped = FALSE
Mod_return = 1
Scans = 8
Total_scans = 8

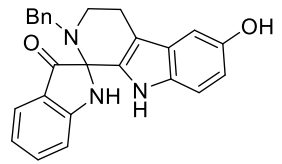
X_90_width = 12.63[us]
X_acq_time = 1.76422912[s]
X_angle = 45[deg]
X_atn = 3.3[dB]
X_pulse = 6.315[us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1[s]
Recvr_gain = 48
Relaxation_delay = 5[s]
Repetition_time = 6.76422912[s]
Temp_get = 23.1[dC]



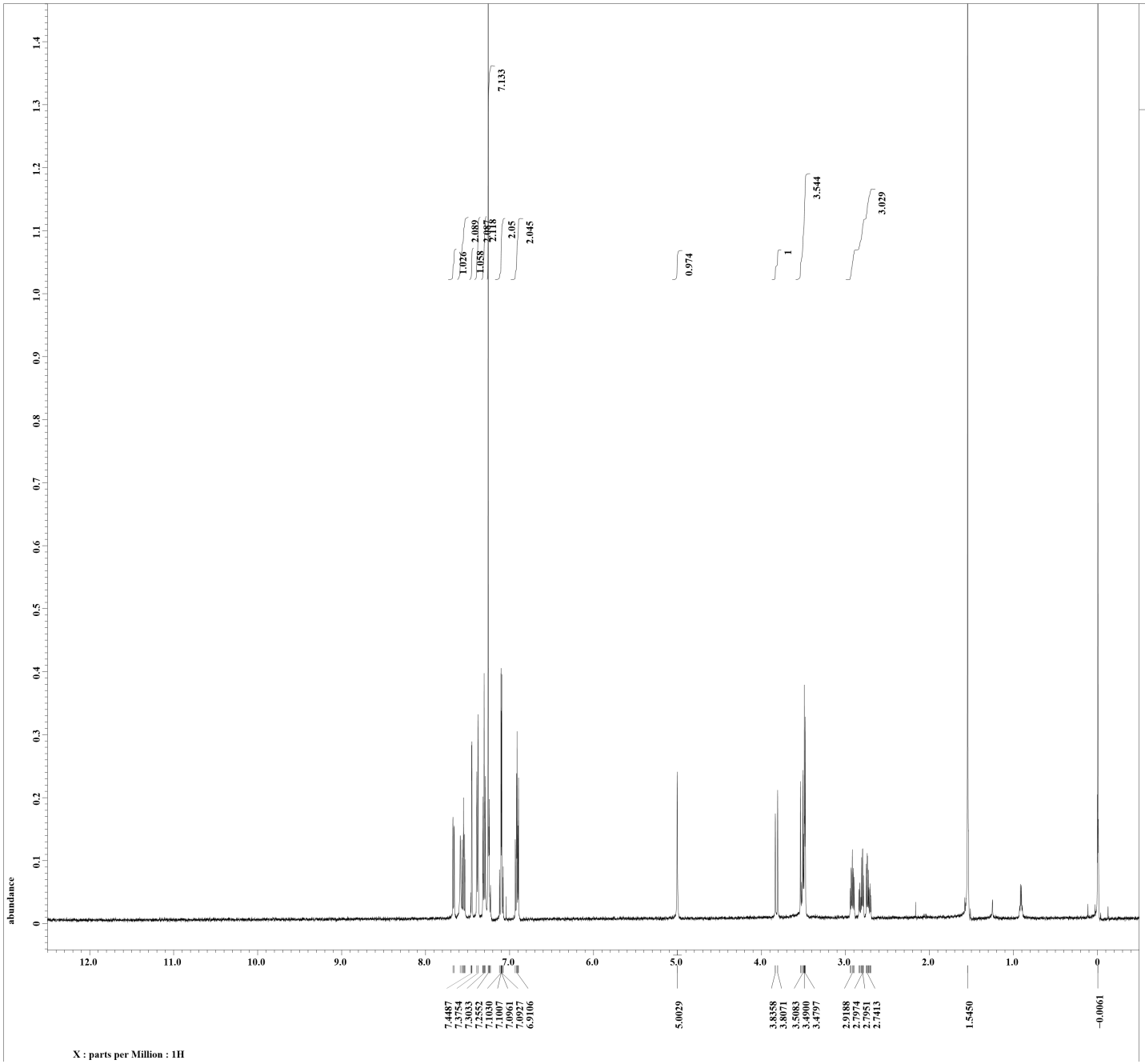
7d



Filename	= SS-18-07-25-01-4.jdf
Author	= delta
Experiment	= single_pulse_dec
Sample_id	= S#674109
Solvent	= CHLOROFORM-D
Creation_time	= 26-JUL-2018 07:53:05
Revision_time	= 26-JUL-2018 08:43:58
Current_time	= 26-JUL-2018 08:44:55
Content	= single pulse decouple
Data_format	= 1D COMPLEX
Dim_size	= 26214
Dim_title	= 13C
Dim_units	= [ppm]
Dimensions	= X
Site	= ECA 500
Spectrometer	= DELTA2_NMR
Field_strength	= 11.62926421[T] (500[M
X_acq_duration	= 0.8388608[s]
X_domain	= 13C
X_freq	= 124.5010059[MHz]
X_offset	= 100[ppm]
X_points	= 32768
X_prescans	= 4
X_resolution	= 1.1920929[Hz]
X_sweep	= 39.0625[kHz]
Irr_domain	= 1H
Irr_freq	= 495.13191398[MHz]
Irr_offset	= 5[ppm]
Clipped	= TRUE
Mod_return	= 1
Scans	= 17633
Total_scans	= 17633
X_90_width	= 10.83[us]
X_acq_time	= 0.8388608[s]
X_angle	= 30[deg]
X_atn	= 9.5[dB]
X_pulse	= 3.61[us]
Irr_atn_dec	= 20.548[dB]
Irr_atn_noe	= 20.548[dB]
Irr_noise	= WALTZ
Decoupling	= TRUE
Initial_wait	= 1[s]
Noe	= TRUE
Noe_time	= 2[s]
RecVr_gain	= 60
Relaxation_delay	= 2[s]
Repetition_time	= 2.8388608[s]
Temp_get	= 24.7[dC]



7d

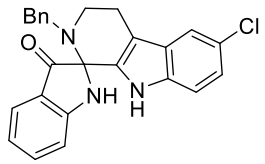


Filename = SS-18-07-13-01-4.jdf
Author = delta
Experiment = single_pulse.ex2
Sample_id = S#411021
Solvent = CHLOROFORM-D
Creation_time = 13-JUL-2018 10:38:28
Revision_time = 13-JUL-2018 11:31:06
Current_time = 13-JUL-2018 11:36:39

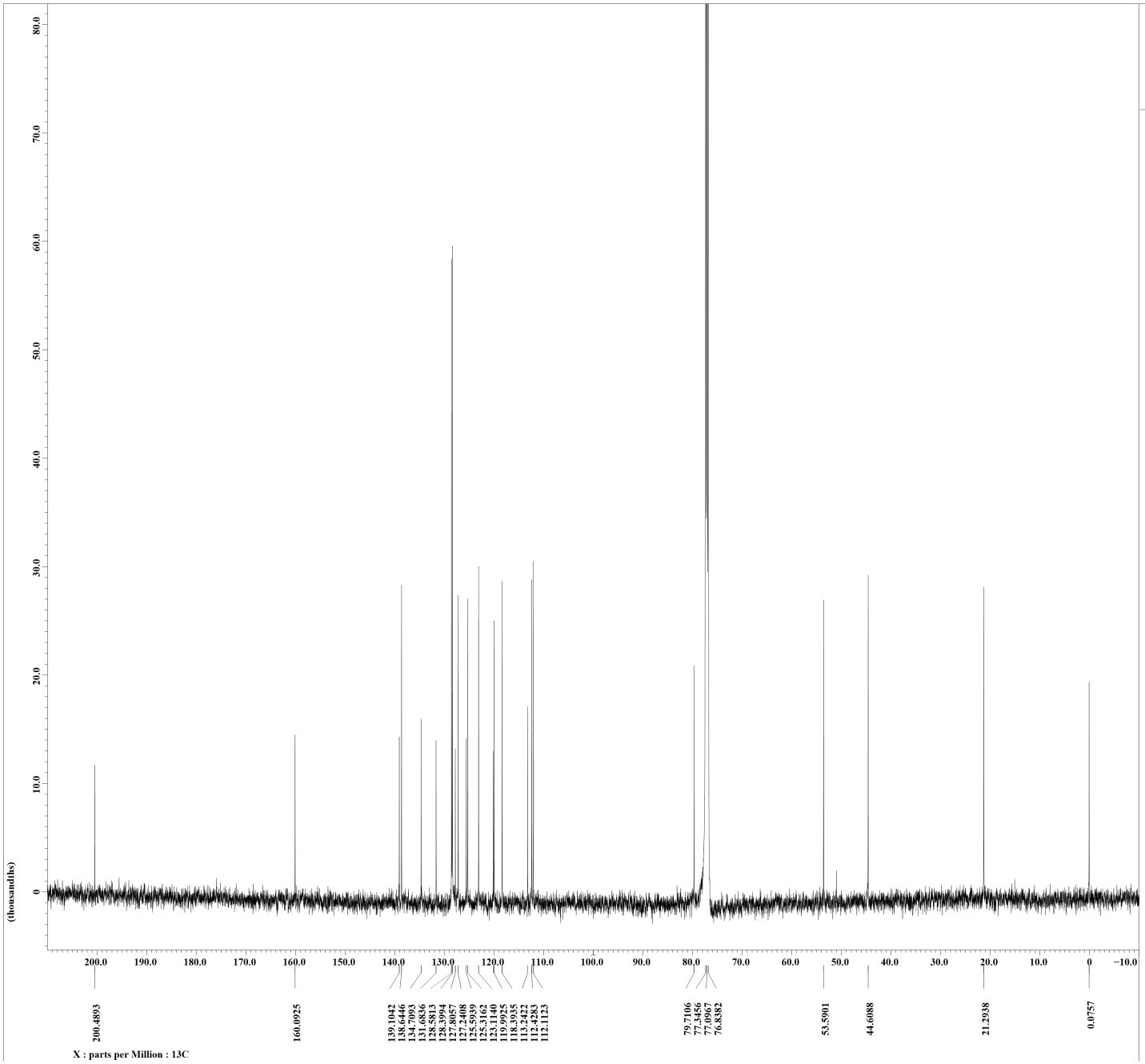
Content = single_pulse
Data_format = 1D COMPLEX
Dim_size = 13107
Dim_title = 1H
Dim_units = [ppm]
Dimensions = X
Site = ECA 500
Spectrometer = DELTA2_NMR

Field_strength = 11.62926421[T] (500[M
X_acq_duration = 1.76422912[s]
X_domain = 1H
X_freq = 495.13191398[MHz]
X_offset = 5[ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.5668198[Hz]
X_sweep = 9.28677563[kHz]
Irr_domain = 1H
Irr_freq = 495.13191398[MHz]
Irr_offset = 5[ppm]
Tri_domain = 1H
Tri_freq = 495.13191398[MHz]
Tri_offset = 5[ppm]
Clipped = FALSE
Mod_return = 1
Scans = 8
Total_scans = 8

X_90_width = 12.63[us]
X_acq_time = 1.76422912[s]
X_angle = 45[deg]
X_atn = 3.3[dB]
X_pulse = 6.315[us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1[s]
Recvr_gain = 48
Relaxation_delay = 5[s]
Repetition_time = 6.76422912[s]
Temp_get = 23.7[dC]



7e



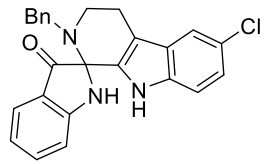
JEOL

```
Filename          = SS-18-07-13-01-7.jdf
Author            = delta
Experiment        = single_pulse_dec
Sample_id         = S#657893
Solvent           = CHLOROFORM-D
Creation_time     = 15-JUL-2018 07:38:49
Revision_time     = 15-JUL-2018 08:30:13
Current_time      = 15-JUL-2018 08:30:54

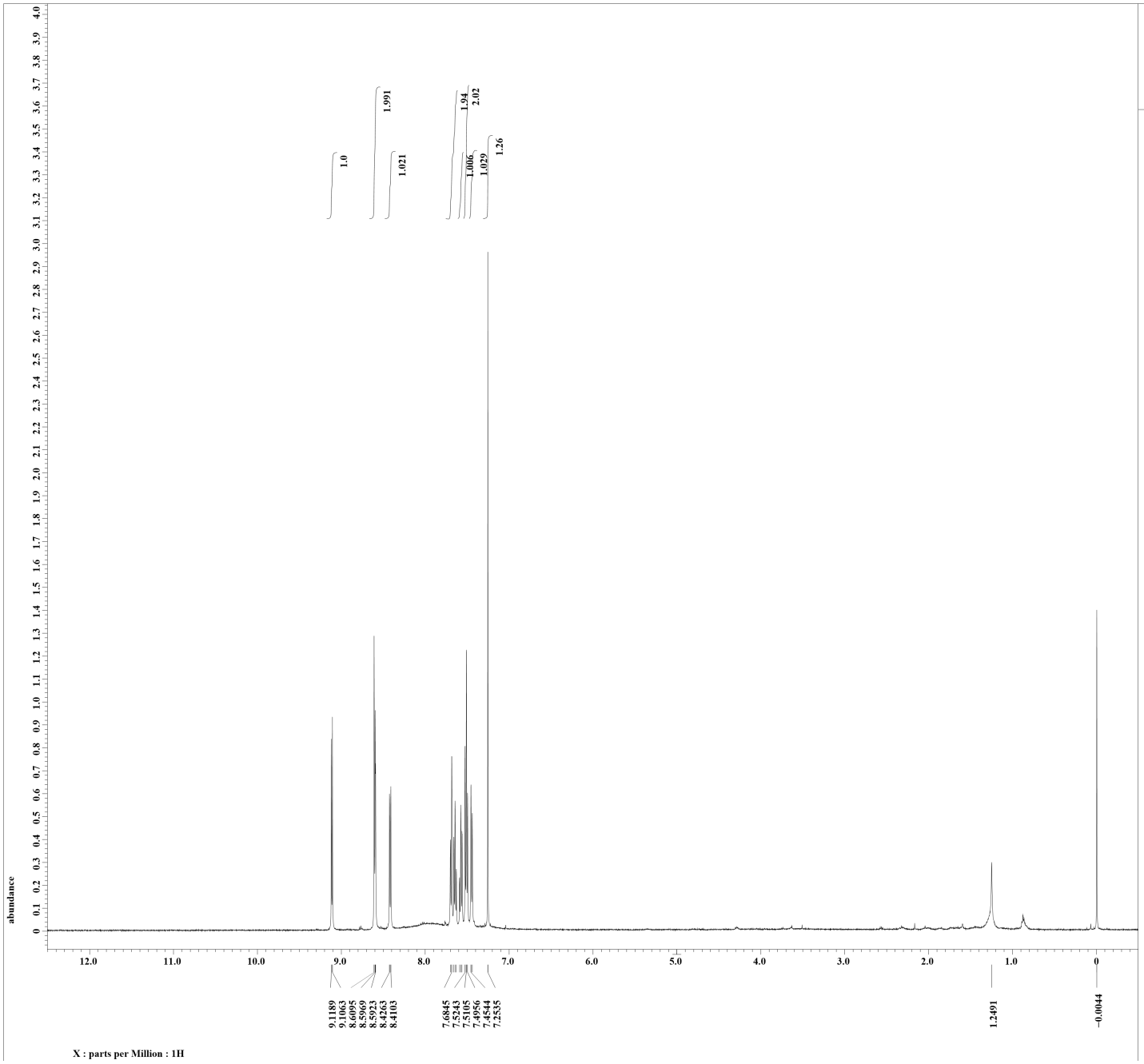
Content           = single pulse decouple
Data_format       = 1D COMPLEX
Dim_size          = 26214
Dim_title         = 13C
Dim_units         = [ppm]
Dimensions        = X
Site              = ECA 500
Spectrometer      = DELTA2_NMR

Field_strength    = 11.62926421[T] (500[M
X_acq_duration    = 0.8388608[s]
X_domain          = 13C
X_freq            = 124.5010059[MHz]
X_offset          = 100[ppm]
X_points          = 32768
X_prescans        = 4
X_resolution      = 1.1920929[Hz]
X_sweep           = 39.0625[kHz]
Irr_domain        = 1H
Irr_freq          = 495.13191398[MHz]
Irr_offset        = 5[ppm]
Clipped           = TRUE
Mod_return        = 1
Scans             = 48352
Total_scans       = 48352

X_90_width        = 10.83[us]
X_acq_time        = 0.8388608[s]
X_angle           = 30[deg]
X_atn             = 9.5[dB]
X_pulse           = 3.61[us]
Irr_atn_dec       = 20.548[dB]
Irr_atn_noe       = 20.548[dB]
Irr_noise         = WALTZ
Decoupling        = TRUE
Initial_wait      = 1[s]
Noe               = TRUE
Noe_time          = 2[s]
RecVr_gain        = 60
Relaxation_delay  = 2[s]
Repetition_time   = 2.8388608[s]
Temp_get          = 24.7[dC]
```



7e

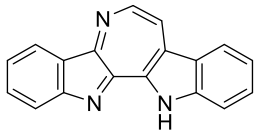


Filename = yama-18-03-15-4-4.jdf
Author = delta
Experiment = single_pulse.ex2
Sample_id = S#658458
Solvent = CHLOROFORM-D
Creation_time = 15-MAR-2018 17:50:10
Revision_time = 15-MAR-2018 18:20:57
Current_time = 15-MAR-2018 18:21:44

Content = single_pulse
Data_format = 1D COMPLEX
Dim_size = 13107
Dim_title = 1H
Dim_units = [ppm]
Dimensions = X
Site = ECA 500
Spectrometer = DELTA2_NMR

Field_strength = 11.62926421[T] (500[M
X_acq_duration = 1.76422912[s]
X_domain = 1H
X_freq = 495.13191398[MHz]
X_offset = 5[ppm]
X_points = 16384
X_prescans = 1
X_resolution = 0.5668198[Hz]
X_sweep = 9.28677563[kHz]
Irr_domain = 1H
Irr_freq = 495.13191398[MHz]
Irr_offset = 5[ppm]
Tri_domain = 1H
Tri_freq = 495.13191398[MHz]
Tri_offset = 5[ppm]
Clipped = FALSE
Mod_return = 1
Scans = 8
Total_scans = 8

X_90_width = 12.63[us]
X_acq_time = 1.76422912[s]
X_angle = 45[deg]
X_atn = 3.3[dB]
X_pulse = 6.315[us]
Irr_mode = Off
Tri_mode = Off
Dante_presat = FALSE
Initial_wait = 1[s]
Recvr_gain = 46
Relaxation_delay = 5[s]
Repetition_time = 6.76422912[s]
Temp_get = 23.7[dC]



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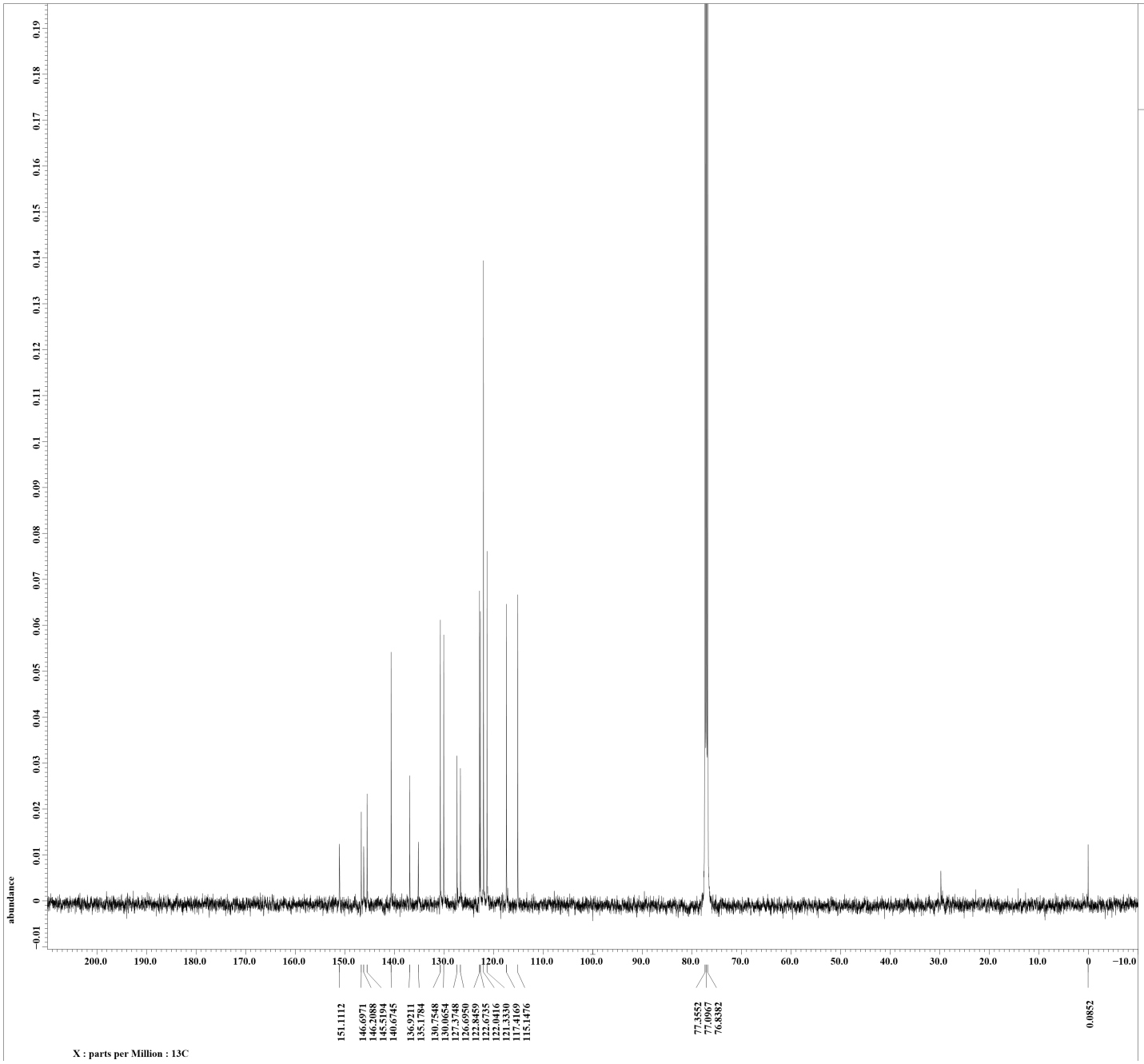


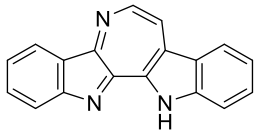
JEOL

```
Filename          = yama-18-03-15-4-3.jdf
Author            = delta
Experiment        = single_pulse_dec
Sample_id         = S#658826
Solvent           = CHLOROFORM-D
Creation_time     = 16-MAR-2018 07:01:28
Revision_time     = 16-MAR-2018 07:34:35
Current_time      = 16-MAR-2018 07:35:19

Content           = single pulse decouple
Data_format       = 1D COMPLEX
Dim_size          = 26214
Dim_title         = 13C
Dim_units         = [ppm]
Dimensions        = X
Site              = ECA 500
Spectrometer      = DELTA2_NMR

Field_strength    = 11.62926421[T] (500[M
X_acq_duration    = 0.8388608[s]
X_domain          = 13C
X_freq            = 124.5010059[MHz]
X_offset          = 100[ppm]
X_points          = 32768
X_prescans        = 4
X_resolution      = 1.1920929[Hz]
X_sweep           = 39.0625[kHz]
Irr_domain        = 1H
Irr_freq          = 495.13191398[MHz]
Irr_offset        = 5[ppm]
Clipped           = FALSE
Mod_return        = 1
Scans             = 16697
Total_scans       = 16697

X_90_width        = 10.83[us]
X_acq_time        = 0.8388608[s]
X_angle           = 30[deg]
X_atn             = 9.5[dB]
X_pulse           = 3.61[us]
Irr_atn_dec       = 20.548[dB]
Irr_atn_noe       = 20.548[dB]
Irr_noise         = WALTZ
Decoupling        = TRUE
Initial_wait      = 1[s]
Noe               = TRUE
Noe_time          = 2[s]
Recvr_gain        = 60
Relaxation_delay  = 2[s]
Repetition_time   = 2.8388608[s]
Temp_get          = 24.1[dC]
```



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