

Supporting information

Direct synthesis of quinazolinones by acceptorless dehydrogenative coupling of *o*-aminobenzamide and alcohols by heterogeneous Pt catalysts

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Experimental Section

General: Commercially available organic and inorganic compounds (from Tokyo Chemical Industry, Wako Pure Chemical Industries, Kishida Chemical, or Mitsuwa Chemicals) were used without further purifications. The GC (Shimadzu GC-14B) and GCMS (Shimadzu GCMS-QP2010) analyses were carried out with Ultra ALLOY capillary column UA⁺-5 (Frontier Laboratories Ltd.) using nitrogen as the carrier gas.

Catalyst: HBEA (JRC-Z-HB25, SiO₂/Al₂O₃ = 25±5), CeO₂ (JRC-CEO-1, 157 m² g⁻¹), MgO (JRC-MGO-3), TiO₂ (JRC-TIO-4) and SiO₂-Al₂O₃ (JRC-SAL-2) were supplied by Catalysis Society of Japan. H⁺-type MFI zeolite (HMF1) with a SiO₂/Al₂O₃ ratio of 22.3 was kindly supplied by Tosoh Co. γ -Al₂O₃ was prepared by calcination of γ -AlOOH (Catapal B Alumina purchased from Sasol) at 900 °C for 3 h. Hydroxides of Zr and Y were prepared by hydrolysis of zirconium oxynitrate 2-hydrate and yttrium nitrate in distilled water by gradually adding an aqueous NH₄OH solution (1.0 mol dm⁻³), followed by filtration of precipitate, washing with distilled water three times, drying at 100 °C for 12 h. Nb₂O₅·nH₂O was kindly supplied by CBMM. Y₂O₃, ZrO₂, and Nb₂O₅ were prepared by calcination of these hydroxides at 500 °C for 3 h. Active carbon (296 m² g⁻¹) was purchased from Kishida Chemical. SiO₂ (Q-10, 300 m² g⁻¹) was kindly supplied by Fuji Silysia Chemical Ltd.

Precursor of 5 wt% Pt/HBEA catalyst was prepared by an impregnation method; a mixture of HBEA and an aqueous HNO₃ solution of Pt(NH₃)₂(NO₃)₂ was evaporated at 50 °C, followed by drying at 90 °C for 12 h. The pre-reduced catalyst (Pt/HBEA) was prepared by pre-reduction of the precursor in a pyrex tube under a flow of H₂ (20 cm³ min⁻¹) at 300 °C for 0.5 h. Platinum oxides-loaded HBEA (PtOx/HBEA), as a comparative catalyst, was prepared calcination of the precursor at 300 °C for 3 h. By using various supports, several pre-reduced Pt catalysts were prepared by the same method as Pt/HBEA. TiO₂-supported metal catalysts, M/TiO₂ (M = Ir, Re, Ru, Pd, Rh, Ni, Cu) with metal loading of 5 wt% were prepared by impregnation method in the similar manner as Pt/HBEA using aqueous solution of metal nitrates (for Ni, Cu), RuCl₃, IrCl₃·nH₂O, NH₄ReO₄ or aqueous HNO₃ solution of Rh(NO₃)₃ or Pd(NO₃)₂.

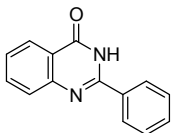
The number of surface metal atoms in Pt/HBEA, in situ reduced under H₂ at 300 °C, was estimated by the CO pulse-adsorption experiment at room temperature in a flow of He using BELCAT (BELL Japan Inc.). The average Pt particle size was calculated from the CO uptake assuming that CO was adsorbed on the surface of spherical Pt particles at CO/(surface Pt atom) = 1/1 stoichiometry.

Typical procedures of catalytic test: Pt/HBEA was used as a standard catalyst. After the pre-reduction at 300 °C, we carried out catalytic tests using a batch-type reactor without exposing the catalyst to air as follows. Typically, the mixture *o*-aminobenzamide (1.0 mmol) and benzylalcohol (1.0 mmol) in mesitylene (1.5 g) was injected to the pre-reduced catalyst inside the reactor (cylindrical glass tube) through a septum inlet, followed by filling N₂. Then, the resulting mixture was magnetically stirred for 24 h under reflux condition; the bath temperature was 180 °C and reaction temperature was *ca* 165 °C. After cooling the mixture, followed by removal of the catalyst, the volatile compound was removed under vacuum. Then, compounds **3** in Table 2 were isolated by column chromatography using silica gel 60 (spherical, 63-210 μm, Kanto Chemical Co. Ltd.) and the eluting solvent of hexane/ethylacetate (7:3) and analyzed by ¹H NMR, ¹³C NMR and GCMS. For the standard reaction of *o*-aminobenzamide and benzylalcohol in Table 1, entry 2 of Table 2, and control reactions in eq. 1 and 2, conversion and yields of products were determined by GC using *n*-dodecane as an internal standard adopting the GC-sensitivity estimated using the isolated product.

NMR and GC/MS analysis

¹H and ¹³C NMR spectra for quinazolinones of Table-2 were assigned and reproduced to the corresponding literature. ¹H and ¹³C NMR spectra were recorded using at ambient temperature on JEOL-ECX 600 operating at 600.17 and 150.92 MHz, respectively with tetramethylsilane as an internal standard. All chemical shifts (δ) are reported in ppm and coupling constants (*J*) in Hz. All chemical shifts are reported relative to tetramethylsilane and *d*-solvent peaks 77.00 ppm chloroform, 40.45 ppm dimethylsulfoxide, respectively. Abbreviations used in the NMR experiments: s, singlet; d, doublet; t, triplet; q, quartet; m, multiplet. GC-MS spectra was taken by SHIMADZU QP2010.

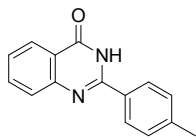
2-Phenyl-3*H*-quinazolin-4-one:¹ ¹H NMR (600.17 MHz, DMSO-D₆), TMS: δ 12.59 (br s, 1H,



NH), 8.23-8.19 (m, 2H), 7.89-7.86 (m, 1H), 7.78 (d, *J* = 7.56 Hz, 1H), 7.63-7.55 (m, 4H); ¹³C NMR (150.92 MHz, DMSO-D₆) δ 163.19, 153.25, 149.69, 135.57, 133.66, 132.34, 129.56 (C×2), 128.71 (C×2), 128.47, 127.55, 126.80; GC-MS

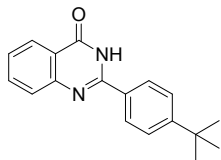
m/e 222.105

2-*p*-Tolyl-3*H*-quinazolin-4-one:¹ ¹H NMR (600.17 MHz, CDCl₃, TMS): δ 11.81 (br s, 1H, NH),



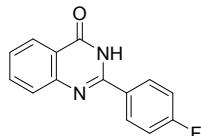
8.33 (d, *J* = 7.50 Hz, 1H), 8.17 (d, *J* = 7.26 Hz, 2H), 7.82-7.78 (m, 2H), 7.49 (t, *J* = 6.84 Hz, 1H), 7.37 (d, *J* = 8.28 Hz, 2H), 2.45 (s, 3H); ¹³C NMR (150.92 MHz, CDCl₃) δ 164.01, 151.82, 149.63, 142.11, 134.78, 129.96, 129.69 (C×2), 127.86, 127.36 (C×2), 126.84, 126.31, 120.75, 20.98; GC-MS m/e 236.105.

2-(4-*tert*-Butyl-phenyl)-3*H*-quinazolin-4-one:² ¹H NMR (600.17 MHz, CDCl₃, TMS): δ 11.69



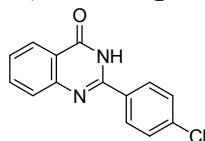
(br s, 1H, NH), 8.35 (dd, *J* = 8.28, 1.38 Hz, 1H), 8.20 (d, *J* = 8.28 Hz, 2H), 7.84-7.80 (m, 2H), 7.60-7.59 (m, 2H), 7.50 (t, *J* = 6.90 Hz, 1H), 1.40 (s, 9H); ¹³C NMR (150.92 MHz, CDCl₃) δ 163.92, 155.20, 151.74, 149.65, 134.78, 129.93, 127.93, 127.15 (C×2), 126.52, 126.34, 126.01 (C×2), 120.78, 35.01, 31.16 (C×3); GC-MS m/e 278.150.

2-(4-Fluoro-phenyl)-3*H*-quinazolin-4-one:¹ ¹H NMR (600.17 MHz, DMSO-D₆, TMS): δ

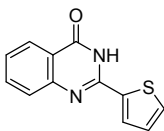


12.14 (br s, 1H, NH), 8.16 (d, *J* = 8.28 Hz, 1H), 7.85-7.83 (m, 1H), 7.76 (t, *J* = 8.22 Hz, 2H), 7.53-7.51 (m, 1H), 7.24-7.22 (m, 1H), 6.86 (d, *J* = 8.22 Hz, 1H), 6.63 (t, *J* = 7.56 Hz, 1H); ¹³C NMR (150.92 MHz, DMSO-D₆) δ 162.96, 154.50, 150.34, 148.96, 135.43, 132.72, 129.79, 127.80, 127.12, 126.64, 121.39, 117.52, 115.91, 113.26; GC-MS m/e 240.075.

2-(4-Chloro-phenyl)-3*H*-quinazolin-4-one:² GC-MS m/e 256.050

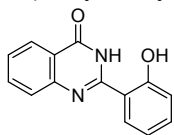


2-Thiophen-2-yl-3*H*-quinazolin-4-one:² ¹H NMR (600.17 MHz, CDCl₃, TMS): δ 12.25 (br s,

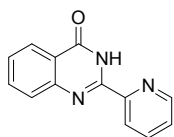


1H, NH), 8.33 (d, *J* = 7.56 Hz, 1H), 8.24 (d, *J* = 3.18 Hz, 1H), 7.76 (d, *J* = 4.14 Hz, 2H), 7.57 (d, *J* = 4.80 Hz, 1H), 7.47-7.46 (m, 1H), 7.23-7.22 (m, 1H); ¹³C NMR (150.92 MHz, CDCl₃) δ 164.12, 149.60, 147.28, 137.68, 134.89, 131.19, 128.51, 128.32, 127.73, 126.47, 126.44, 120.71; GC-MS m/e 228.045.

2-(2-Hydroxy-phenyl)-3*H*-quinazolin-4-one: GC-MS m/e 238.080.



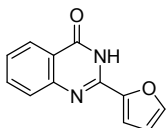
2-Pyridin-2-yl-3*H*-quinazolin-4-one: ¹H NMR (600.17 MHz, CDCl₃, TMS): δ 10.92 (br s, 1H,



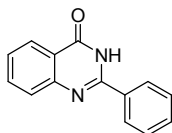
NH), 8.61 (d, *J* = 4.80 Hz, 1H), 8.52 (d, *J* = 7.56 Hz, 1H), 8.32-8.30 (m, 1H), 7.88-7.85 (m, 1H), 7.78-7.74 (m, 2H), 7.49-7.42 (m, 1H), 7.45-7.42 (m, 1H); ¹³C NMR (150.92 MHz, CDCl₃) δ 161.26, 149.01, 148.92, 148.60, 148.28, 137.38,

134.43, 127.94, 127.61, 126.63, 126.11, 122.38, 121.87; GC-MS m/e 223.085.

2-Furan-2-yl-3*H*-quinazolin-4-one:² GC-MS m/e 212.075.



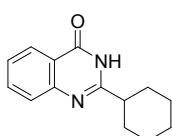
2-Benzyl-3*H*-quinazolin-4-one:¹ ¹H NMR (600.17 MHz, DMSO-D₆, TMS): δ 12.45 (br s, 1H,



NH), 8.10 (d, *J* = 8.22 Hz, 1H), 7.81 (t, *J* = 7.56 Hz, 1H), 7.64 (d, *J* = 8.28 Hz, 1H), 7.50 (t, *J* = 8.28 Hz, 1H), 7.41 (d, *J* = 7.56 Hz, 2H), 7.37-7.32 (m, 2H), 7.30-7.27 (m, 1H), 3.97 (s, 2H); ¹³C NMR (150.92 MHz, DMSO-D₆) δ 162.79,

156.90, 149.75, 137.49, 135.32, 129.80 (C×2), 129.43 (C×2), 127.86, 127.73, 127.14, 126.63, 121.67, 41.32; GC-MS m/e 236.105.

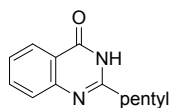
2-Cyclohexyl-3*H*-quinazolin-4-one:² ¹H NMR (600.17 MHz, CDCl₃, TMS): 11.85 (br s, 1H,



NH), 8.28 (dd, *J* = 8.68, 1.38 Hz, 1H), 7.77-7.74 (m, 1H), 7.70 (d, *J* = 8.22 Hz, 1H), 7.47-7.45 (m, 1H), 2.75-2.72 (m, 1H), 2.05-2.04 (m, 2H), 1.93-1.91 (m, 2H),

1.81-1.76 (m, 3H), 1.47-1.38 (m, 3H); ¹³C NMR (150.92 MHz, CDCl₃) δ 164.29, 160.24, 149.55, 134.63, 127.34, 126.21, 126.15, 120.74, 44.85, 30.45 (C×2), 26.01 (C×2), 25.69; GC-MS m/e 207.150.

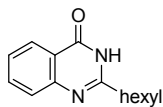
2-Pentyl-3*H*-quinazolin-4-one:³ ¹H NMR (600.17 MHz, CDCl₃, TMS): δ 12.28 (br s, 1H, NH),



8.27 (d, *J* = 6.84 Hz, 1H), 7.77-7.75 (m, 1H), 7.69 (d, *J* = 7.44 Hz, 1H), 7.46 (t, *J* = 7.53 Hz, 1H), 2.80 (t, *J* = 7.89 Hz, 2H), 1.91-1.87 (m, 2H), 1.45-1.39 (m, 4H), 0.92 (t, *J* = 7.53 Hz, 3H); ¹³C NMR (150.92 MHz, CDCl₃) δ 164.51, 157.10,

149.52, 134.72, 127.17, 126.24, 126.15, 120.44, 35.89, 31.38, 27.24, 22.29, 13.91; GC-MS m/e 216.135

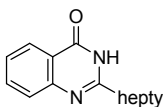
2-Hexyl-3*H*-quinazolin-4-one:² ¹H NMR (600.17 MHz, CDCl₃, TMS): δ 12.15 (br s, 1H, NH),



8.28 (d, *J* = 8.22 Hz, 1H), 7.77-7.75 (m, 1H), 7.70 (d, *J* = 8.28 Hz, 1H), 7.47-7.45 (m, 1H), 2.80 (t, *J* = 7.56 Hz, 2H), 1.90-1.86 (m, 2H), 1.47-1.44 (m, 2H), 1.37-1.31 (m, 4), 0.88 (t, *J* = 6.90 Hz, 3H); ¹³C NMR (150.92 MHz, CDCl₃) δ

164.43, 157.06, 149.51, 134.72, 127.18, 126.25, 126.16, 120.45, 35.96, 31.42, 28.89, 27.52, 22.45, 14.01; GC-MS m/e 230.150

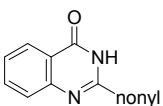
2-Heptyl-3*H*-quinazolin-4-one:¹ ¹H NMR (600.17 MHz, DMSO-D₆, TMS): δ 12.20 (br s, 1H,



NH), 8.10 (dd, *J* = 7.56, 1.38 Hz, 1H), 7.81-7.78 (m, 1H), 7.61 (d, *J* = 8.28 Hz, 1H), 7.48 (t, *J* = 7.53 Hz, 1H), 2.61 (t, *J* = 7.92 Hz, 2H), 1.75-1.73 (m, 2H), 1.33-1.27 (m, 8H), 0.87 (t, *J* = 6.87 Hz, 3H); ¹³C NMR (150.92 MHz, DMSO-D₆)

δ 162.77, 158.45, 149.91, 135.20, 127.73, 126.83, 126.61, 121.71, 35.44, 32.06, 29.43, 29.32, 27.72, 22.99, 14.87; GC-MS m/e 201.100.

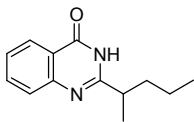
2-Nonyl-3*H*-quinazolin-4-one: ¹H NMR (600.17 MHz, CDCl₃, TMS): δ 11.95 (br, s, 1H, NH),



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NMR (150.92 MHz, CDCl₃) δ 164.31, 157.00, 149.50, 134.73, 127.19, 126.26, 126.19, 120.49, 35.98, 31.83, 29.41, 29.26 (C×2), 29.23, 27.58, 22.64, 14.08; GC-MS m/e 272.195.

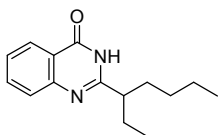
2-(1-Methyl-butyl)-3*H*-quinazolin-4-one: ¹H NMR (600.17 MHz, CDCl₃, TMS): δ 11.29 (br s,



1H, NH), 8.28 (dd, *J* = 8.78, 1.38 Hz, 1H), 7.77-7.73 (m, 1H), 7.70 (d, *J* = 7.56 Hz, 1H), 7.47-7.44 (m, 1H), 2.90-2.87 (m, 1H), 1.92-1.85 (m, 1H), 1.72-1.64 (m, 1H), 1.48-1.41 (m, 4H), 1.38-1.34 (m, 1H), 0.93 (t, *J* = 7.56 Hz, 3H); ¹³C

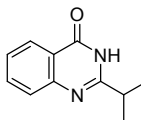
NMR (150.92 MHz, CDCl₃) δ 163.90, 160.32, 149.44, 134.64, 127.37, 126.25, 126.23, 120.77, 40.39, 37.20, 20.57, 18.52, 13.96; GC-MS m/e 216.135.

2-(1-Ethyl-pentyl)-3*H*-quinazolin-4-one:⁴ ¹H NMR (600.17 MHz, CDCl₃, TMS): δ 11.99 (br s, 1H, NH), 8.30 (d, *J* = 7.56 Hz, 1H), 7.76-7.73 (m, 1H), 7.46 (t, *J* = 6.84 Hz, 1H), 2.69-2.67 (m, 1H), 1.94-1.88 (m, 2H), 1.83-1.76 (m, 2H), 1.33-1.22 (m, 4H), 0.93 (t, *J* = 7.56 Hz, 3H), 0.82 (t, *J*



= 6.18 Hz, 3H); ^{13}C NMR (150.92 MHz, CDCl_3) δ 164.32, 159.84, 149.50, 134.54, 127.36, 126.17, 126.10, 120.69, 48.34, 33.03, 29.63, 26.71, 22.59, 13.86, 12.01; GC-MS m/e 244.175.

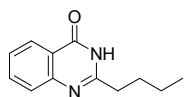
2-Isopropyl-3H-quinazolin-4-one:⁵



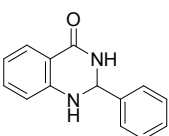
^1H NMR (600.17 MHz, CDCl_3 , TMS): δ 11.21 (br s, 1H, NH), 8.28 (dd, J = 8.78, 1.38 Hz, 1H), 7.76-7.71 (m, 2H), 7.46-7.44 (m, 1H), 3.04-3.02 (m, 1H), 1.44 (d, J = 6.90 Hz, 6H); ^{13}C NMR (150.92 MHz, CDCl_3) δ 174.63, 171.36, 160.20, 145.42, 138.17, 137.07, 137.04, 131.56, 34.93, 20.40 (C \times 2);

GC-MS m/e 188.105

2-Butyl-3H-quinazolin-4-one:⁶ GC-MS m/e 202.115.



2-Phenyl-2,3-dihydro-1H-quinazolin-4-one:⁷

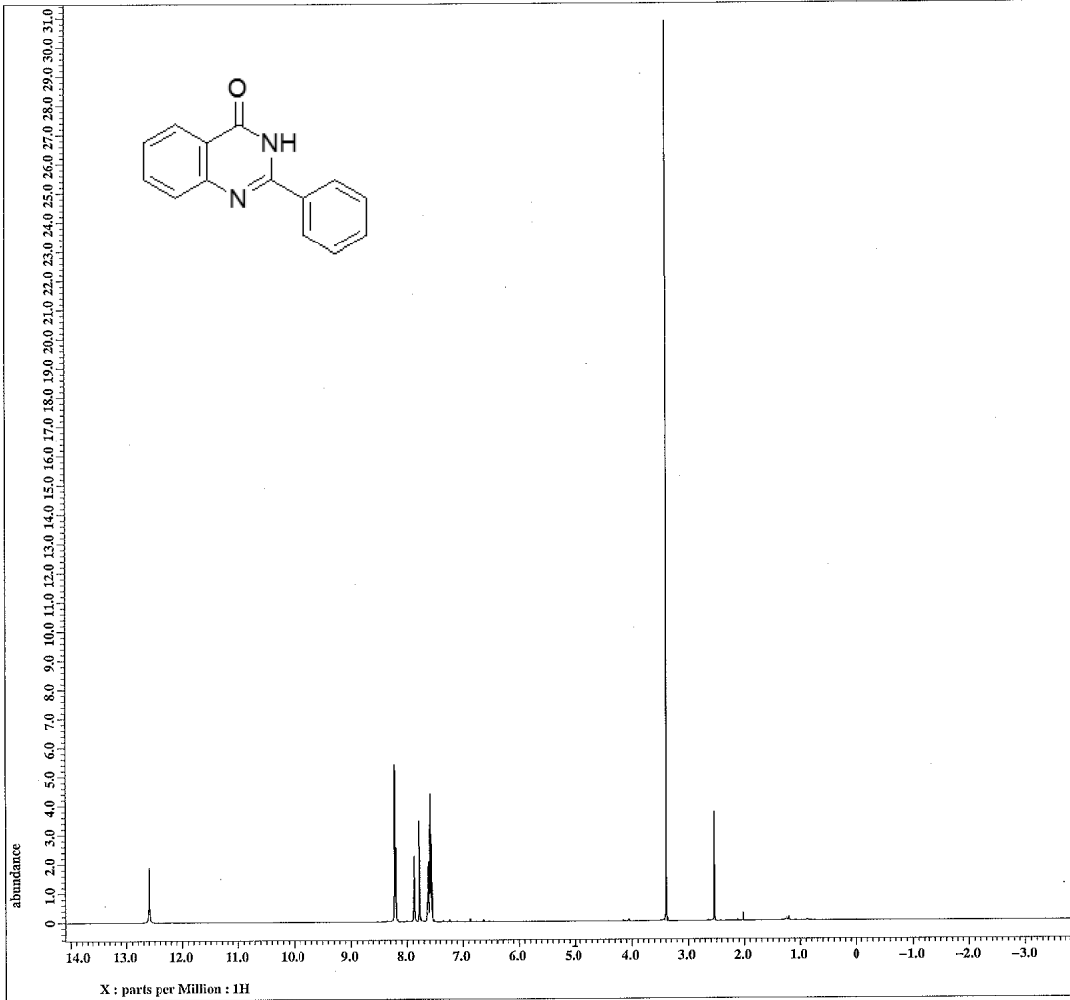


^1H NMR (600.17 MHz, DMSO-D_6 , TMS): δ 8.34 (br s, 1H, NH), 7.65 (d, J = 8.28 Hz, 1H), 7.53 (d, J = 7.56 Hz, 2H), 7.43 (t, J = 7.56 Hz, 2H), 7.40-7.37 (m, 1H), 7.29-7.27 (m, 1H), 7.16 (br s, 1H, NH), 6.79 (d, J = 8.28 Hz, 1H), 6.71 (t, J = 7.56 Hz, 1H), 5.79 (s, 1H); ^{13}C NMR (150.92 MHz, DMSO-D_6) δ 164.54, 148.81, 142.56, 134.26, 129.40, 129.27 (C \times 2), 128.29,

127.81 (C \times 2), 118.06, 115.88, 115.34, 67.50; GC-MS m/e 224.105.

References:

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JEOL

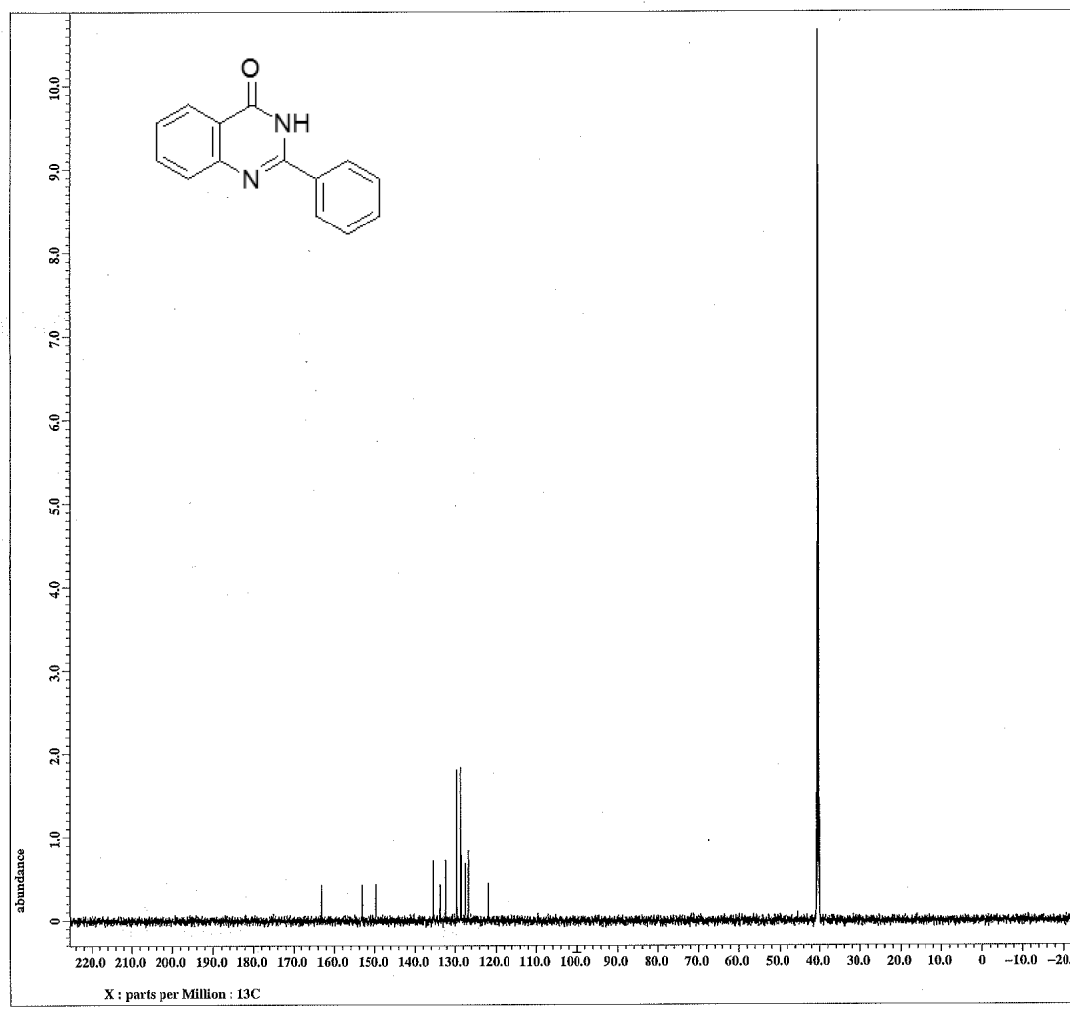
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X_domain       = 1H
X_freq        = 600.1723046[MHz]
X_offset      = 5[ppm]
X_points      = 16384
X_prescans    = 1
X_resolution  = 0.82569205[Hz]
X_sweep       = 13.52813853[kHz]
Irr_domain    = 1H
Irr_freq      = 600.1723046[MHz]
Irr_offset    = 5[ppm]
Irr_domain    = 1H
Tri_freq      = 600.1723046[MHz]
Tri_offset    = 5[ppm]
Clipped       = FALSE
Mod_return    = 1
Scans         = 8
Total_scans   = 8

X_90_width    = 13[us]
X_acq_time    = 1.21110528[s]
X_angle       = 45[deg]
X_atn         = 3.6[db]
X_pulse       = 6.5[us]
Irr_mode      = Off
Tri_mode      = Off
Densit_yesat = FALSE
Initial_wait  = 1[s]
Recvr_gain    = 50
Relaxation_delay = 5[s]
Repetition_time = 6.21110528[s]
Temp_get      = 21[dc]
  
```



JEOL

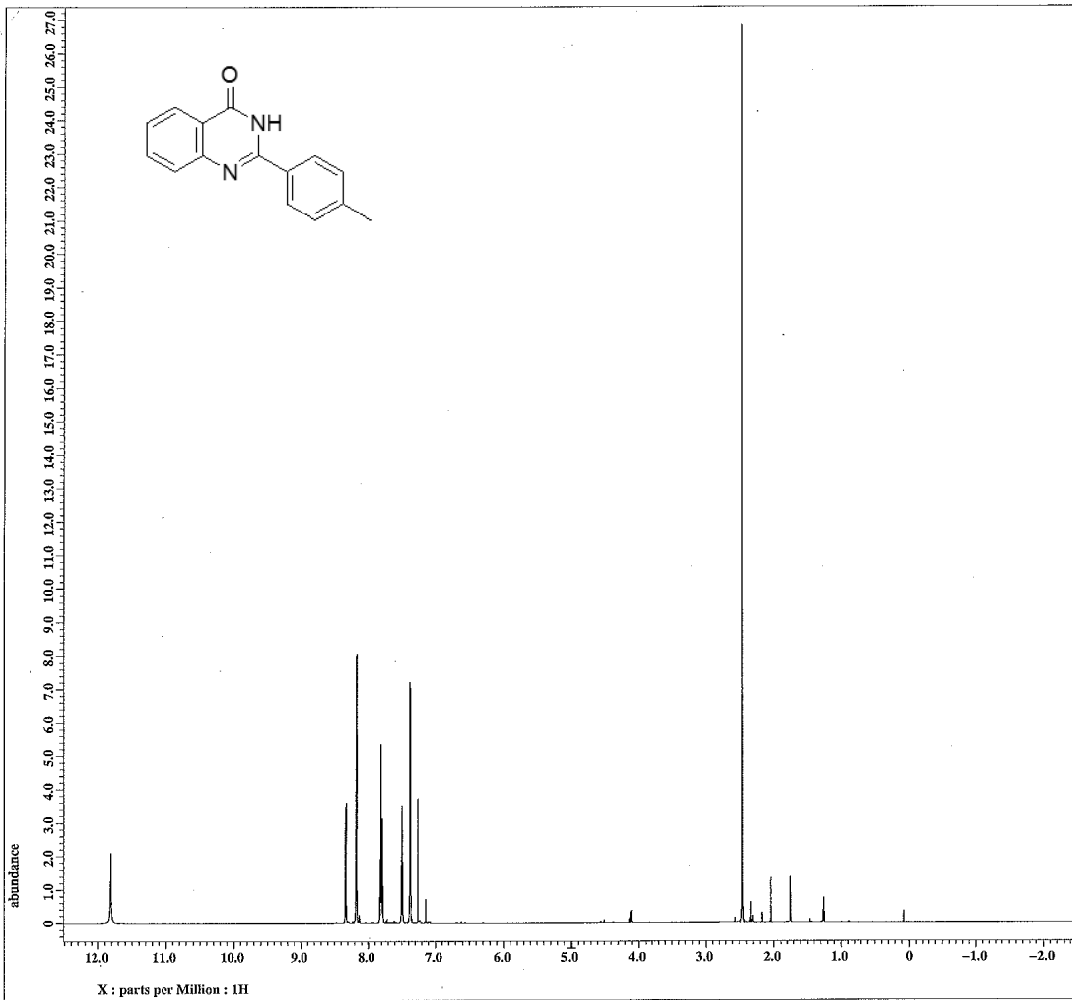
```

Filename      = Exp-hakim-134-1-CARBO
Author       = delta
Experiment    = single_pulse_dec
Sample_id    = Exp-hakim-134-1-CARBO
Solvent      = DMSO-D6
Creation_time = 4-OCT-2013 17:22:59
Revision_time = 4-OCT-2013 17:32:26
Current_time  = 4-OCT-2013 17:32:32

Content      = Exp-hakim-134-1-CARBO
Data_format  = 1D COMPLEX
Dim_size     = 32768
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site        = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 0.868352[s]
X_domain       = 13C
X_freq        = 150.91343039[MHz]
X_offset      = 100[ppm]
X_points      = 32768
X_prescans    = 4
X_resolution  = 1.15160672[Hz]
X_sweep       = 37.73584906[kHz]
Irr_domain    = 1H
Irr_freq      = 600.1723046[MHz]
Irr_offset    = 5[ppm]
Clipped       = FALSE
Mod_return    = 1
Scans         = 93
Total_scans   = 93

X_90_width    = 11.4[us]
X_acq_time    = 0.868352[s]
X_angle       = 30[deg]
X_atn         = 7.5[db]
X_pulse       = 3.8[us]
Irr_atn_dec   = 19.391[db]
Irr_atn_noe   = 19.391[db]
Irr_noise     = WALTZ
Decoupling    = TRUE
Initial_wait  = 1[s]
Noe           = TRUE
Noe_time      = 2.5[s]
Recvr_gain    = 76
Relaxation_delay = 2.5[s]
Repetition_time = 3.368352[s]
Temp_get      = 20.9[dc]
  
```



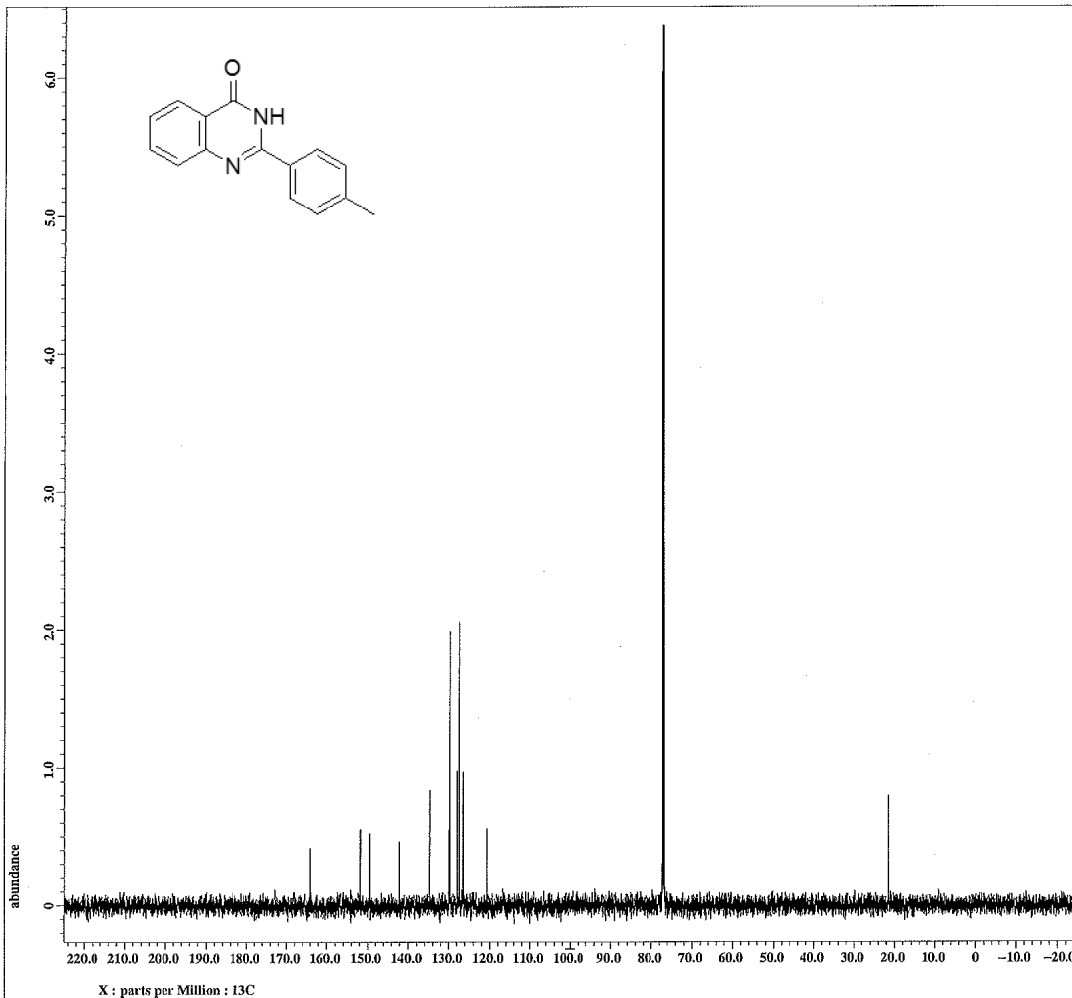
```

Filename      = Exp-hakim-135-5-prot
Author       = delta
Experiment   = single_pulse.ex2
Sample_id    = Exp-hakim-135-5-prot
Solvent      = CHLOROFORM-D
Creation_time = 10-DEC-2013 17:24:30
Revision_time = 10-DEC-2013 17:38:08
Current_time  = 10-DEC-2013 17:38:14

Content      = Exp-hakim-135-5-prot
Data_format  = 1D COMPLEX
Dim_size     = 13107
Dim_title    = 1H
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 1.4548992[s]
X_domain       = 1H
X_freq         = 600.1723046[MHz]
X_offset       = 5[ppm]
X_points       = 16384
X_prescans     = 1
X_resolution   = 0.68733284[Hz]
X_sweep        = 11.26126126[kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046[MHz]
Irr_offset     = 5[ppm]
Tri_domain     = 1H
Tri_freq       = 600.1723046[MHz]
Tri_offset     = 5[ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 8
Total_scans    = 8

X_90_width    = 13[us]
X_acq_time     = 1.4548992[s]
X_angle        = 45[deg]
X_atn          = 3.6[db]
X_pulse        = 6.5[us]
Irr_mode       = Off
Tri_mode       = Off
Dante_preset   = FALSE
Initial_wait   = 1[s]
Recvr_gain     = 50
Relaxation_delay = 5[s]
Repetition_time = 6.4548992[s]
Temp_get       = 21.9[dC]
  
```



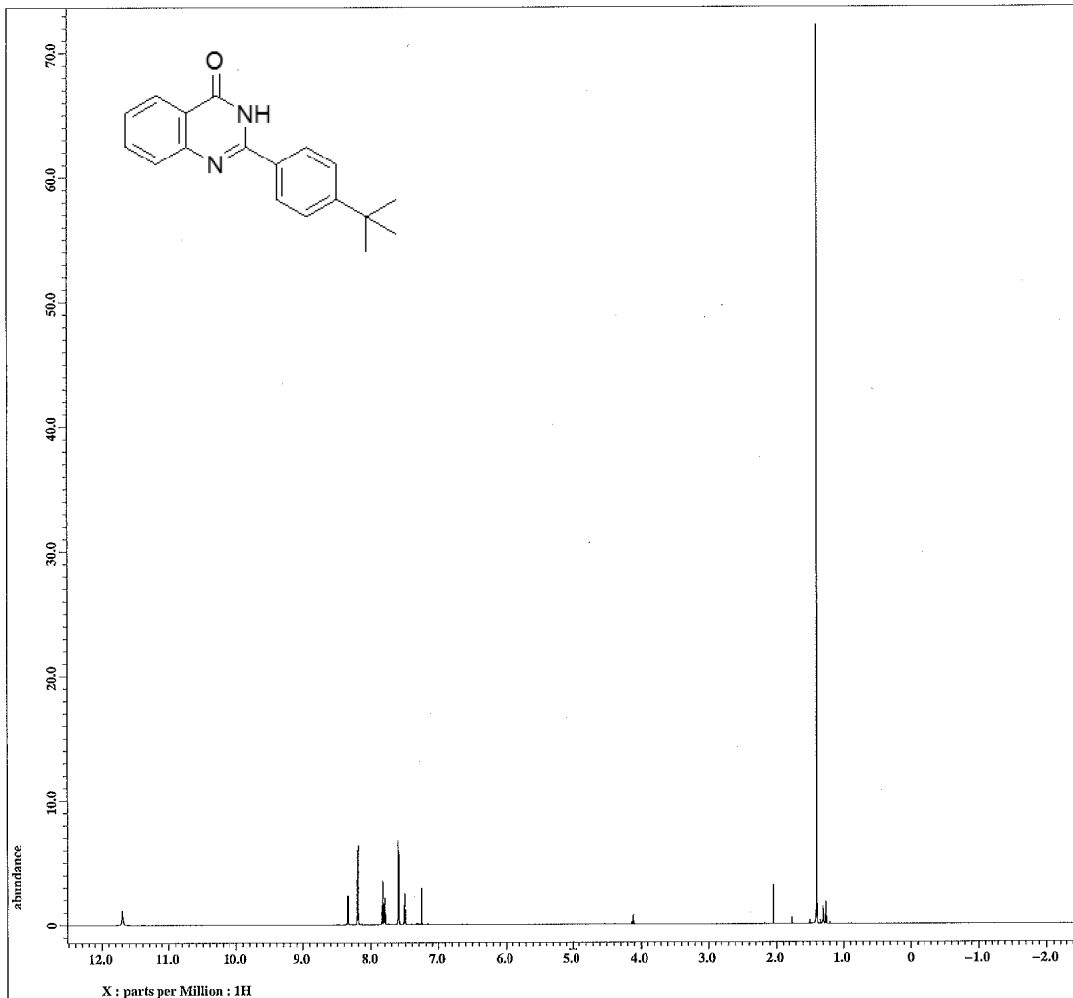
```

Filename      = Exp-hakim-135-5-carbo
Author       = delta
Experiment   = single_pulse_dec
Sample_id    = Exp-hakim-135-5-carbo
Solvent      = CHLOROFORM-D
Creation_time = 10-DEC-2013 17:29:44
Revision_time = 10-DEC-2013 17:46:37
Current_time  = 10-DEC-2013 17:46:41

Content      = Exp-hakim-135-5-carbo
Data_format  = 1D COMPLEX
Dim_size     = 32768
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 0.868352[s]
X_domain       = 13C
X_freq         = 150.91343039[MHz]
X_offset       = 100[ppm]
X_points       = 32768
X_prescans     = 4
X_resolution   = 1.15160672[Hz]
X_sweep        = 37.73584906[kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046[MHz]
Irr_offset     = 5[ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 74
Total_scans    = 74

X_90_width    = 11.4[us]
X_acq_time     = 0.868352[s]
X_angle        = 30[deg]
X_atn          = 7.5[db]
X_pulse        = 3.8[us]
Irr_atn_dec    = 19.39[db]
Irr_atn_noe    = 19.39[db]
Irr_noise      = WALTZ
Decoupling     = TRUE
Initial_wait   = 1[s]
Noe            = TRUE
Noe_time       = 2.5[s]
Recvr_gain     = 78
Relaxation_delay = 2.5[s]
Repetition_time = 3.368352[s]
Temp_get       = 22.6[dC]
  
```

JEOL

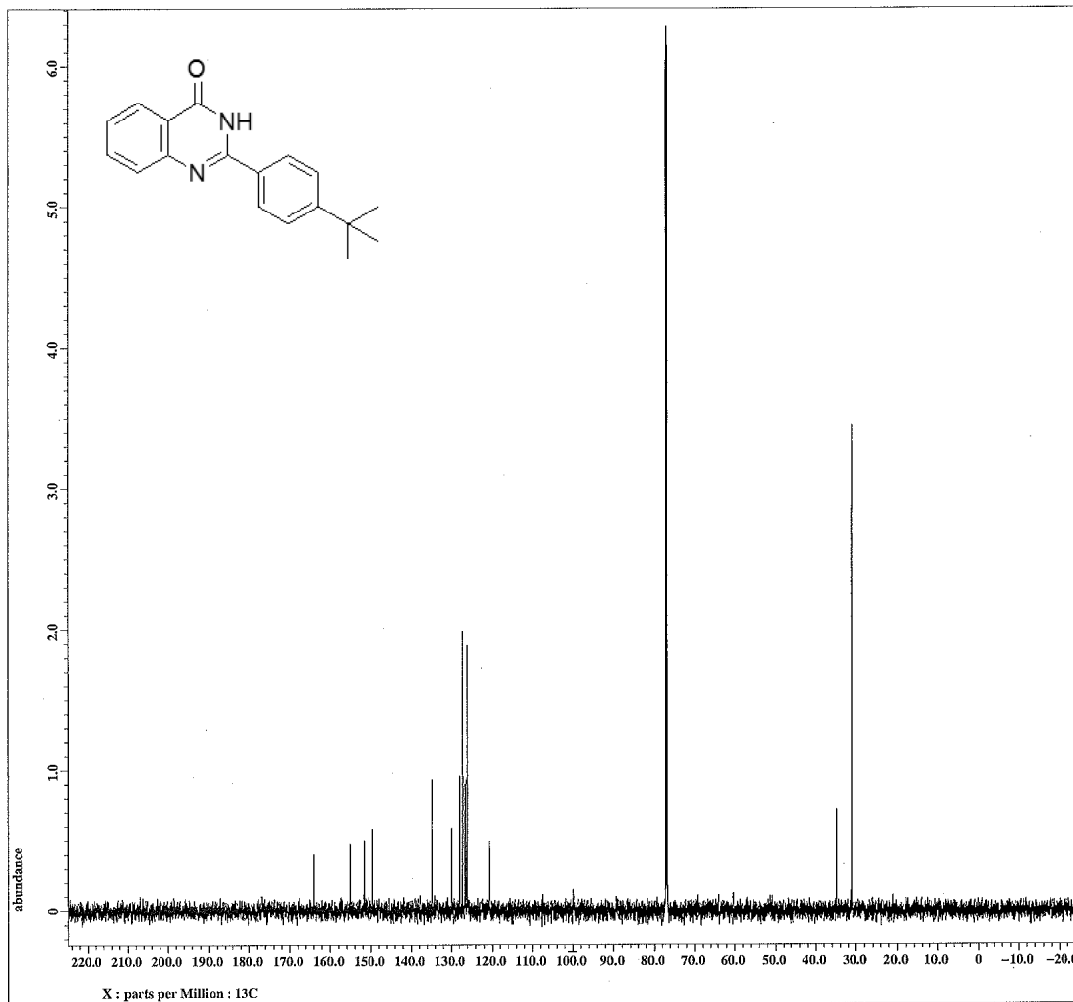
```

Filename      = Exp-hakim-135-2-proto
Author       = delta
Experiment   = single_pulse.ex2
Sample_id    = Exp-hakim-135-2-proto
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 17:18:38
Revision_time = 9-DEC-2013 17:32:08
Current_time = 9-DEC-2013 17:32:12

Content      = Exp-hakim-135-2-proto
Data_format = 1D_COMPLEX
Dim_size     = 13107
Dim_title    = 1H
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 1.4548992[s]
X_domain       = 1H
X_freq         = 600.1723046[MHz]
X_offset       = 5[ppm]
X_points       = 16384
X_prescans     = 1
X_resolution   = 0.68733284[Hz]
X_sweep        = 11.26126126[kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046[MHz]
Irr_offset     = 5[ppm]
Tri_domain     = 1H
Tri_freq       = 600.1723046[MHz]
Tri_offset     = 5[ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 8
Total_scans    = 8

X_90_width    = 13[us]
X_acq_time     = 1.4548992[s]
X_angle       = 45[deg]
X_atn         = 3.6[dB]
X_pulse       = 6.5[us]
Irr_mode      = Off
Tri_mode      = Off
Dante_preset  = FALSE
Initial_wait  = 1[s]
Recvr_gain    = 46
Relaxation_delay = 5[s]
Repetition_time = 6.4548992[s]
Temp_get      = 21.4[degC]
  
```



JEOL

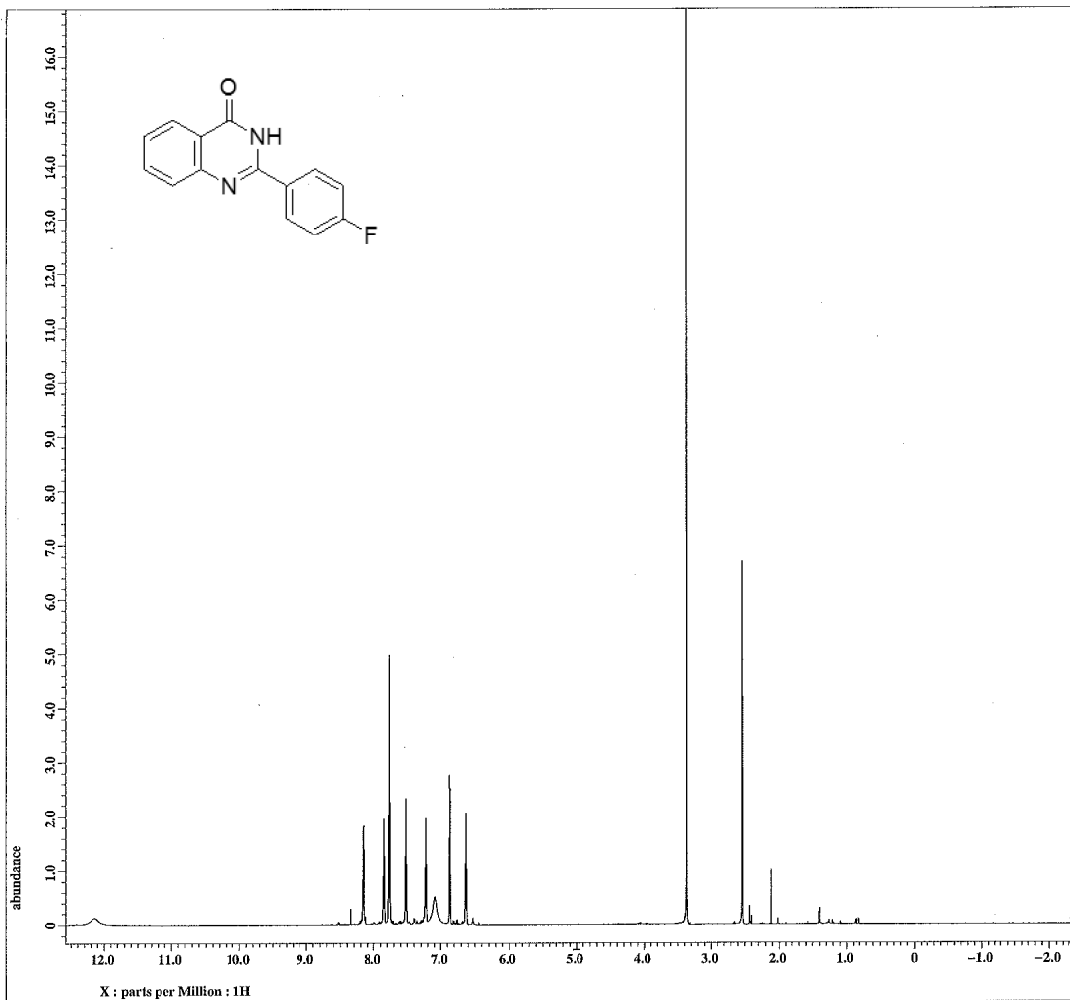
```

Filename      = Exp-hakim-135-2-carbo
Author       = delta
Experiment   = single_pulse_dec
Sample_id    = Exp-hakim-135-2-carbo
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 17:24:21
Revision_time = 9-DEC-2013 17:40:01
Current_time = 9-DEC-2013 17:40:05

Content      = Exp-hakim-135-2-carbo
Data_format = 1D_COMPLEX
Dim_size     = 32768
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 0.868352[s]
X_domain       = 13C
X_freq         = 150.91343039[MHz]
X_offset       = 100[ppm]
X_points       = 32768
X_prescans     = 4
X_resolution   = 1.15160672[Hz]
X_sweep        = 37.73584906[kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046[MHz]
Irr_offset     = 5[ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 83
Total_scans    = 83

X_90_width    = 11.4[us]
X_acq_time     = 0.868352[s]
X_angle       = 30[deg]
X_atn         = 7.5[dB]
X_pulse       = 3.0[us]
Irr_atn_dec   = 19.391[dB]
Irr_atn_nos   = 19.391[dB]
Irr_noise     = WALTZ
Decoupling    = TRUE
Initial_wait  = 1[s]
Noe           = TRUE
Noe_time      = 2.5[s]
Recvr_gain    = 78
Relaxation_delay = 2.5[s]
Repetition_time = 3.368352[s]
Temp_get      = 22.2[degC]
  
```



JEOL

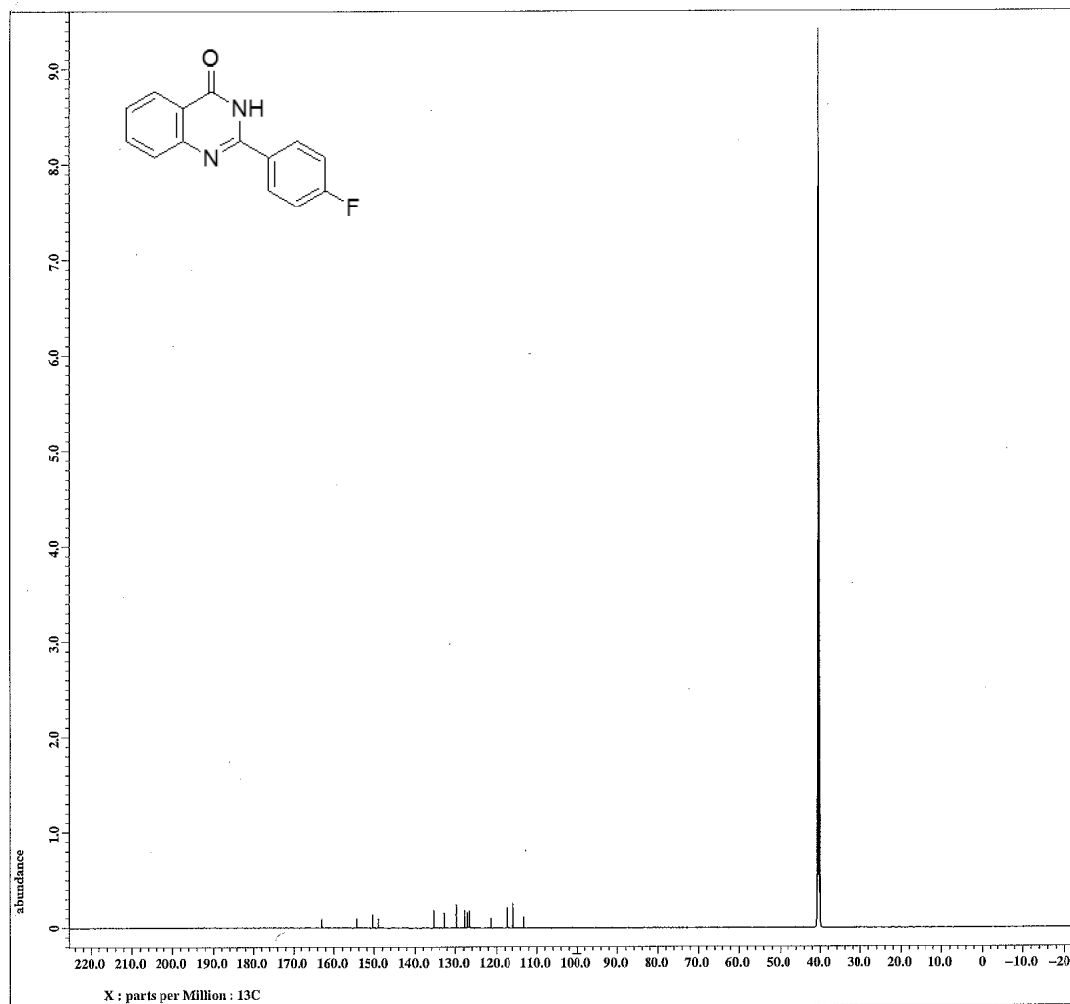
```

Filename      = Exp-hakim-135-5a-prot
Author       = delta
Experiment   = single_pulse.ex2
Sample_id    = Exp-hakim-135-5a-prot
Solvent      = DMSO-D6
Creation_time = 10-DEC-2013 21:37:45
Revision_time = 10-DEC-2013 21:51:41
Current_time  = 10-DEC-2013 21:51:54

Content       = Exp-hakim-135-5a-prot
Data_format  = 1D COMPLEX
Dim_size     = 13107
Dim_title    = 1H
Dim_units    = [ppm]
Dimensions   = X
Site         = X
Spectrometer = ECA 600

Field_strength = 14.09636928 [T] (600[M]
X_acq_duration = 1.4548992 [s]
X_domain       = 1H
X_freq         = 600.1723046 [MHz]
X_offset       = 5 [ppm]
X_points       = 16384
X_prescans     = 1
X_resolution   = 0.68733284 [Hz]
X_sweep        = 11.26126126 [kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046 [MHz]
Irr_offset     = 5 [ppm]
Tri_domain     = 1H
Tri_freq       = 600.1723046 [MHz]
Tri_offset     = 5 [ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 8
Total_scans    = 8

X_90_width    = 13 [us]
X_acq_time    = 1.4548992 [s]
X_angle       = 45 [deg]
X_atn         = 3.6 [dB]
X_pulse       = 6.5 [us]
Irr_mode      = OFF
Tri_mode      = OFF
Dante_preset  = FALSE
Initial_wait  = 1 [s]
Recvr_gain    = 56
Relaxation_delay = 5 [s]
Repetition_time = 6.4548992 [s]
Temp_set      = 23.7 [dC]
  
```



JEOL

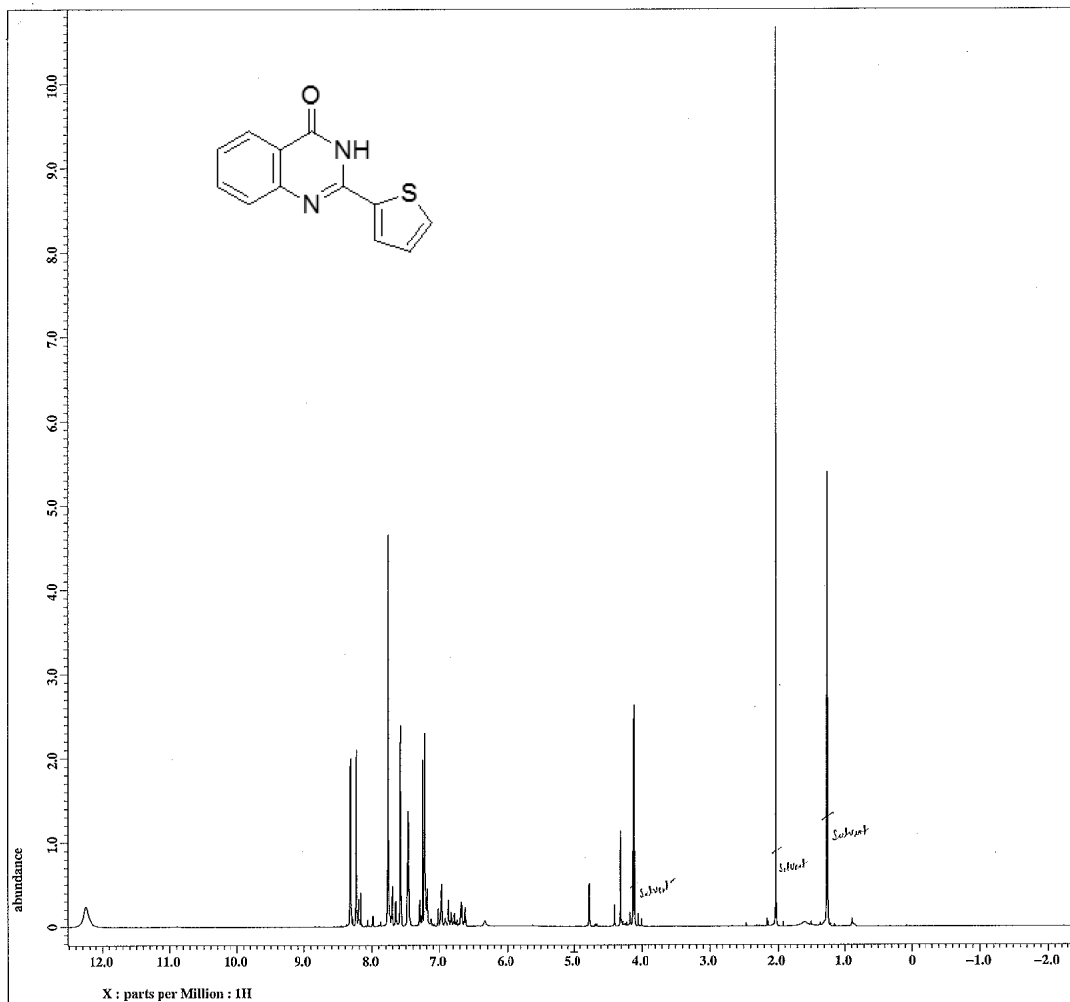
```

Filename      = Exp-hakim-135-6b-carb
Author       = delta
Experiment   = single_pulse_dec
Sample_id    = Exp-hakim-135-6b-carb
Solvent      = DMSO-D6
Creation_time = 11-DEC-2013 06:05:11
Revision_time = 11-DEC-2013 16:09:08
Current_time  = 11-DEC-2013 16:09:12

Content       = Exp-hakim-135-6b-carb
Data_format  = 1D COMPLEX
Dim_size     = 32768
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site         = X
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928 [T] (600[M]
X_acq_duration = 0.868352 [s]
X_domain       = 13C
X_freq         = 150.91343039 [MHz]
X_offset       = 100 [ppm]
X_points       = 32768
X_prescans     = 4
X_resolution   = 1.15160672 [Hz]
X_sweep        = 37.73584906 [kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046 [MHz]
Irr_offset     = 5 [ppm]
Clipped        = TRUE
Mod_return     = 1
Scans          = 8000
Total_scans    = 8000

X_90_width    = 11.4 [us]
X_acq_time    = 0.868352 [s]
X_angle       = 30 [deg]
X_atn         = 7.5 [dB]
X_pulse       = 3.8 [us]
Irr_atn_dec   = 19.391 [dB]
Irr_atn_noc   = 19.391 [dB]
Irr_noise     = WALTZ
Decoupling    = TRUE
Initial_wait  = 1 [s]
Noc           = TRUE
Noc_time      = 2.5 [s]
Recvr_gain    = 76
Relaxation_delay = 2.5 [s]
Repetition_time = 3.368352 [s]
Temp_set      = 25.1 [dC]
  
```



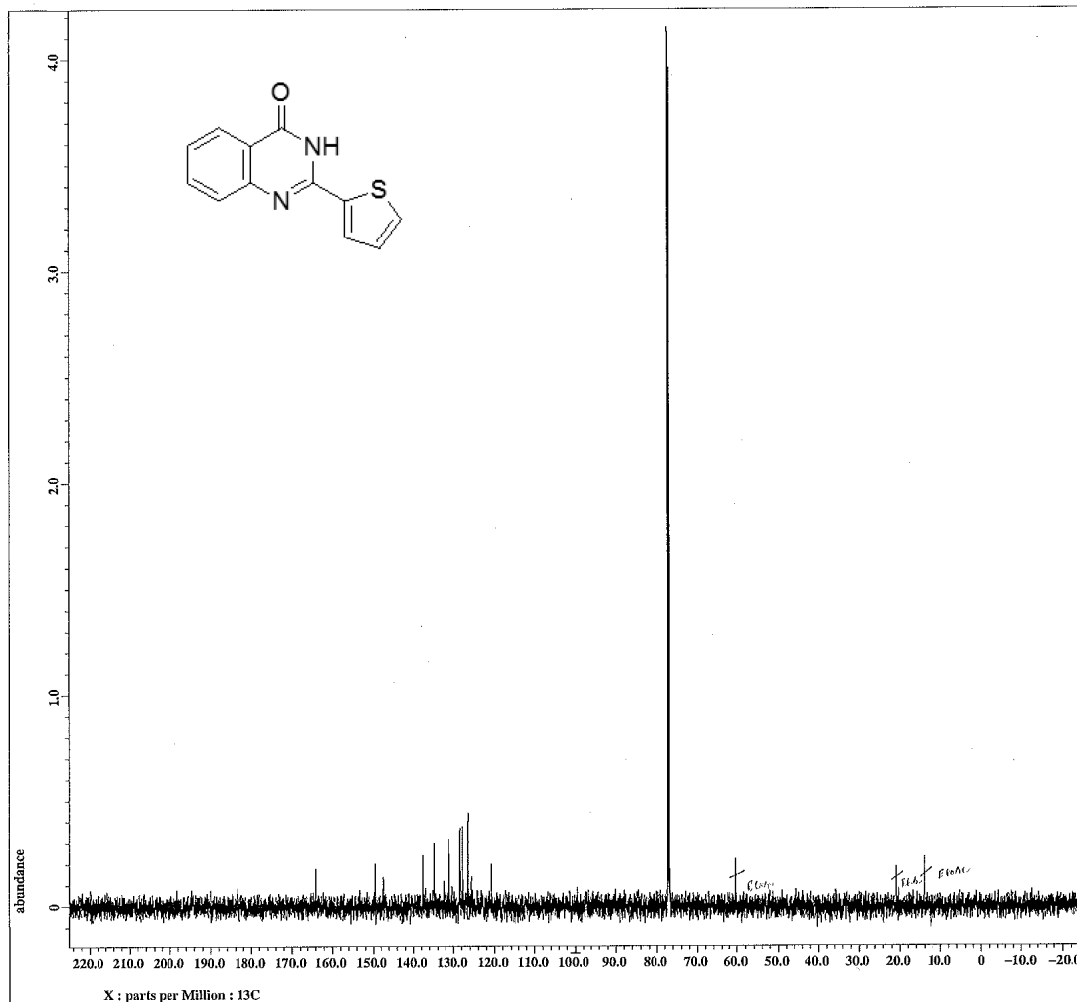
```

Filename      = Exp-hakim-151-2-proto
Author       = delta
Experiment   = single_pulse_ex2
Sample_id    = Exp-hakim-151-2-proto
Solvent      = CHLOROFORM-D
Creation_time = 11-DEC-2013 21:39:12
Revision_time = 11-DEC-2013 21:53:01
Current_time = 11-DEC-2013 21:53:09

Content      = Exp-hakim-151-2-proto
Data_format  = ID COMPLEX
Dim_size     = 13107
Dim_title    = 1H
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 1.4548992[s]
X_domain       = 1H
X_freq         = 600.1723046[MHz]
X_offset       = 5[ppm]
X_points       = 16384
X_prescans     = 1
X_resolution   = 0.68733284[Hz]
X_sweep        = 11.26126126[kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046[MHz]
Irr_offset     = 5[ppm]
Tri_domain     = 1H
Tri_freq       = 600.1723046[MHz]
Tri_offset     = 5[ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 8
Total_scans    = 8

X_90_width     = 13[us]
X_acq_time     = 1.4548992[s]
X_angle        = 45[deg]
X_atn          = 3.6[dB]
X_pulse        = 6.5[us]
Irr_mode       = OFF
Tri_mode       = OFF
Dante_preset   = FALSE
Initial_wait   = 1[s]
Recvr_gain     = 50
Relaxation_delay = 5[s]
Repetition_time = 6.4548992[s]
Temp_get       = 50[dc]
  
```



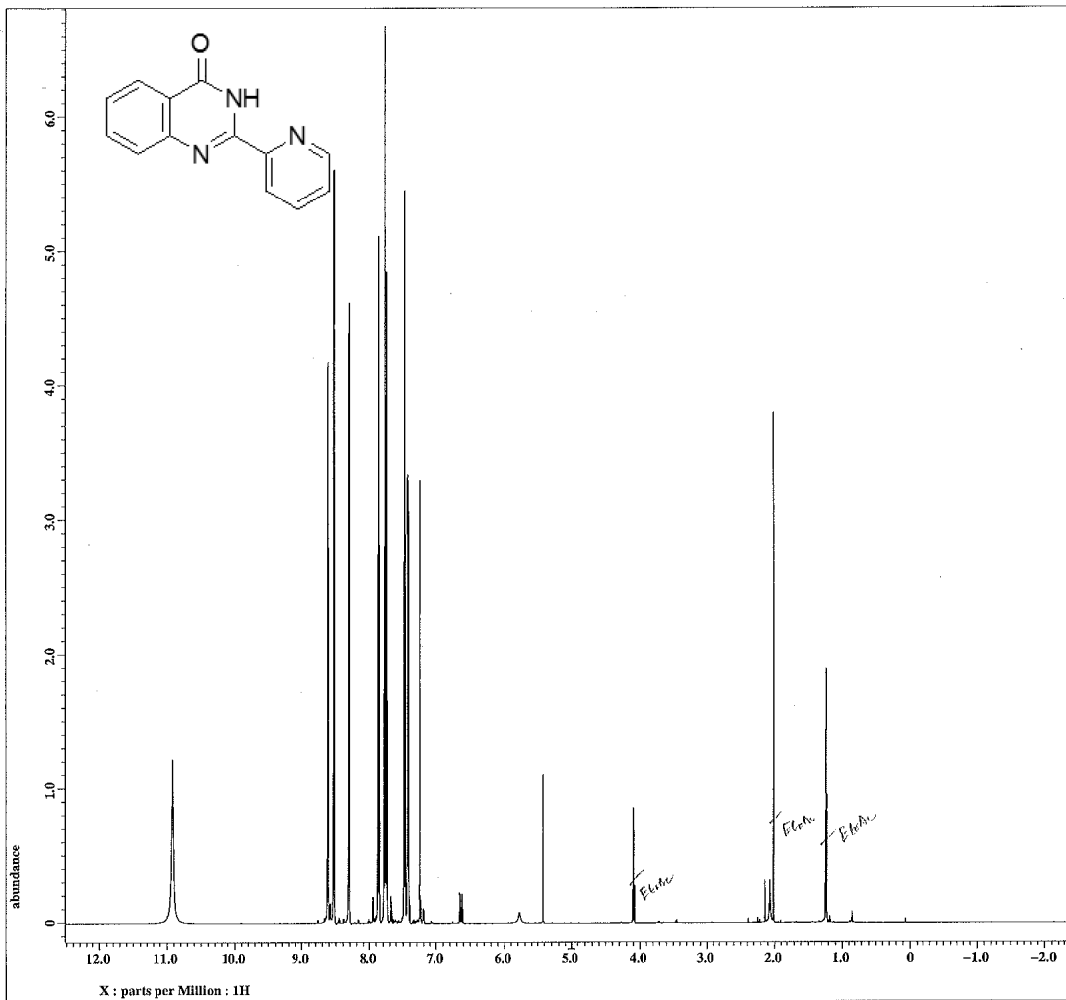
```

Filename      = Exp-hakim-151-2-carbo
Author       = delta
Experiment   = single_pulse_dec
Sample_id    = Exp-hakim-151-2-carbo
Solvent      = CHLOROFORM-D
Creation_time = 11-DEC-2013 21:48:16
Revision_time = 11-DEC-2013 22:04:44
Current_time = 11-DEC-2013 22:04:49

Content      = Exp-hakim-151-2-carbo
Data_format  = ID COMPLEX
Dim_size     = 32768
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 0.868352[s]
X_domain       = 13C
X_freq         = 150.91343039[MHz]
X_offset       = 100[ppm]
X_points       = 32768
X_prescans     = 4
X_resolution   = 1.15160672[Hz]
X_sweep        = 37.73584906[kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046[MHz]
Irr_offset     = 5[ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 90
Total_scans    = 90

X_90_width     = 11.4[us]
X_acq_time     = 0.868352[s]
X_angle        = 30[deg]
X_atn          = 7.5[dB]
X_pulse        = 3.8[us]
Irr_atn_dec    = 19.391[dB]
Irr_atn_noe    = 19.391[dB]
Irr_noise      = WALTZ
Decoupling     = TRUE
Initial_wait   = 1[s]
Noe            = TRUE
Noe_time       = 2.5[s]
Recvr_gain     = 76
Relaxation_delay = 2.5[s]
Repetition_time = 3.358352[s]
Temp_get       = 50[dc]
  
```



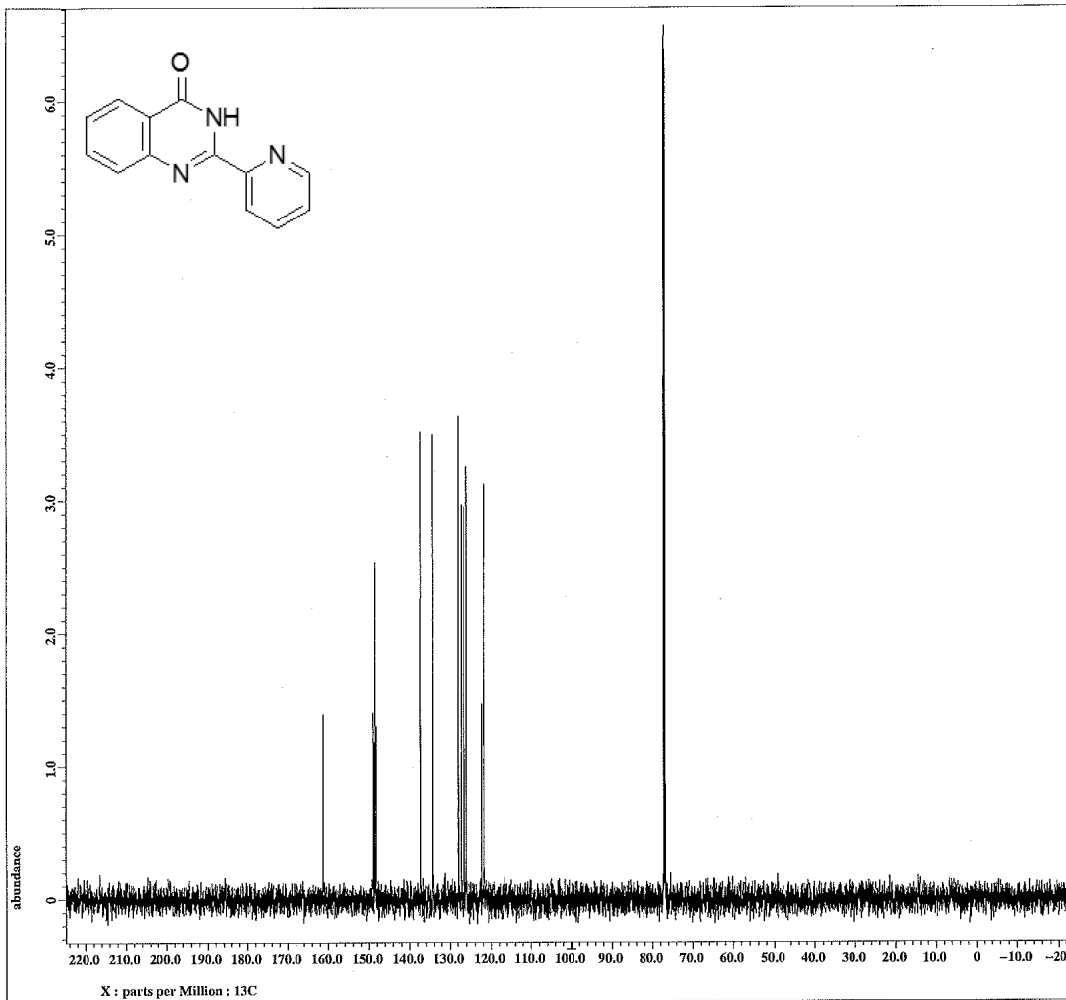
```

Filename      = Exp-hakim-135-4b-prot
Author       = delta
Experiment   = single_pulse_ex2
Sample_id    = Exp-hakim-135-4b-prot
Solvent      = CHLOROFORM-D
Creation_time = 10-DEC-2013 22:12:44
Revision_time = 10-DEC-2013 22:26:13
Current_time  = 10-DEC-2013 22:26:17

Content      = Exp-hakim-135-4b-prot
Data_format  = ID COMPLEX
Dim_size     = 13107
Dim_title    = 1H
Dim_units    = [ppm]
Dimensions   = X
Site         = RCA 600
Spectrometer = DELTA2_MMR

Field_strength = 14.09636928 [T] (600[M]
X_acq_duration = 1.4548992 [s]
X_domain      = 1H
X_freq        = 600.1723046 [MHz]
X_offset      = 5 [ppm]
X_points      = 16384
X_prescans    = 1
X_resolution  = 0.69733284 [Hz]
X_sweep       = 11.26126126 [kHz]
Irr_domain    = 1H
Irr_freq      = 600.1723046 [MHz]
Irr_offset    = 5 [ppm]
Tri_domain    = 1H
Tri_freq      = 600.1723046 [MHz]
Tri_offset    = 5 [ppm]
Clipped       = FALSE
Mod_return    = 1
Scans         = 8
Total_scans   = 8

X_90_width   = 13 [us]
X_acq_time    = 1.4548992 [s]
X_angle       = 45 [deg]
X_atn         = 3.6 [dB]
X_pulse       = 6.5 [us]
Irr_mode      = OFF
Irr_noise     = OFF
Data_presat   = FALSE
Initial_wait  = 1 [s]
Recvr_gain    = 42
Relaxation_delay = 5 [s]
Repetition_time = 6.4548992 [s]
Temp_get      = 24 [dC]
  
```



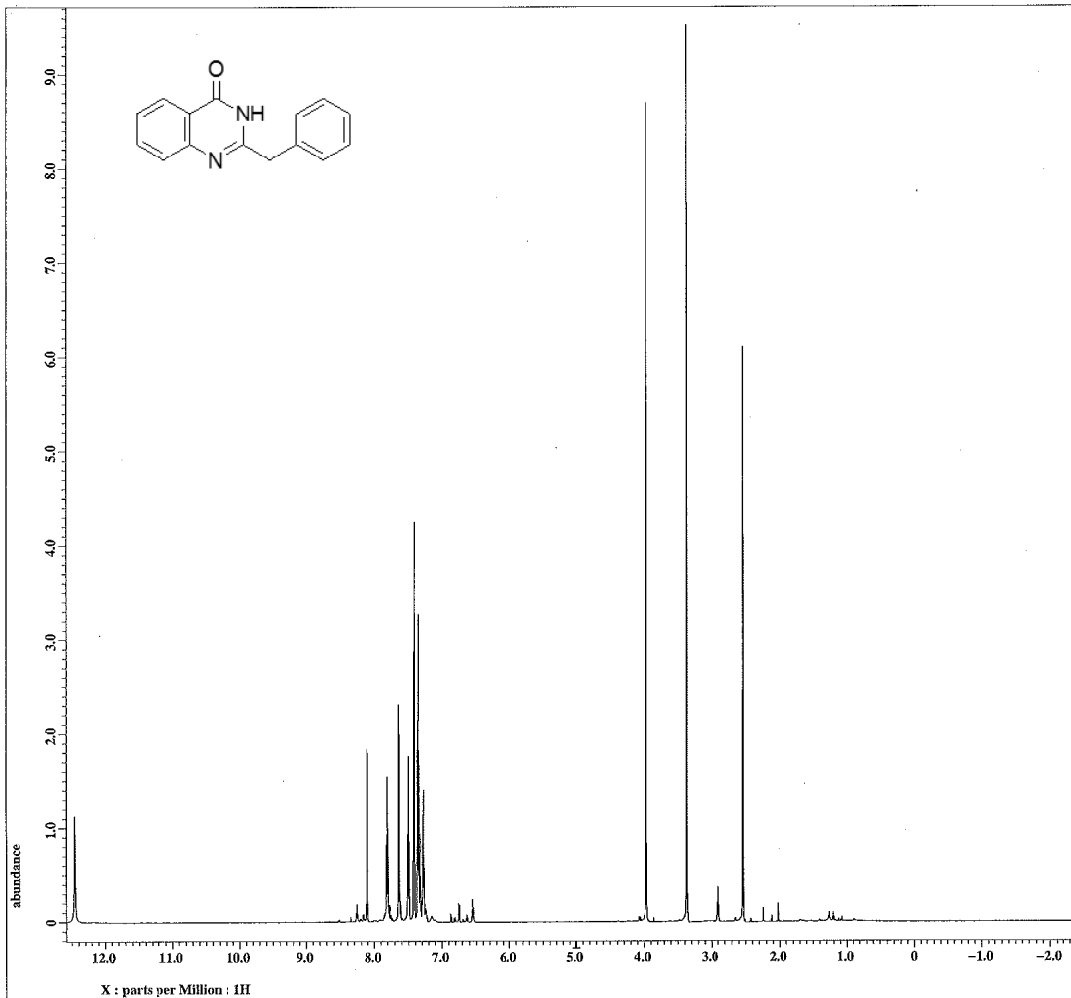
```

Filename      = Exp-hakim-135-4b-carb
Author       = delta
Experiment   = single_pulse_dec
Sample_id    = Exp-hakim-135-4b-carb
Solvent      = CHLOROFORM-D
Creation_time = 10-DEC-2013 22:15:28
Revision_time = 10-DEC-2013 22:30:50
Current_time  = 10-DEC-2013 22:30:54

Content      = Exp-hakim-135-4b-carb
Data_format  = ID COMPLEX
Dim_size     = 32768
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site         = RCA 600
Spectrometer = DELTA2_MMR

Field_strength = 14.09636928 [T] (600[M]
X_acq_duration = 0.868352 [s]
X_domain      = 13C
X_freq        = 150.91343039 [MHz]
X_offset      = 100 [ppm]
X_points      = 32768
X_prescans    = 4
X_resolution  = 1.15160672 [Hz]
X_sweep       = 37.73584906 [kHz]
Irr_domain    = 1H
Irr_freq      = 600.1723046 [MHz]
Irr_offset    = 5 [ppm]
Clipped       = FALSE
Mod_return    = 1
Scans         = 30
Total_scans   = 30

X_90_width   = 11.4 [us]
X_acq_time    = 0.868352 [s]
X_angle       = 30 [deg]
X_atn         = 7.5 [dB]
X_pulse       = 3.9 [us]
Irr_atn_dec  = 19.391 [dB]
Irr_atn_noe  = 19.391 [dB]
Irr_noise     = WALTZ
Decoupling    = TRUE
Initial_wait  = 1 [s]
Noe           = TRUE
Noe_time      = 2.5 [s]
Recvr_gain    = 78
Relaxation_delay = 2.5 [s]
Repetition_time = 3.368352 [s]
Temp_get      = 24.5 [dC]
  
```



JEOL

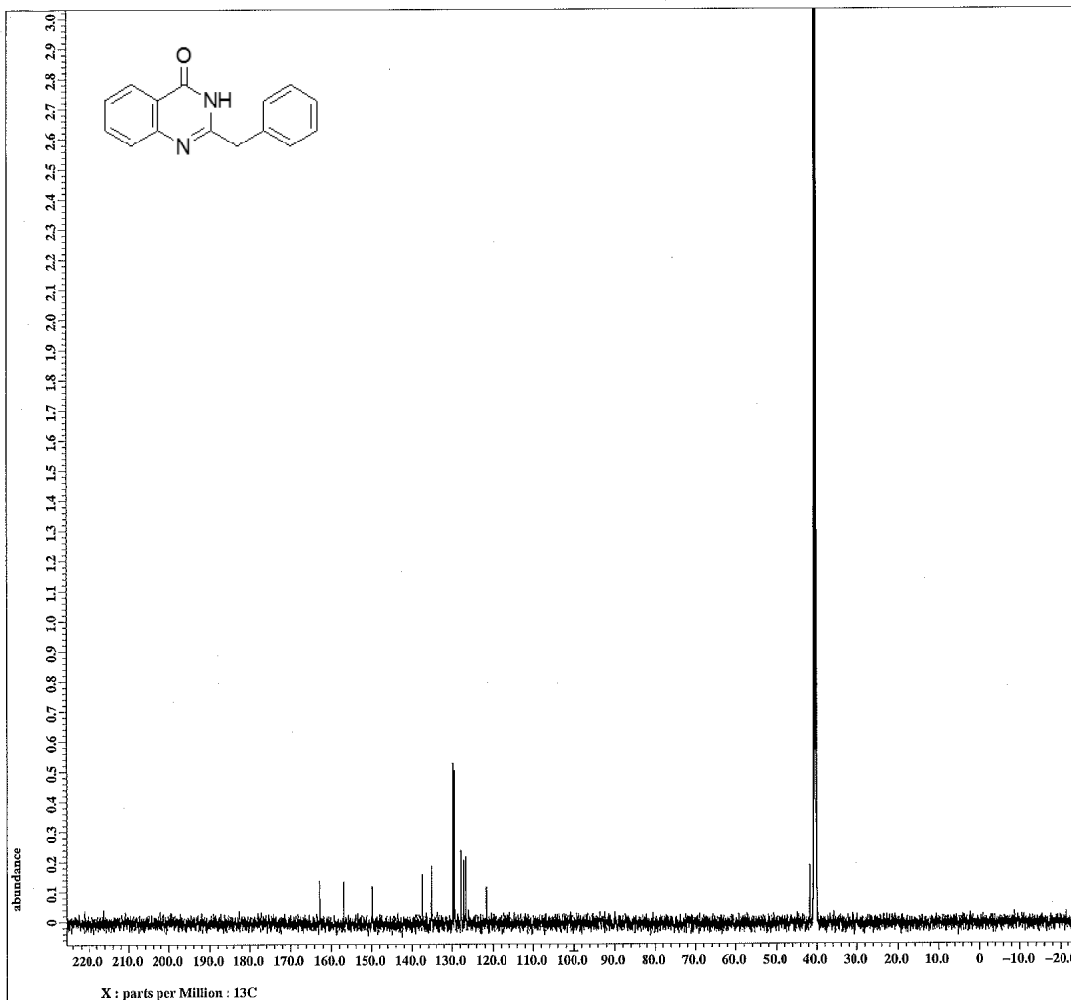
```

Filename      = Exp-hakim-135-3-p-2a-
Author        = delta
Experiment    = single_pulse_ex2
Sample_id     = Exp-hakim-135-3-p-2a-
Solvent       = DMSO-D6
Creation_time = 10-DEC-2013 17:59:02
Revision_time = 10-DEC-2013 18:13:00
Current_time  = 10-DEC-2013 18:13:05

Content       = Exp-hakim-135-3-p-2a-
Data_format  = 1D COMPLEX
Dim_size     = 43107
Dim_title    = 1H
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928 [T] (600 [M]
X_acq_duration = 1.4548992 [s]
X_domain       = 1H
X_freq         = 600.1723046 [MHz]
X_offset       = 5 [ppm]
X_points       = 16384
X_prescans     = 1
X_resolution   = 0.69733284 [Hz]
X_sweep        = 11.26126126 [kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046 [MHz]
Irr_offset     = 5 [ppm]
Tri_domain     = 1H
Tri_freq       = 600.1723046 [MHz]
Tri_offset     = 5 [ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 8
Total_scans    = 8

X_90_width    = 13 [us]
X_acq_time    = 1.4548992 [s]
X_angle       = 45 [deg]
X_atn         = 3.6 [dB]
X_pulse       = 6.5 [us]
Irr_mode      = OFF
Tri_mode      = OFF
Dante_preset  = FALSE
Initial_wait  = 1 [s]
Recvr_gain    = 56
Relaxation_delay = 5 [s]
Repetition_time = 5.4548992 [s]
Temp_get      = 22 [dC]
  
```



JEOL

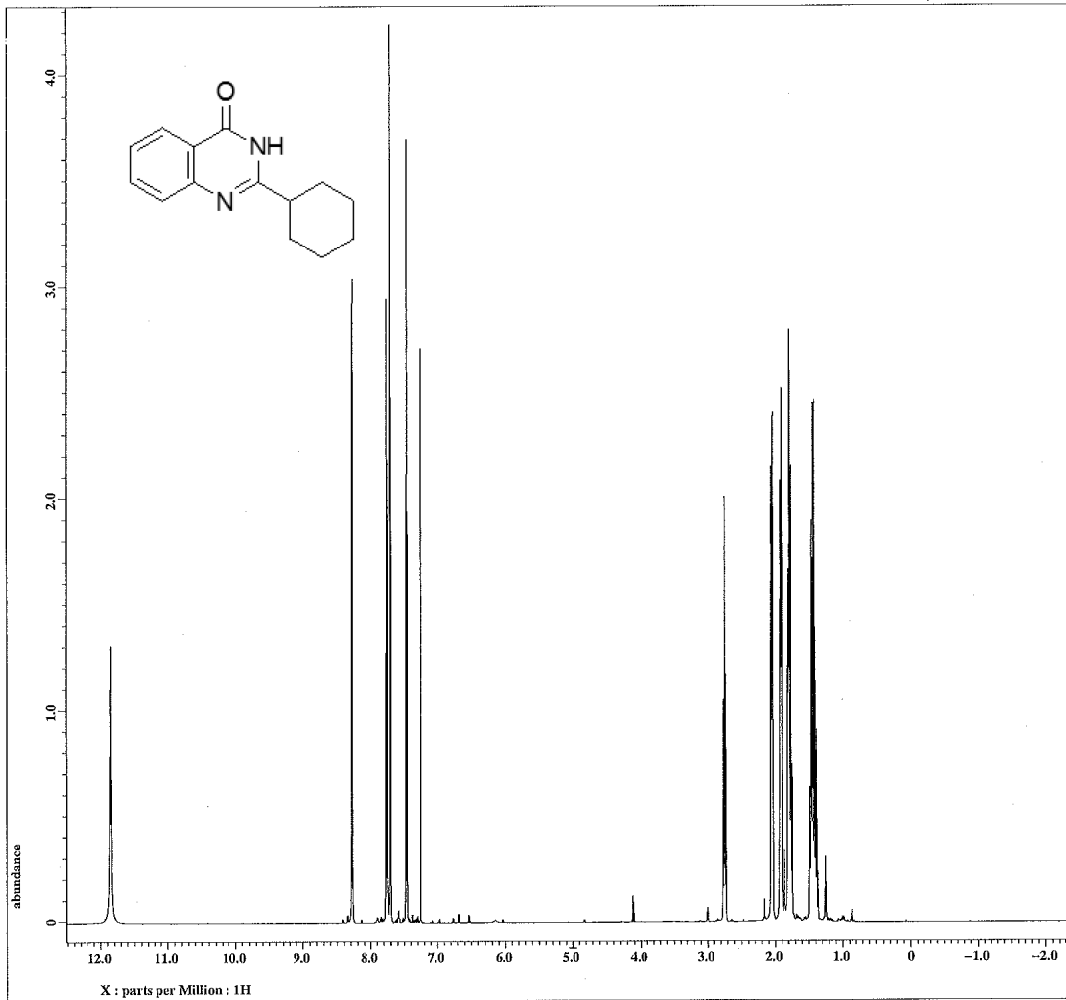
```

Filename      = Exp-hakim-135-3-p-2a-
Author        = delta
Experiment    = single_pulse_dec
Sample_id     = Exp-hakim-135-3-p-2a-
Solvent       = DMSO-D6
Creation_time = 10-DEC-2013 18:21:36
Revision_time = 10-DEC-2013 18:35:51
Current_time  = 10-DEC-2013 18:36:03

Content       = Exp-hakim-135-3-p-2a-
Data_format  = 1D COMPLEX
Dim_size     = 32768
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928 [T] (600 [M]
X_acq_duration = 0.868352 [s]
X_domain       = 13C
X_freq         = 150.91343039 [MHz]
X_offset       = 100 [ppm]
X_points       = 32768
X_prescans     = 4
X_resolution   = 1.15160672 [Hz]
X_sweep        = 37.73584906 [kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046 [MHz]
Irr_offset     = 5 [ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 385
Total_scans    = 385

X_90_width    = 11.4 [us]
X_acq_time    = 0.868352 [s]
X_angle       = 30 [deg]
X_atn         = 7.5 [dB]
X_pulse       = 3.0 [us]
Irr_atn_dec   = 19.391 [dB]
Irr_atn_noe   = 19.391 [dB]
Irr_noise     = WALTZ
Decoupling    = TRUE
Initial_wait  = 1 [s]
Noe           = TRUE
Noe_time      = 2.5 [s]
Recvr_gain    = 76
Relaxation_delay = 2.5 [s]
Repetition_time = 3.368352 [s]
Temp_get      = 22.7 [dC]
  
```



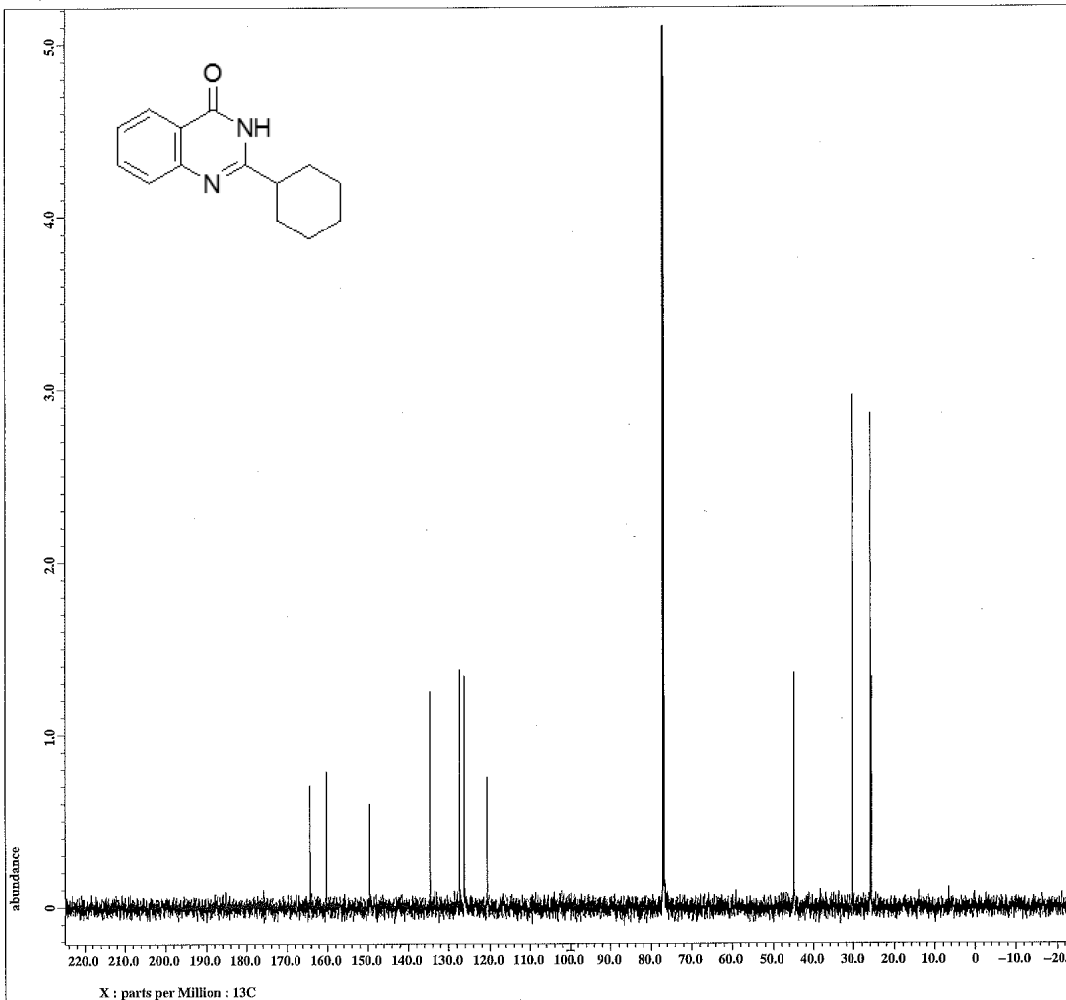
```

Filename      = Exp-hakim-135-1-proto
Author       = delta
Experiment   = single_pulse_ex2
Sample_id    = Exp-hakim-135-1-proto
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 17:07:22
Revision_time = 9-DEC-2013 17:20:48
Current_time  = 9-DEC-2013 17:20:50

Content      = Exp-hakim-135-1-proto
Data_format  = 1D_COMPLEX
Dim_size     = 13107
Dim_title    = 1H
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928 [T] (600 [M]
X_acq_duration = 1.4548992 [s]
X_domain       = 1H
X_freq         = 600.1723046 [MHz]
X_offset       = 5 [ppm]
X_points       = 16384
X_prescans     = 1
X_resolution   = 0.69733284 [Hz]
X_sweep        = 11.26126126 [kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046 [MHz]
Irr_offset     = 5 [ppm]
Tri_domain     = 1H
Tri_freq       = 600.1723046 [MHz]
Tri_offset     = 5 [ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 8
Total_scans    = 8

X_90_width    = 13 [us]
X_acq_time     = 1.4548992 [s]
X_angle        = 45 [deg]
X_atn          = 3.6 [dB]
X_atn          = 6.5 [us]
X_pulse        = OFF
Irr_mode       = OFF
Tri_mode       = OFF
Burst_presat   = FALSE
Initial_wait   = 1 [s]
Recvx_gain     = 44
Relaxation_delay = 5 [s]
Repetition_time = 6.4548992 [s]
Temp_get       = 21.5 [dC]
  
```



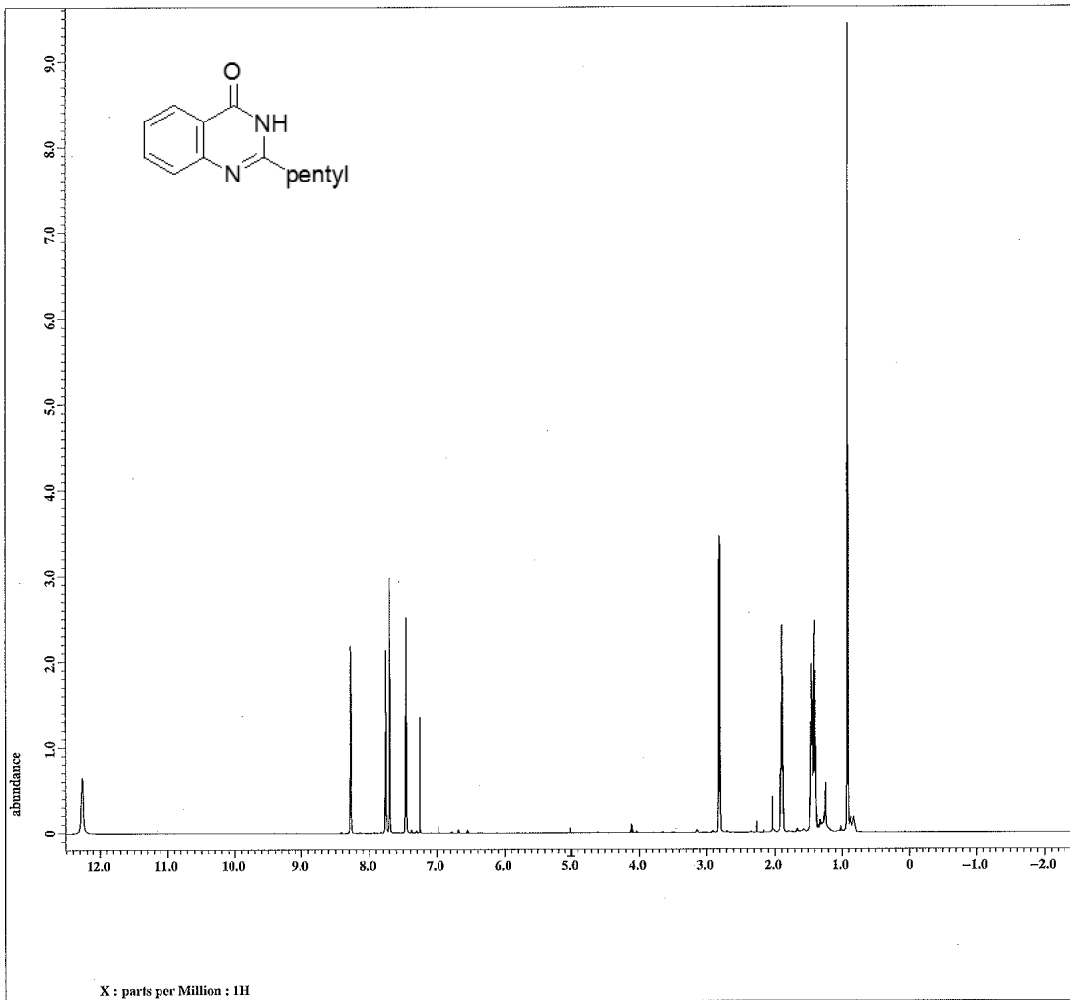
```

Filename      = Exp-hakim-135-1-carbo
Author       = delta
Experiment   = single_pulse_dec
Sample_id    = Exp-hakim-135-1-carbo
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 17:12:10
Revision_time = 9-DEC-2013 17:26:52
Current_time  = 9-DEC-2013 17:26:55

Content      = Exp-hakim-135-1-carbo
Data_format  = 1D_COMPLEX
Dim_size     = 32768
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928 [T] (600 [M]
X_acq_duration = 0.868352 [s]
X_domain       = 13C
X_freq         = 150.91343039 [MHz]
X_offset       = 100 [ppm]
X_points       = 32768
X_prescans     = 4
X_resolution   = 1.15160672 [Hz]
X_sweep        = 37.73584906 [kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046 [MHz]
Irr_offset     = 5 [ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 68
Total_scans    = 68

X_90_width    = 11.4 [us]
X_acq_time     = 0.868352 [s]
X_angle        = 30 [deg]
X_atn          = 7.5 [dB]
X_pulse        = 3.9 [us]
Irr_atn_dec    = 19.391 [dB]
Irr_atn_noe    = 19.391 [dB]
Irr_noise      = WALTZ
Decoupling     = TRUE
Initial_wait   = 1 [s]
Noe            = TRUE
Noe_time       = 2.5 [s]
Recvx_gain     = 76
Relaxation_delay = 2.5 [s]
Repetition_time = 3.368352 [s]
Temp_get       = 21.9 [dC]
  
```



JEOL

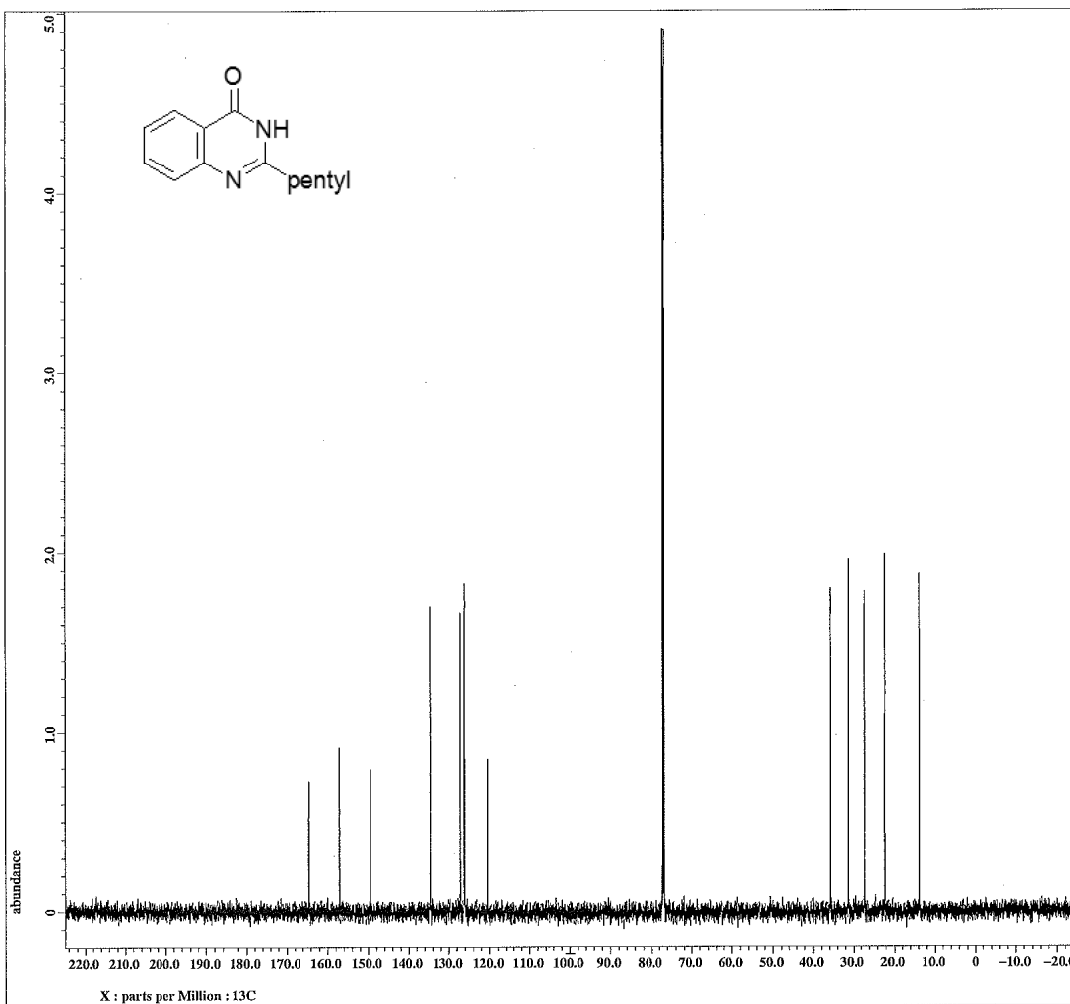
```

Filename      = Exp-hakim144-1-proton
Author       = delta
Experiment   = single_pulse.ex2
Sample_id    = Exp-hakim144-1-proton
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 15:42:16
Revision_time = 9-DEC-2013 15:57:39
Current_time = 9-DEC-2013 15:57:46

Content      = Exp-hakim144-1-proton
Data_format  = 1D_COMPLEX
Dim_size     = 131.07
Dim_title    = 1H
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928 [T] (600 [M]
X_acq_duration = 1.4548992 [s]
X_domain       = 1H
X_freq         = 600.1723046 [MHz]
X_offset       = 5 [ppm]
X_points       = 16384
X_prescans     = 1
X_resolution   = 0.68733284 [Hz]
X_sweep        = 11.26126126 [kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046 [MHz]
Irr_offset     = 5 [ppm]
Tri_domain     = 1H
Tri_freq       = 600.1723046 [MHz]
Tri_offset     = 5 [ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 8
Total_scans    = 8

X_90_width     = 13 [us]
X_acq_time     = 1.4548992 [s]
X_angle        = 45 [deg]
X_atn          = 3.6 [dB]
X_pulse        = 6.5 [us]
Irr_mode       = Off
Tri_mode       = Off
Dnfs_preast    = FALSE
Initial_wait   = 1 [s]
Recvr_gain     = 40
Relaxation_delay = 5 [s]
Repetition_time = 6.4548992 [s]
Temp_set       = 21.3 [C]
  
```



JEOL

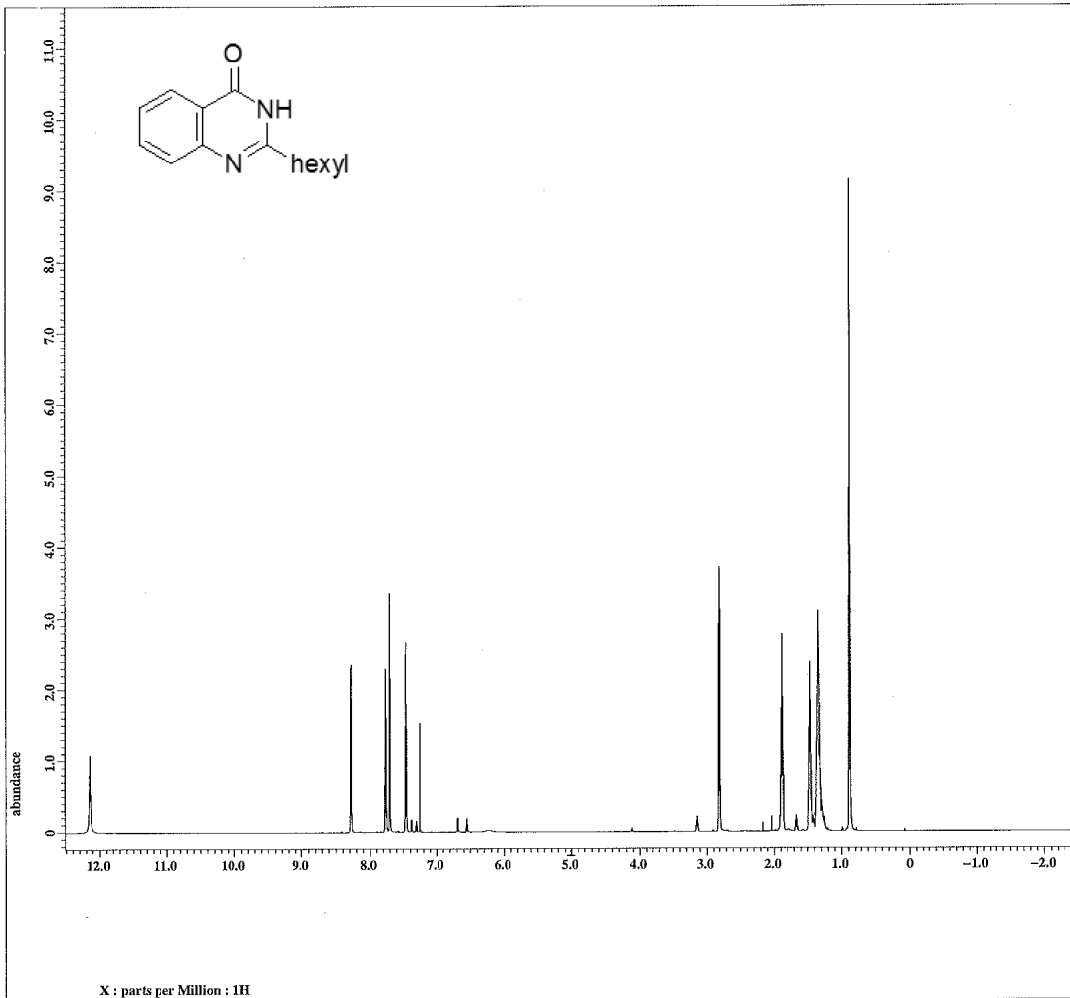
```

Filename      = Exp-hakim-144-1-carbo
Author       = delta
Experiment   = single_pulse.dec
Sample_id    = Exp-hakim-144-1-carbo
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 16:04:13
Revision_time = 9-DEC-2013 16:04:43
Current_time = 9-DEC-2013 16:04:53

Content      = Exp-hakim-144-1-carbo
Data_format  = 1D_COMPLEX
Dim_size     = 32768
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928 [T] (600 [M]
X_acq_duration = 0.868352 [s]
X_domain       = 13C
X_freq         = 150.91343039 [MHz]
X_offset       = 100 [ppm]
X_points       = 32768
X_prescans     = 4
X_resolution   = 1.15160672 [Hz]
X_sweep        = 37.73584906 [kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046 [MHz]
Irr_offset     = 5 [ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 89
Total_scans    = 89

X_90_width     = 11.4 [us]
X_acq_time     = 0.868352 [s]
X_angle        = 30 [deg]
X_atn          = 7.5 [dB]
X_pulse        = 3.8 [us]
Irr_atn_dec    = 19.391 [dB]
Irr_atn_noe    = 19.391 [dB]
Irr_noise      = WALTZ
Decoupling     = TRUE
Initial_wait   = 1 [s]
Noe            = TRUE
Noe_time       = 2.5 [s]
Recvr_gain     = 76
Relaxation_delay = 2.5 [s]
Repetition_time = 3.368352 [s]
Temp_set       = 22 [C]
  
```



JEOL

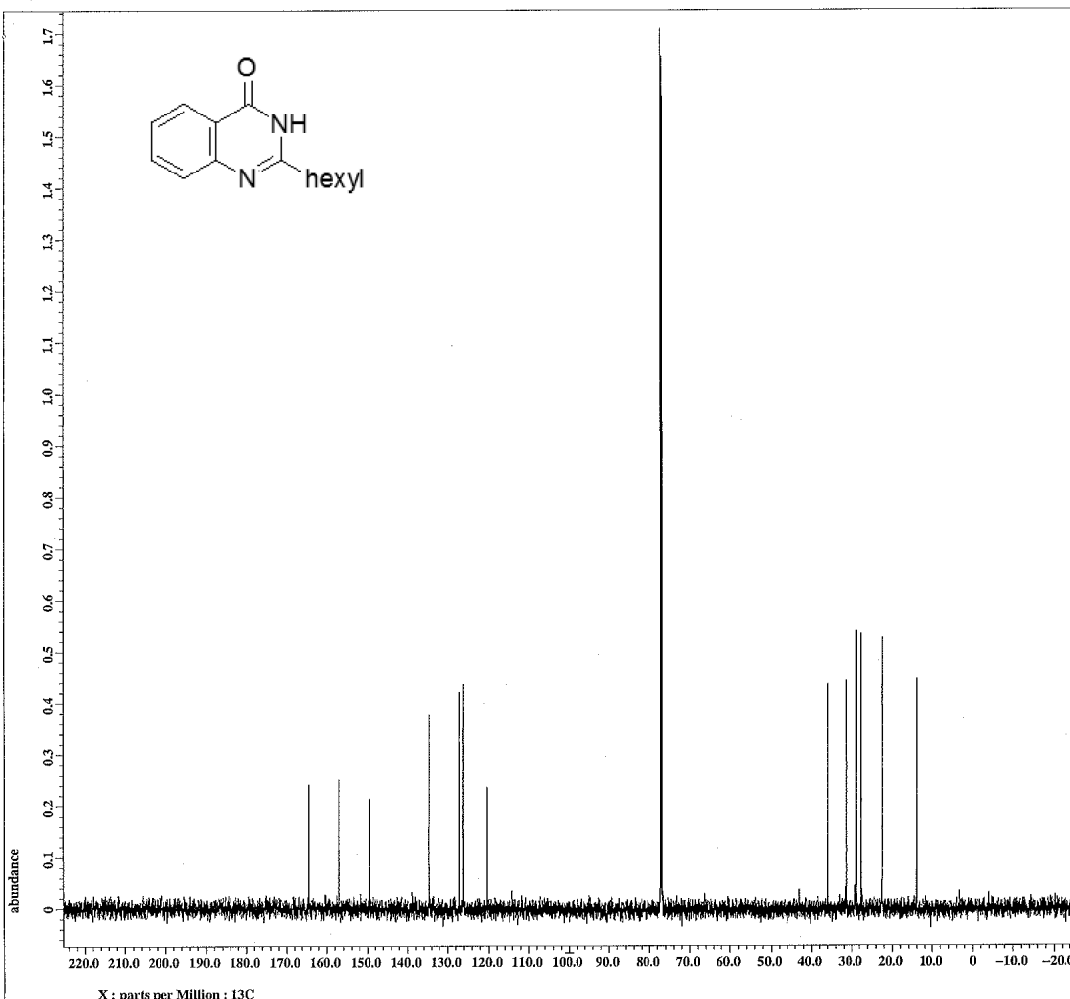
```

Filename      = Exp-hakim-144-2-PROTO
Author       = delta
Experiment    = single_pulse_ex2
Sample_id    = Exp-hakim-144-2-PROTO
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 15:54:50
Revision_time = 9-DEC-2013 16:10:02
Current_time  = 9-DEC-2013 16:10:12

Content      = Exp-hakim-144-2-PROTO
Data_format  = 1D_COMPLEX
Dim_size     = 131.07
Dim_title    = 1H
Dim_units    = [ppm]
Dimensions   = X
Site        = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928 [T] (600 [M])
X_acq_duration = 1.4548992 [s]
X_domain       = 1H
X_freq         = 600.1723046 [MHz]
X_offset       = 5 [ppm]
X_points       = 16384
X_prescans    = 1
X_resolution   = 0.69733284 [Hz]
X_sweep       = 11.26126126 [kHz]
Irr_domain    = 1H
Irr_freq      = 600.1723046 [MHz]
Irr_offset    = 5 [ppm]
Tri_domain    = 1H
Tri_freq      = 600.1723046 [MHz]
Tri_offset    = 5 [ppm]
Clipped       = FALSE
Mod_return    = 1
Scans         = 8
Total_scans   = 8

X_90_width    = 13 [us]
X_acq_time    = 1.4548992 [s]
X_angle       = 45 [deg]
X_atn         = 3.6 [dB]
X_pulse       = 6.5 [us]
Irr_mode      = OFF
Tri_mode      = OFF
Dante_preset  = FALSE
Initial_wait  = 1 [s]
Recvr_gain    = 44
Relaxation_delay = 5 [s]
Repetition_time = 6.4548992 [s]
Temp_set      = 21.4 [dC]
  
```



JEOL

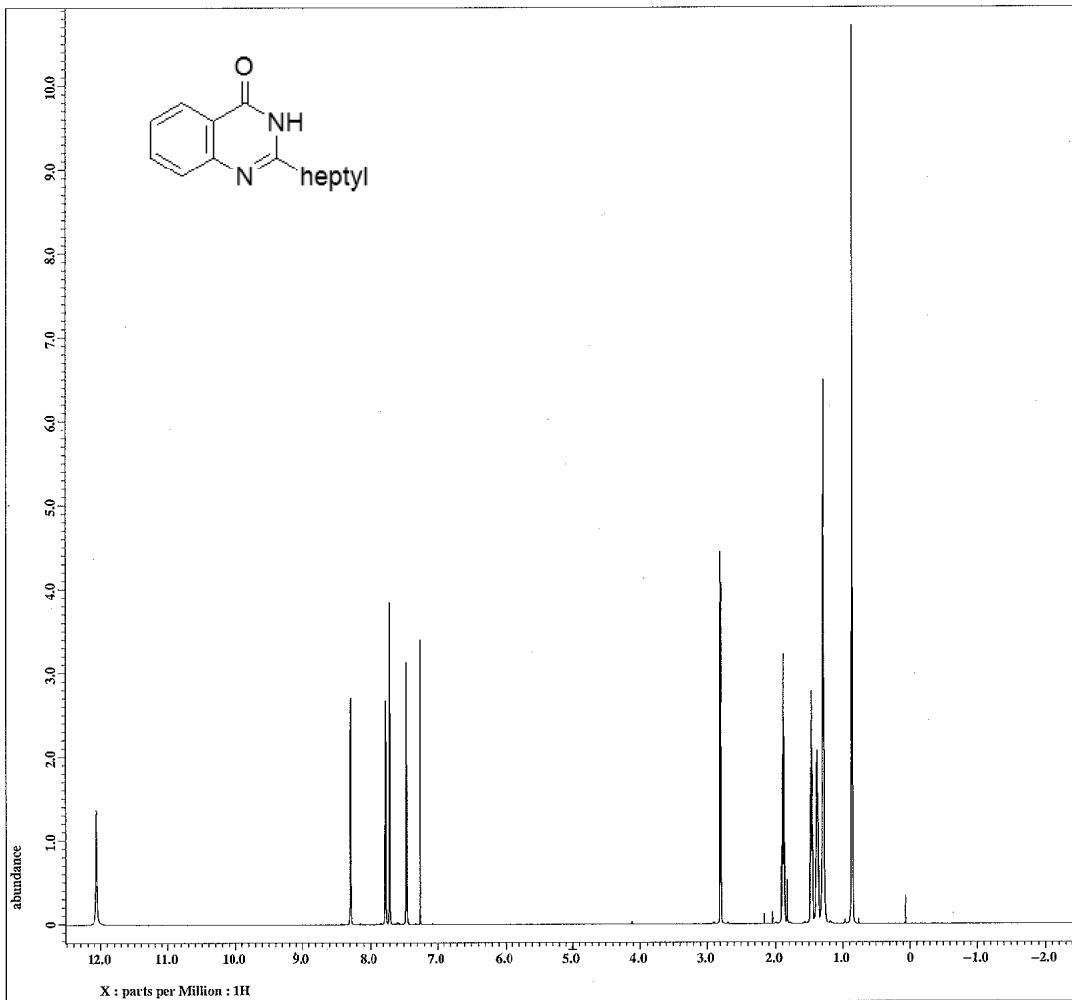
```

Filename      = Exp-hakim-144-2-CARBO
Author       = delta
Experiment    = single_pulse_dec
Sample_id    = Exp-hakim-144-2-CARBO
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 16:00:51
Revision_time = 9-DEC-2013 18:31:04
Current_time  = 9-DEC-2013 18:31:08

Content      = Exp-hakim-144-2-CARBO
Data_format  = 1D_COMPLEX
Dim_size     = 26214
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site        = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928 [T] (600 [M])
X_acq_duration = 0.69206016 [s]
X_domain       = 13C
X_freq         = 150.91343039 [MHz]
X_offset       = 100 [ppm]
X_points       = 32768
X_prescans    = 4
X_resolution   = 1.44496109 [Hz]
X_sweep       = 47.34848485 [kHz]
Irr_domain    = 1H
Irr_freq      = 600.1723046 [MHz]
Irr_offset    = 5 [ppm]
Clipped       = FALSE
Mod_return    = 1
Scans         = 98
Total_scans   = 98

X_90_width    = 11.4 [us]
X_acq_time    = 0.69206016 [s]
X_angle       = 30 [deg]
X_atn         = 7.5 [dB]
X_pulse       = 3.8 [us]
Irr_atn_dec   = 19.391 [dB]
Irr_atn_noe   = 19.391 [dB]
Irr_noise     = WALTZ
Decoupling    = TRUE
Initial_wait  = 1 [s]
Noe           = TRUE
Noe_time      = 2.5 [s]
Recvr_gain    = 60
Relaxation_delay = 2.5 [s]
Repetition_time = 1.19206016 [s]
Temp_set      = 22 [dC]
  
```

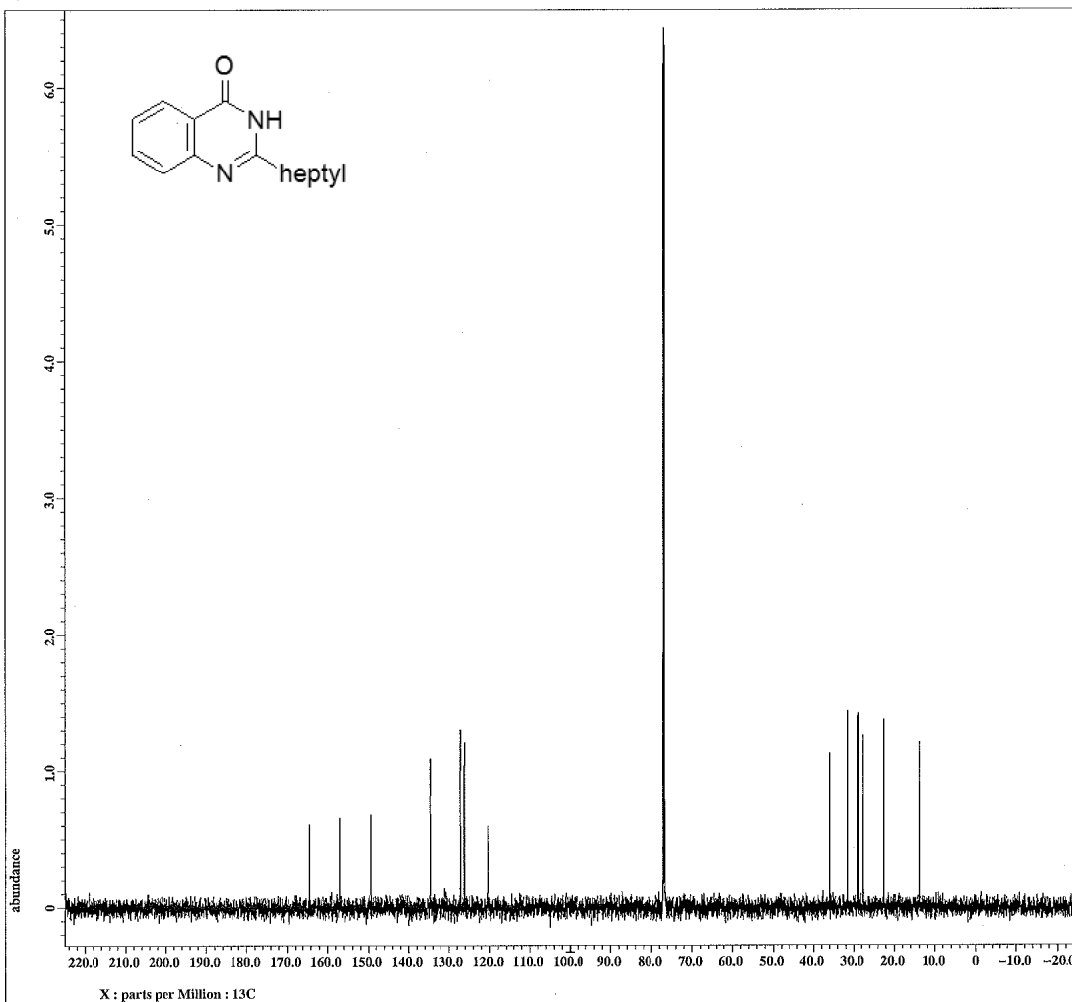
```

Filename      = Exp-hakim-130-2a-prot
Author       = delta
Experiment   = single_pulse.ex2
Sample_id    = Exp-hakim-130-2a-prot
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 18:03:20
Revision_time = 9-DEC-2013 18:16:59
Current_time  = 9-DEC-2013 18:17:03

Content      = Exp-hakim-130-2a-prot
Data_format  = 1D COMPLEX
Dim_size     = 13107
Dim_title    = 1H
Dim_units    = [ppm]
Dimensions   = X
Site        = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 1.4548992[s]
X_domain       = 1H
X_freq         = 600.1723046[MHz]
X_offset       = 5[ppm]
X_points       = 16384
X_preescans   = 1
X_resolution   = 0.68733284[Hz]
X_sweep        = 11.26126126[kHz]
Irr_domain    = 1H
Irr_freq      = 600.1723046[MHz]
Irr_offset    = 5[ppm]
Tri_domain    = 1H
Tri_freq      = 600.1723046[MHz]
Tri_offset    = 5[ppm]
Clipped       = FALSE
Mod_return    = 1
Scans         = 8
Total_scans   = 8

X_90_width    = 13[us]
X_acq_time    = 1.4548992[s]
X_angle       = 45[deg]
X_atn         = 3.6[dB]
X_pulse       = 6.5[us]
Irr_mode      = Off
Tri_mode      = Off
Dante_preset  = FALSE
Initial_wait  = 1[s]
Recvr_gain    = 46
Relaxation_delay = 5[s]
Repetition_time = 4.4548992[s]
Temp_get      = 21.7[degC]
  
```



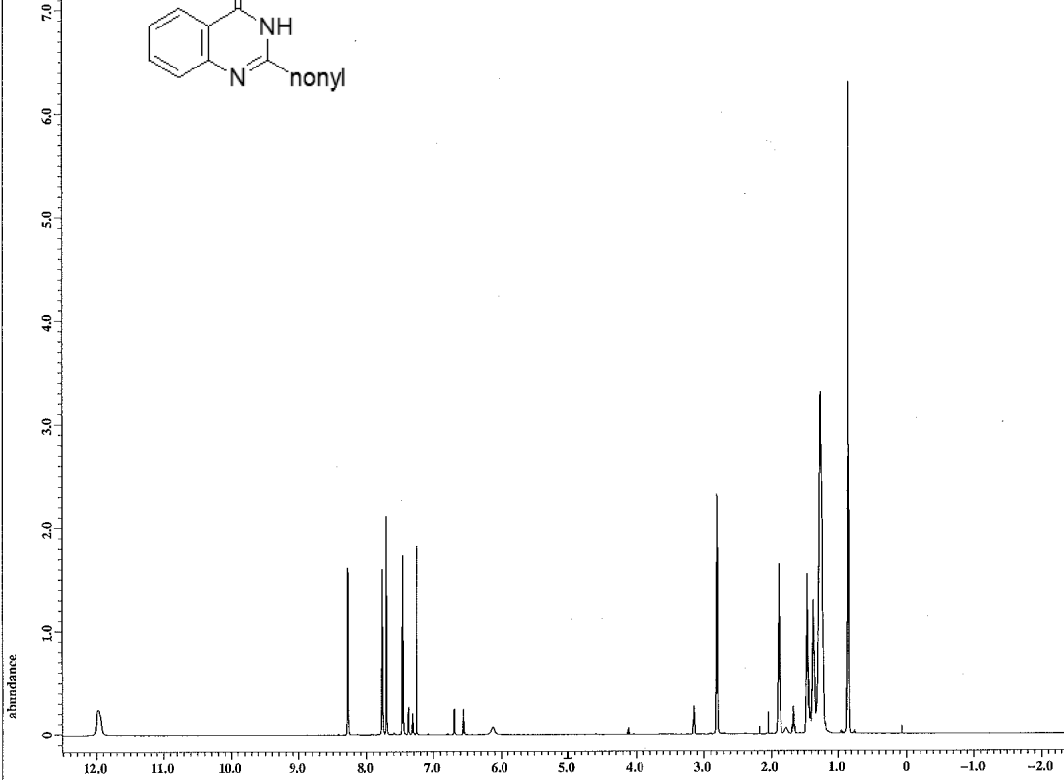
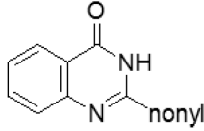
```

Filename      = Exp-hakim-130-2a-carb
Author       = delta
Experiment   = single_pulse_dec
Sample_id    = Exp-hakim-130-2a-carb
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 18:08:23
Revision_time = 9-DEC-2013 18:21:49
Current_time  = 9-DEC-2013 18:21:53

Content      = Exp-hakim-130-2a-carb
Data_format  = 1D COMPLEX
Dim_size     = 32768
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site        = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 0.868352[s]
X_domain       = 13C
X_freq         = 150.91343039[MHz]
X_offset       = 100[ppm]
X_points       = 32768
X_preescans   = 4
X_resolution   = 1.15160672[Hz]
X_sweep        = 37.73584906[kHz]
Irr_domain    = 1H
Irr_freq      = 600.1723046[MHz]
Irr_offset    = 5[ppm]
Clipped       = TRUE
Mod_return    = 1
Scans         = 71
Total_scans   = 71

X_90_width    = 11.4[us]
X_acq_time    = 0.868352[s]
X_angle       = 30[deg]
X_atn         = 7.5[dB]
X_pulse       = 3.8[us]
Irr_atn_dec   = 19.391[dB]
Irr_atn_noe   = 19.391[dB]
Irr_noise     = WALTZ
Decoupling    = TRUE
Initial_wait  = 1[s]
Noe           = TRUE
Noe_time      = 2.5[s]
Recvr_gain    = 78
Relaxation_delay = 2.5[s]
Repetition_time = 3.358352[s]
Temp_get      = 22.3[degC]
  
```



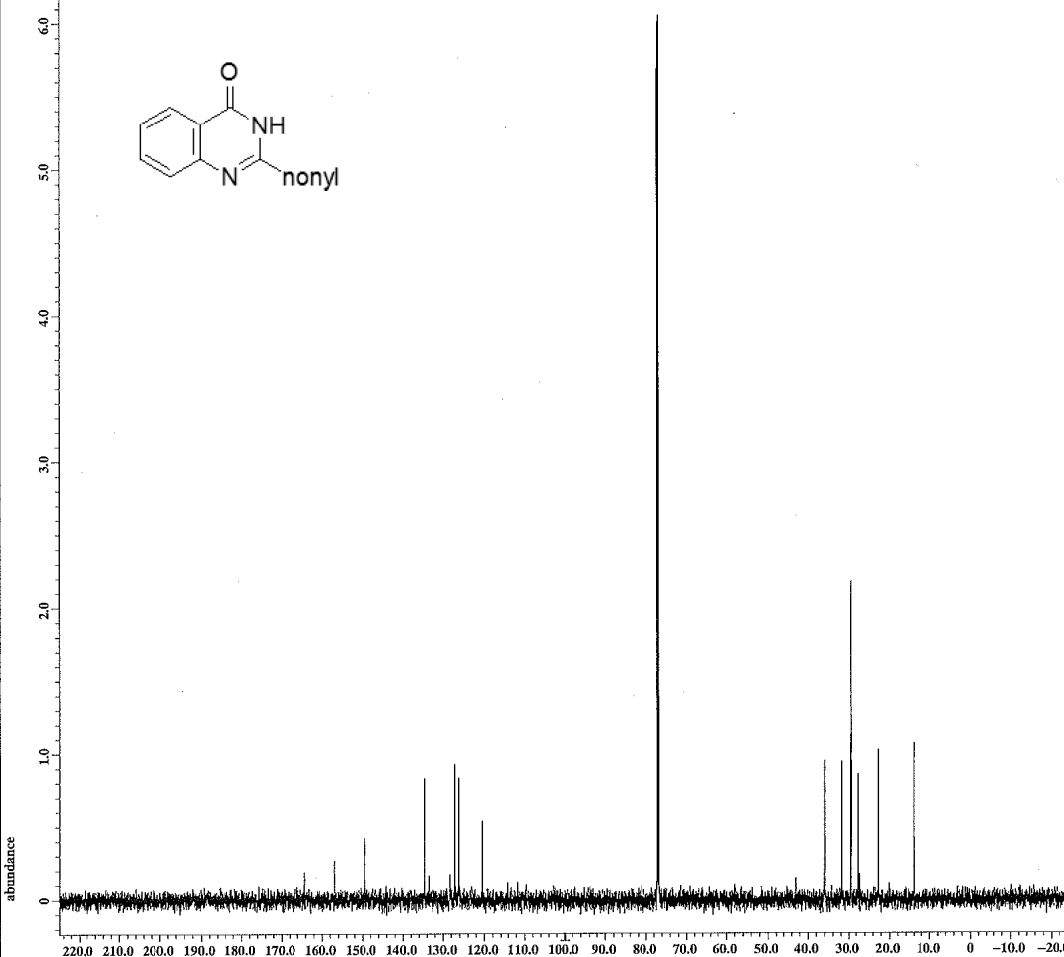
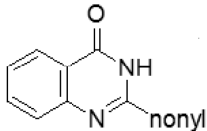
X : parts per Million : 1H

```
Filename      = Exp-hakim-144-3-proto
Author       = delta
Experiment   = single_pulse_ex2
Sample_id    = Exp-hakim-144-3-proto
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 16:07:22
Revision_time = 9-DEC-2013 16:26:13
Current_time = 9-DEC-2013 16:26:21

Content      = Exp-hakim-144-3-proto
Data_format  = 1D COMPLEX
Dim_size     = 13107
Dim_title    = 1H
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 1.4548992[s]
X_domain      = 1H
X_freq        = 600.1723046[MHz]
X_offset      = 5[ppm]
X_points      = 16384
X_prescans    = 1
X_resolution  = 0.68733284[Hz]
X_sweep       = 11.26126126[kHz]
Irr_domain    = 1H
Irr_freq      = 600.1723046[MHz]
Irr_offset    = 5[ppm]
Tri_domain    = 1H
Tri_freq      = 600.1723046[MHz]
Tri_offset    = 5[ppm]
Clipped       = FALSE
Mod_return    = 1
Scans         = 8
Total_scans   = 8

X_90_width    = 13[us]
X_acq_time     = 1.4548992[s]
X_angle        = 45[deg]
X_atn          = 3.6[dB]
X_pulse        = 6.5[us]
Irr_mode       = OFF
Tri_mode       = OFF
Dante_preset  = FALSE
Initial_wait   = 1[s]
Recvr_gain     = 44
Relaxation_delay = 5[s]
Repetition_time = 6.4548992[s]
Temp_get       = 21.5[degC]
```



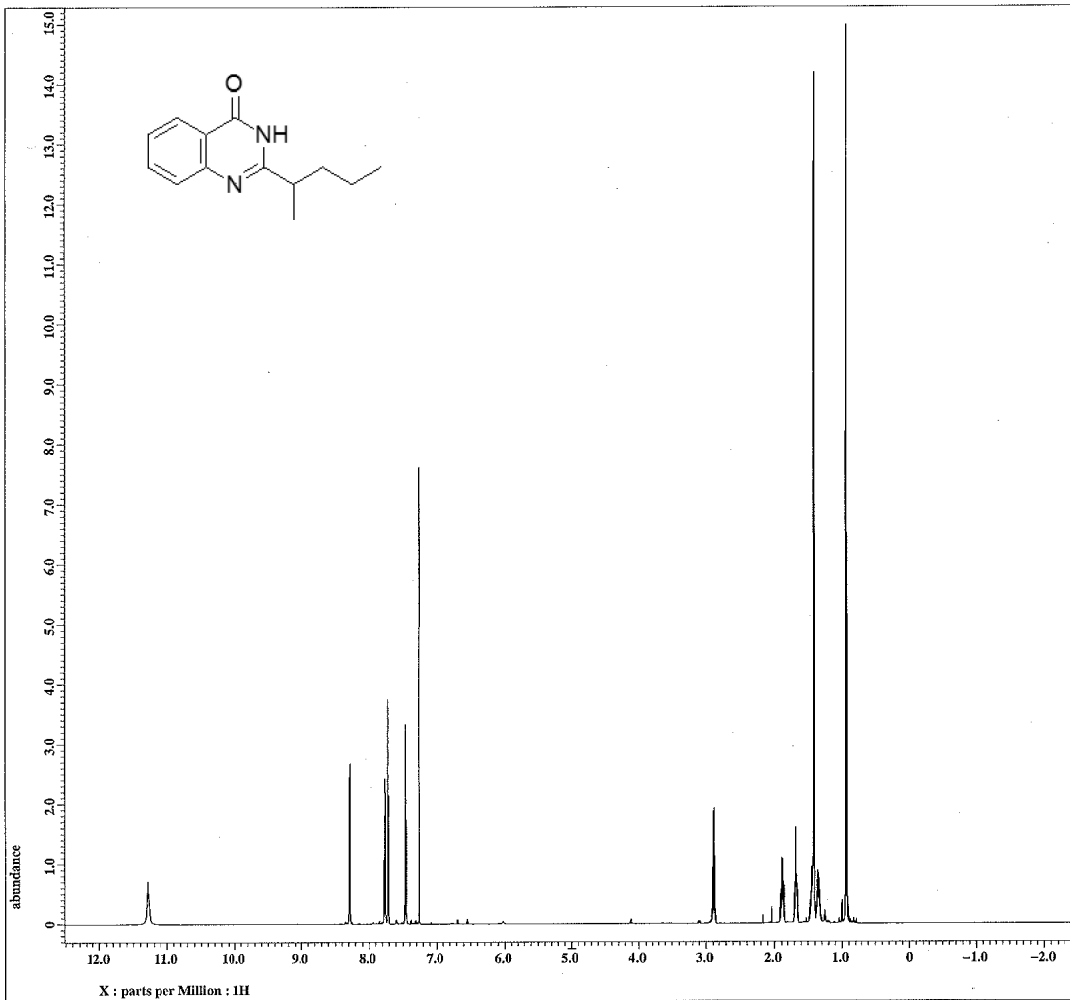
X : parts per Million : 13C

```
Filename      = Exp-hakim-144-3-carbo
Author       = delta
Experiment   = single_pulse_dec
Sample_id    = Exp-hakim-144-3-carbo
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 16:13:41
Revision_time = 9-DEC-2013 16:28:25
Current_time = 9-DEC-2013 16:28:29

Content      = Exp-hakim-144-3-carbo
Data_format  = 1D COMPLEX
Dim_size     = 32768
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 0.868352[s]
X_domain      = 13C
X_freq        = 150.91343039[MHz]
X_offset      = 100[ppm]
X_points      = 32768
X_prescans    = 4
X_resolution  = 1.15160672[Hz]
X_sweep       = 37.73584906[kHz]
Irr_domain    = 1H
Irr_freq      = 600.1723046[MHz]
Irr_offset    = 5[ppm]
Clipped       = FALSE
Mod_return    = 1
Scans         = 94
Total_scans   = 94

X_90_width    = 11.4[us]
X_acq_time     = 0.868352[s]
X_angle        = 30[deg]
X_atn          = 7.5[dB]
X_pulse        = 3.0[us]
Irr_atn_dec    = 19.391[dB]
Irr_atn_noe    = 19.391[dB]
Irr_noise      = WALTZ
Decoupling     = TRUE
Initial_wait   = 1[s]
Noe            = TRUE
Noe_time       = 2.5[s]
Recvr_gain     = 78
Relaxation_delay = 2.5[s]
Repetition_time = 3.368352[s]
Temp_get       = 22.1[degC]
```



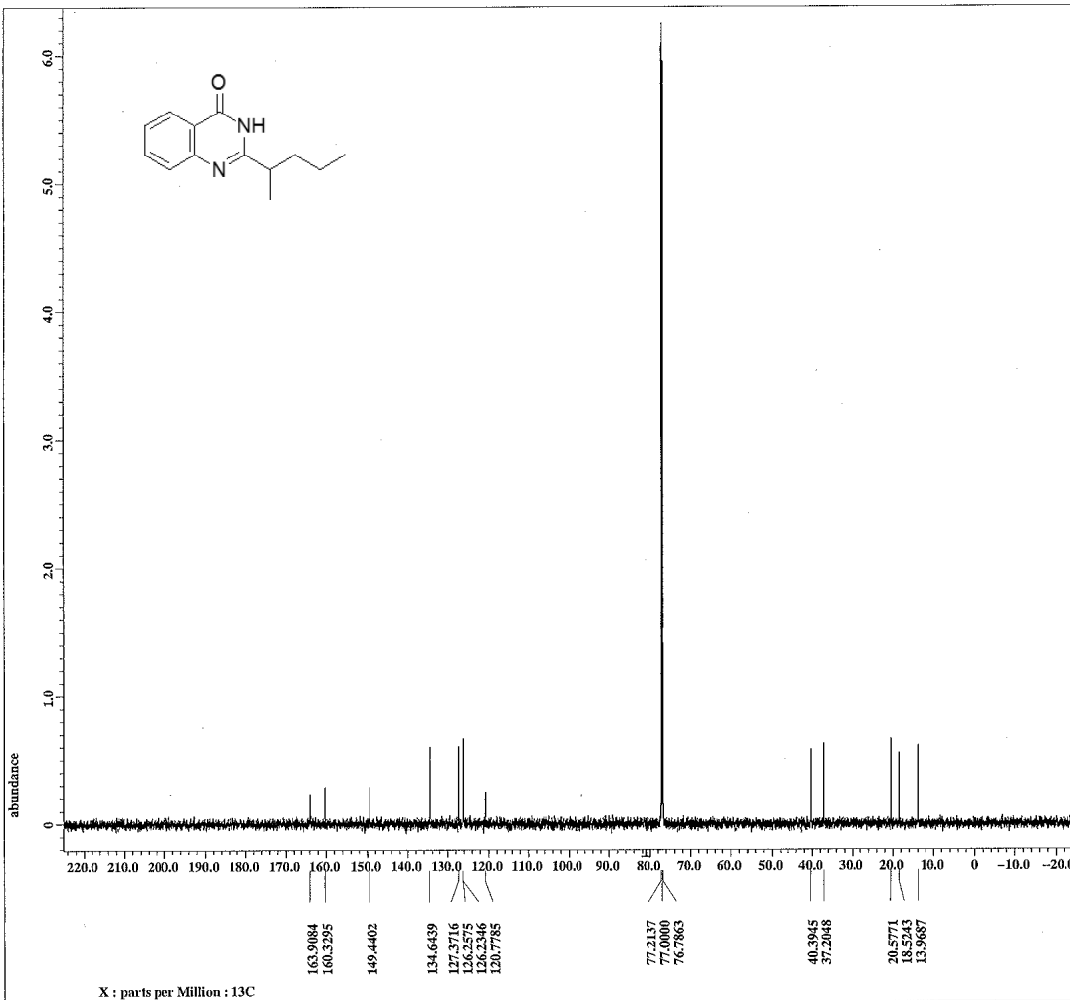
```

Filename      = Exp-hakim-144-4-prot
Author       = delta
Experiment   = single_pulse.ex2
Sample_id    = Exp-hakim-144-4-prot
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 16:20:08
Revision_time = 9-DEC-2013 16:41:26
Current_time  = 9-DEC-2013 16:41:30

Content      = Exp-hakim-144-4-prot
Data_format  = 1D COMPLEX
Dim_size     = 13107
Dim_title    = 1H
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 1.4548992[s]
X_domain       = 2H
X_freq         = 600.1723046[MHz]
X_offset       = 5[ppm]
X_points       = 16384
X_prescans     = 1
X_resolution   = 0.68733284[Hz]
X_sweep        = 11.26126126[kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046[MHz]
Irr_offset     = 5[ppm]
Tri_domain     = 1H
Tri_freq       = 600.1723046[MHz]
Tri_offset     = 5[ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 8
Total_scans    = 8

X_90_width    = 13[us]
X_acq_time    = 1.4548992[s]
X_angle       = 45[deg]
X_atn         = 3.6[dB]
X_pulse       = 6.5[us]
Irr_mode      = Off
Tri_mode      = Off
Denic_preset  = FALSE
Initial_wait  = 1[s]
Recvr_gain    = 52
Relaxation_delay = 5[s]
Repetition_time = 6.4548992[s]
Temp_get      = 21.5[dC]
  
```



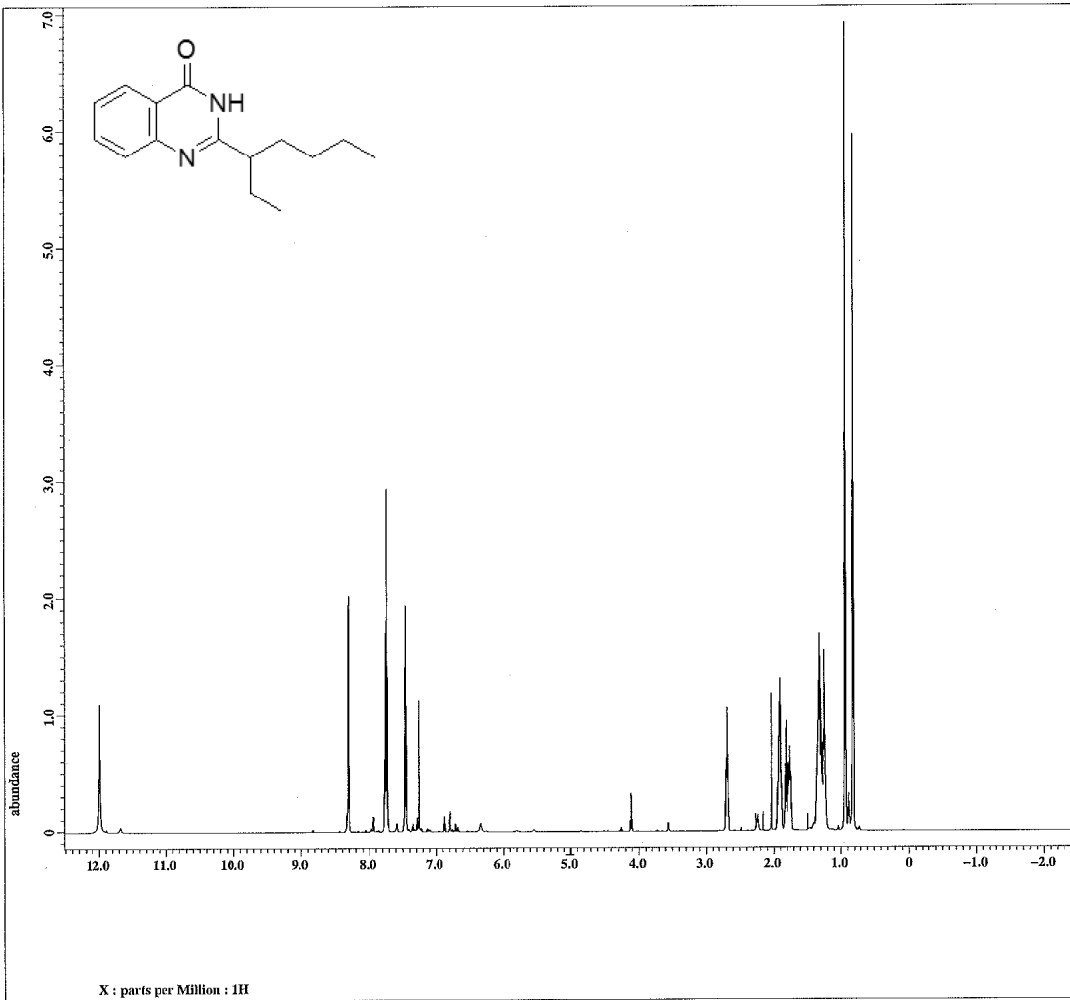
```

Filename      = Exp-hakim-144-4-carbo
Author       = delta
Experiment   = single_pulse_dec
Sample_id    = Exp-hakim-144-4-carbo
Solvent      = CHLOROFORM-D
Creation_time = 9-DEC-2013 16:32:52
Revision_time = 9-DEC-2013 16:50:44
Current_time  = 9-DEC-2013 16:50:49

Content      = Exp-hakim-144-4-carbo
Data_format  = 1D COMPLEX
Dim_size     = 32768
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 0.868352[s]
X_domain       = 13C
X_freq         = 150.91343039[MHz]
X_offset       = 100[ppm]
X_points       = 32768
X_prescans     = 4
X_resolution   = 1.15140672[Hz]
X_sweep        = 37.73584906[kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046[MHz]
Irr_offset     = 5[ppm]
Clipped        = TRUE
Mod_return     = 1
Scans          = 208
Total_scans    = 208

X_90_width    = 11.4[us]
X_acq_time    = 0.868352[s]
X_angle       = 30[deg]
X_atn         = 7.5[dB]
X_pulse       = 3.8[us]
Irr_atn_dec   = 19.391[dB]
Irr_atn_noe   = 19.391[dB]
Irr_noise     = WALTZ
Decoupling    = TRUE
Initial_wait  = 1[s]
Noe           = TRUE
Noe_time      = 2.5[s]
Recvr_gain    = 78
Relaxation_delay = 2.5[s]
Repetition_time = 1.368352[s]
Temp_get      = 22.2[dC]
  
```



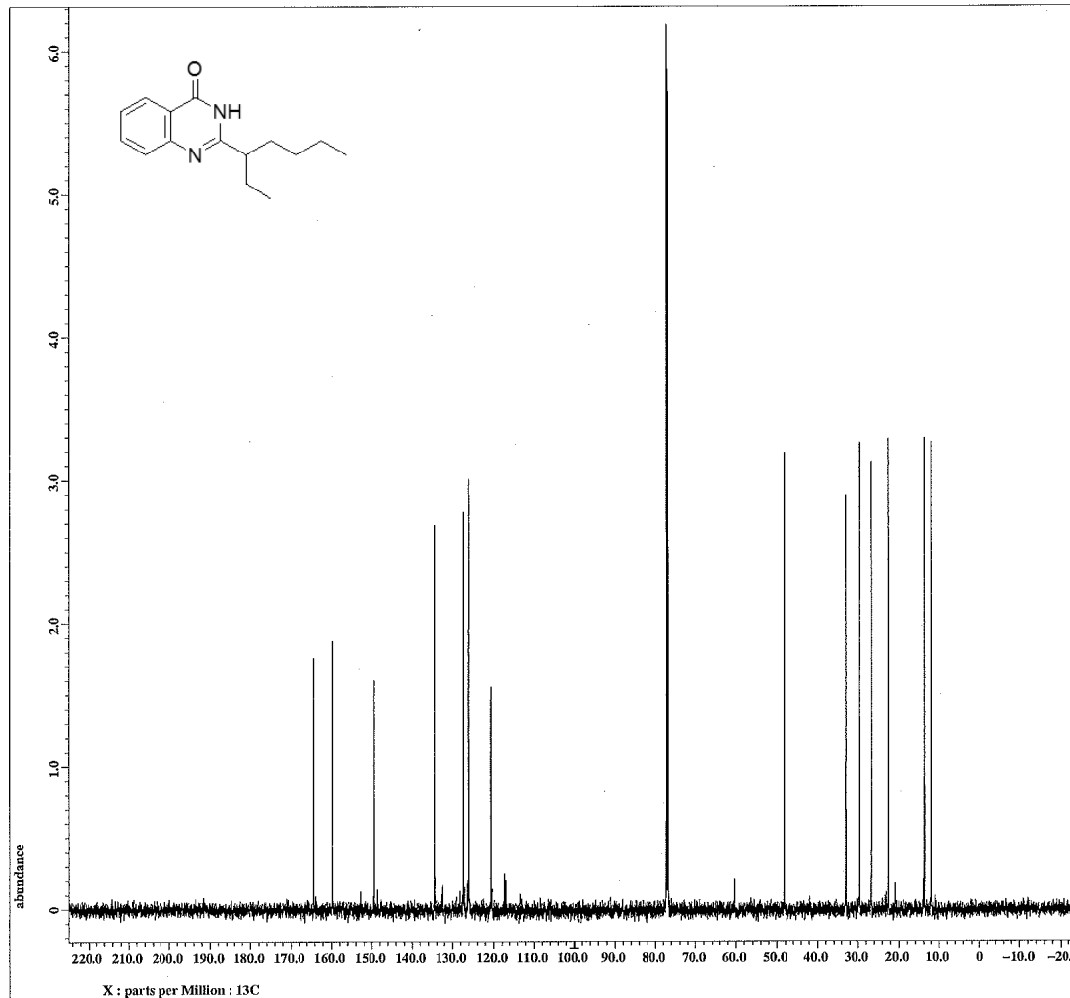
```

Filename      = Exp-hakim-144-5-p-1b-
Author       = delta
Experiment    = single_pulse_ex2
Sample_id    = Exp-hakim-144-5-p-1b-
Solvent      = CHLOROFORM-D
Creation_time = 10-DEC-2013 22:21:19
Revision_time = 10-DEC-2013 22:36:51
Current_time  = 10-DEC-2013 22:36:55

Content      = Exp-hakim-144-5-p-1b-
Data_format  = 1D_COMPLEX
Dim_size     = 13107
Dim_title    = 1H
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 1.4548992[s]
X_domain       = 1H
X_freq         = 600.1723046[MHz]
X_offset       = 5 [ppm]
X_points      = 16384
X_prescans    = 1
X_resolution   = 0.68733284 [Hz]
X_sweep       = 11.26126126 [kHz]
Irr_domain    = 1H
Irr_freq      = 600.1723046[MHz]
Irr_offset    = 5 [ppm]
Tri_domain    = 1H
Tri_freq      = 600.1723046[MHz]
Tri_offset    = 5 [ppm]
Clipped       = FALSE
Mod_return    = 1
Scans         = 8
Total_scans   = 8

X_90_width    = 13 [us]
X_acq_time    = 1.4548992[s]
X_angle       = 45 [deg]
X_atn         = 3.6 [dB]
X_pulse       = 6.5 [us]
Irr_mode      = OFF
Tri_mode      = OFF
Dante_preset  = FALSE
Initial_wait  = 1 [s]
Recvr_gain    = 36
Relaxation_delay = 5 [s]
Repetition_time = 6.4548992 [s]
Temp_get      = 24.1 [dC]
  
```



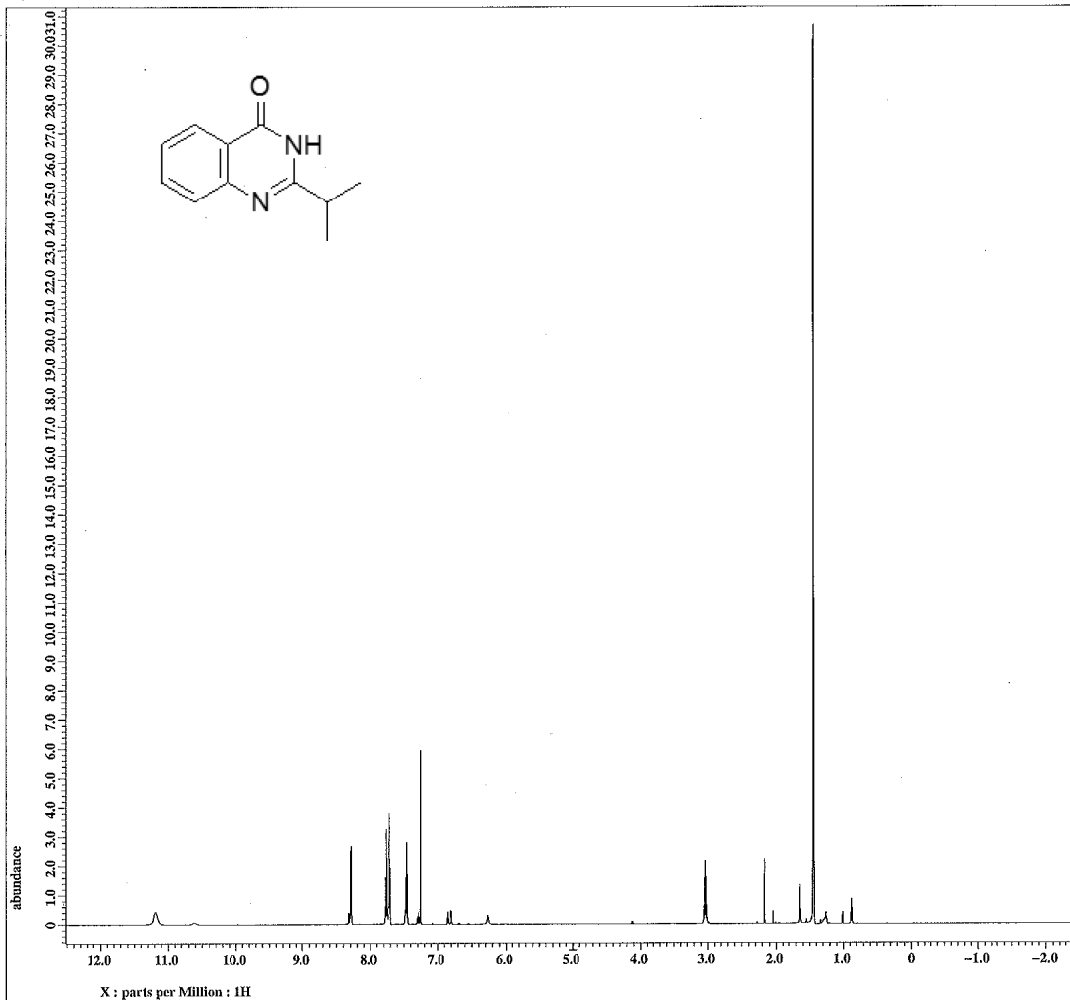
```

Filename      = Exp-hakim-144-5-p-1b-
Author       = delta
Experiment    = single_pulse_dec
Sample_id    = Exp-hakim-144-5-p-1b-
Solvent      = CHLOROFORM-D
Creation_time = 10-DEC-2013 22:30:01
Revision_time = 10-DEC-2013 22:43:40
Current_time  = 10-DEC-2013 22:43:45

Content      = Exp-hakim-144-5-p-1b-
Data_format  = 1D_COMPLEX
Dim_size     = 32768
Dim_title    = 13C
Dim_units    = [ppm]
Dimensions   = X
Site         = ECA 600
Spectrometer = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 0.868352[s]
X_domain       = 13C
X_freq         = 150.91343039[MHz]
X_offset       = 100 [ppm]
X_points      = 32768
X_prescans    = 4
X_resolution   = 1.15160672 [Hz]
X_sweep       = 37.73584906 [kHz]
Irr_domain    = 1H
Irr_freq      = 600.1723046[MHz]
Irr_offset    = 5 [ppm]
Clipped       = FALSE
Mod_return    = 1
Scans         = 136
Total_scans   = 136

X_90_width    = 11.4 [us]
X_acq_time    = 0.868352[s]
X_angle       = 30 [deg]
X_atn         = 7.5 [dB]
X_pulse       = 3.8 [us]
Irr_atn_dec   = 19.391 [dB]
Irr_atn_noe   = 19.391 [dB]
Irr_noise     = WALTZ
Decoupling    = TRUE
Initial_wait  = 1 [s]
Noe           = TRUE
Noe_time      = 2.5 [s]
Recvr_gain    = 78
Relaxation_delay = 2.5 [s]
Repetition_time = 3.368352 [s]
Temp_get      = 24.8 [dC]
  
```



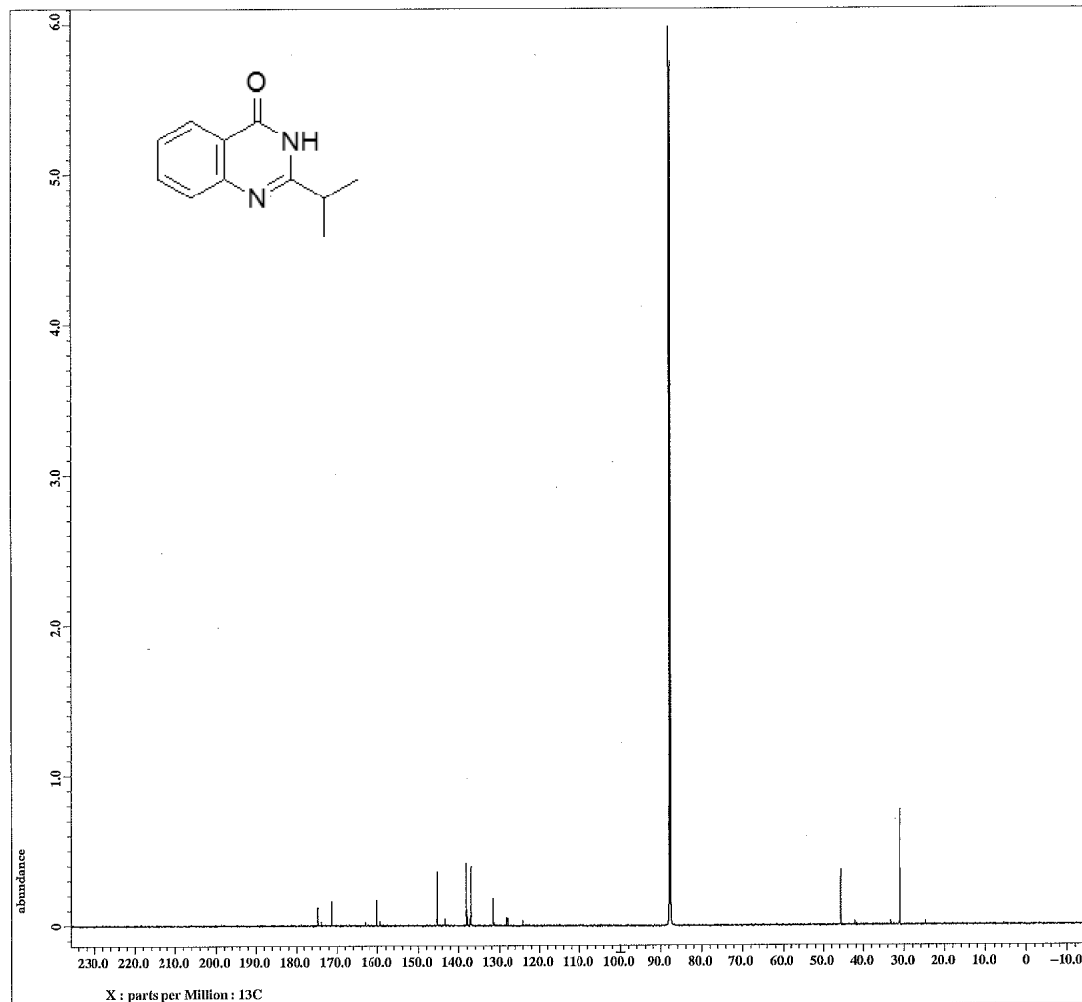
```

Filename      = Exp-hakim-241-proton-
Author        = delta
Experiment    = single_pulse_ew2
Sample_id     = Exp-hakim-241-proton
Solvent       = CHLOROFORM-D
Creation_time = 12-DEC-2013 23:38:49
Revision_time = 12-DEC-2013 23:52:51
Current_time  = 12-DEC-2013 23:52:55

Content       = Exp-hakim-241-proton
Data_format   = 1D_COMPLEX
Dim_size      = 13107
Dim_title     = 1H
Dim_units     = [ppm]
Dimensions    = X
Site          = ECA 600
Spectrometer  = DELTA2_NMR

Field_strength = 14.09636928 [T] (600 [M]
X_acq_duration = 1.4548992 [s]
X_domain       = 1H
X_freq         = 600.1723046 [MHz]
X_offset       = 5 [ppm]
X_points       = 16384
X_prescans     = 1
X_resolution   = 0.68733284 [Hz]
X_sweep        = 1.26126126 [kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046 [MHz]
Irr_offset     = 5 [ppm]
Tri_domain     = 1H
Tri_freq       = 600.1723046 [MHz]
Tri_offset     = 5 [ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 8
Total_scans    = 8

X_90_width     = 13 [us]
X_acq_time     = 1.4548992 [s]
X_angle        = 15 [deg]
X_atn          = 3.6 [dB]
X_pulse        = 6.5 [us]
Irr_mode       = Off
Tri_mode       = Off
Dante_preset   = FALSE
Initial_wait   = 1 [s]
Recvr_gain     = 56
Relaxation_delay = 5 [s]
Repetition_time = 6.4548992 [s]
Temp_get       = 25.4 [dC]
  
```



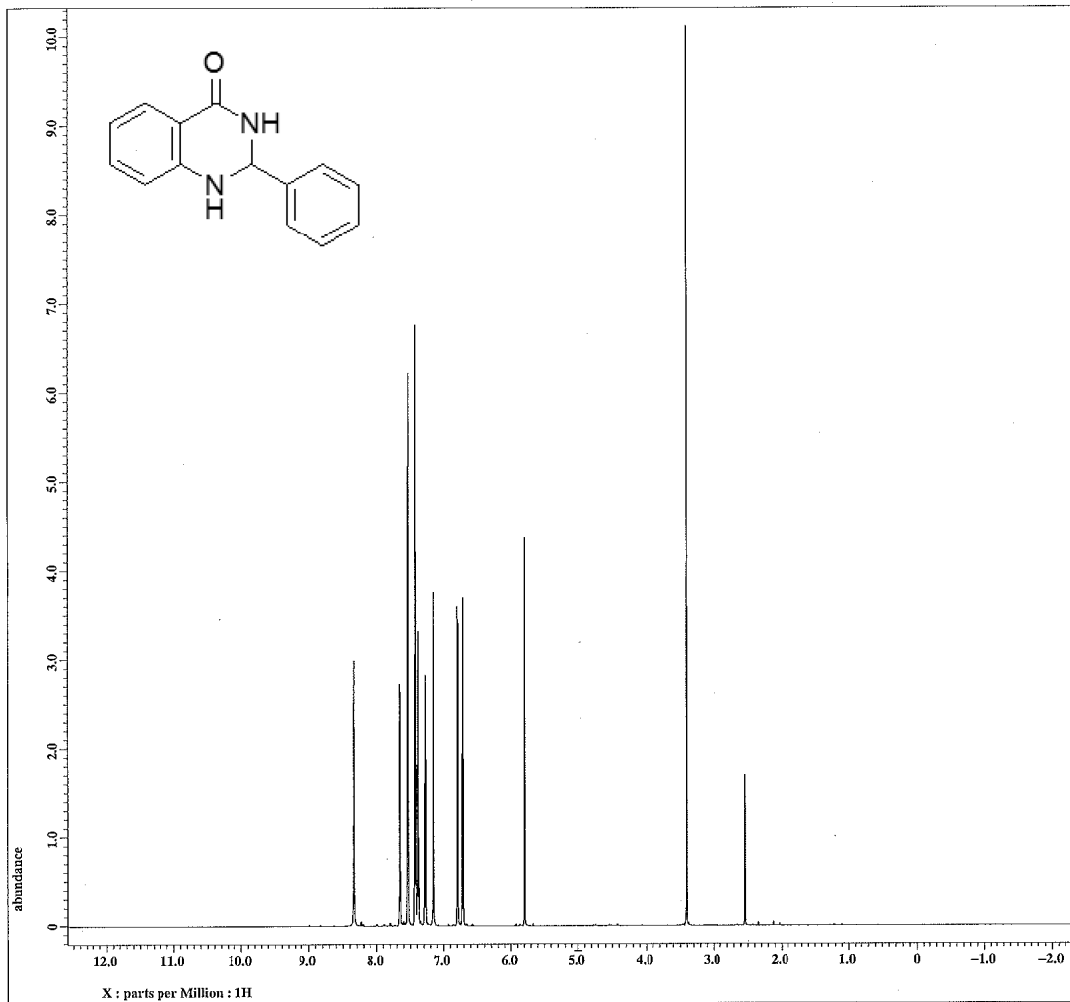
```

Filename      = Exp-241-hakim-p-2a-ca
Author        = delta
Experiment    = single_pulse_dec
Sample_id     = Exp-241-hakim-p-2a-ca
Solvent       = CHLOROFORM-D
Creation_time = 13-DEC-2013 09:25:40
Revision_time = 13-DEC-2013 10:06:35
Current_time  = 13-DEC-2013 10:06:36

Content       = Exp-241-hakim-p-2a-ca
Data_format   = 1D_COMPLEX
Dim_size      = 32768
Dim_title     = 13C
Dim_units     = [ppm]
Dimensions    = X
Site          = ECA 600
Spectrometer  = DELTA2_NMR

Field_strength = 14.09636928 [T] (600 [M]
X_acq_duration = 0.868352 [s]
X_domain       = 13C
X_freq         = 150.91343039 [MHz]
X_offset       = 100 [ppm]
X_points       = 32768
X_prescans     = 4
X_resolution   = 1.15160672 [Hz]
X_sweep        = 37.73584906 [kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046 [MHz]
Irr_offset     = 5 [ppm]
Clipped        = TRUE
Mod_return     = 1
Scans          = 10000
Total_scans    = 10000

X_90_width     = 11.4 [us]
X_acq_time     = 0.868352 [s]
X_angle        = 30 [deg]
X_atn          = 7.5 [dB]
X_pulse        = 3.8 [us]
Irr_atn_dec    = 19.391 [dB]
Irr_atn_noe    = 19.391 [dB]
Irr_noise      = WAIVE
Decoupling     = TRUE
Initial_wait   = 1 [s]
Noe            = TRUE
Noe_time       = 2.5 [s]
Recvr_gain     = 78
Relaxation_delay = 2.5 [s]
Repetition_time = 3.368352 [s]
Temp_get       = 25.2 [dC]
  
```



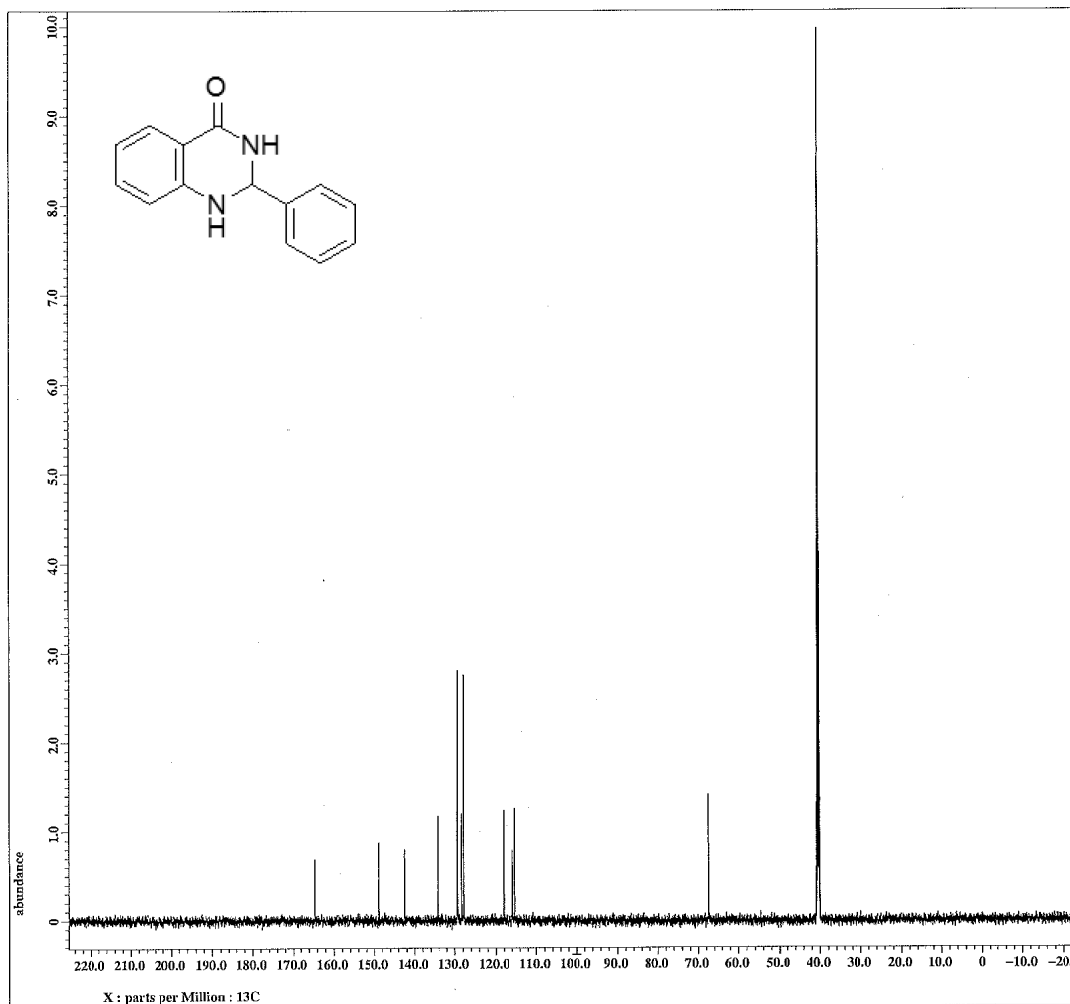
```

Filename      = Exp-hakim-aminal-prot
Author       = delta
Experiment    = single_pulse_ex2
Sample_id     = Exp-hakim-aminal-prot
Solvent      = DMSO-D6
Creation_time = 20-JAN-2014 21:04:31
Revision_time = 20-JAN-2014 21:15:45
Current_time  = 20-JAN-2014 21:15:49

Content       = Exp-hakim-aminal-prot
Data_format   = ID COMPLEX
Dim_size      = 13107
Dim_title     = 1H
Dim_units     = [ppm]
Dimensions    = X
Site          = ECA_600
Spectrometer  = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 1.4548992[s]
X_domain       = 1H
X_freq         = 600.1723046[MHz]
X_offset       = 5[ppm]
X_points       = 16384
X_prescans     = 1
X_resolution   = 0.68733284[Hz]
X_sweep        = 11.26126126[kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046[MHz]
Irr_offset     = 5[ppm]
Tri_domain     = 1H
Tri_freq       = 600.1723046[MHz]
Tri_offset     = 5[ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 8
Total_scans    = 8

X_90_width     = 13[us]
X_acq_time     = 1.4548992[s]
X_angle        = 45[deg]
X_atn          = 3.6[db]
X_pulse        = 6.5[us]
Irr_mode       = Off
Tri_mode       = Off
Dante_preset   = FALSE
Initial_wait   = 1[s]
Recvr_gain     = 44
Relaxation_delay = 5[s]
Repetition_time = 6.4548992[s]
Temp_get       = 21.2[dc]
  
```



```

Filename      = Exp-hakim-aminal-carb
Author       = delta
Experiment    = single_pulse_dec
Sample_id     = Exp-hakim-aminal-carb
Solvent      = DMSO-D6
Creation_time = 20-JAN-2014 21:09:32
Revision_time = 20-JAN-2014 21:20:50
Current_time  = 20-JAN-2014 21:20:52

Content       = Exp-hakim-aminal-carb
Data_format   = ID COMPLEX
Dim_size      = 32768
Dim_title     = 13C
Dim_units     = [ppm]
Dimensions    = X
Site          = ECA_600
Spectrometer  = DELTA2_NMR

Field_strength = 14.09636928[T] (600[M]
X_acq_duration = 0.868352[s]
X_domain       = 13C
X_freq         = 150.91343039[MHz]
X_offset       = 100[ppm]
X_points       = 32768
X_prescans     = 4
X_resolution   = 1.15160672[Hz]
X_sweep        = 37.73584906[kHz]
Irr_domain     = 1H
Irr_freq       = 600.1723046[MHz]
Irr_offset     = 5[ppm]
Clipped        = FALSE
Mod_return     = 1
Scans          = 72
Total_scans    = 72

X_90_width     = 11.4[us]
X_acq_time     = 0.868352[s]
X_angle        = 30[deg]
X_atn          = 7.5[db]
X_pulse        = 3.0[us]
Irr_atn_dec    = 19.391[db]
Irr_atn_noa    = 19.391[db]
Irr_noise      = WALTZ
Decoupling     = TRUE
Initial_wait   = 1[s]
Noe            = TRUE
Noe_time       = 2.5[s]
Recvr_gain     = 76
Relaxation_delay = 2.5[s]
Repetition_time = 3.368352[s]
Temp_get       = 22[dc]
  
```