

*Supporting Information*

**H<sub>2</sub>O<sub>2</sub>/HBr system - several directions but one choice:  
oxidation-bromination of secondary alcohols into mono- or dibromo ketones**

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## General materials and methods

$^1\text{H}$  and  $^{13}\text{C}$  NMR spectra were recorded on Bruker AVANCE II 300 spectrometer (300.13 and 75.48 MHz, respectively) in  $\text{CDCl}_3$ . Chemical shifts were reported in parts per million (ppm), and the residual solvent peak was used as an internal reference:  $^1\text{H}$  ( $\text{CDCl}_3$   $\delta=7.26$  ppm),  $^{13}\text{C}$  ( $\text{CDCl}_3$   $\delta=77.16$  ppm). Multiplicity was indicated as follows: s (singlet), d (doublet), t (triplet), q (quartet), m (multiplet).

High resolution mass spectra (HR-MS) were measured on a Bruker micrOTOF II instrument using electrospray ionization (ESI). The measurements were performed in a positive ion mode (interface capillary voltage – 4500 V); mass range from  $m/z$  50 to  $m/z$  3000 Da; external calibration with Electrospray Calibrant Solution (Fluka). A syringe injection was used for all acetonitrile solutions (flow rate 3  $\mu\text{L}/\text{min}$ ). Nitrogen was applied as a dry gas; interface temperature was set at 180  $^\circ\text{C}$ .

GC analysis was performed on a Chrom-5 chromatograph with the flame-ionization detector and 3x3000 mm analytical glass columns with 5% SE-30 and 5% FFAP on Chromaton N-AW-HMDS (0.16-0.20 mm). The product yields were determined by an internal standard method with the empirical correlation coefficients.

The TLC analysis was carried out on standard silica gel chromatography plates (DC-Fertigfolien ALUGRAM<sup>R</sup> Xtra SIL G/UV<sub>254</sub>). Column chromatography was performed using silica gel (0.060-0.200 mm, 60 A, CAS 7631-86-9, Acros).

Petroleum ether (PE, 40/70), MeOH, THF, dichloroethane (DCE) were distilled prior to use. MeCN were distilled over  $\text{P}_2\text{O}_5$ . EtOAc were purchased from commercial sources and were used as is.

Pentan-3-ol (**1a**), 2,4-dimethylpentan-3-ol (**1h**), nonan-4-ol (**1f**), 2-methyloctan-3-ol (**1g**), 1-phenylhexan-1-ol (**4c**), HBr (48% solution in water),  $\text{H}_2\text{O}_2$  (35% aqueous solution),  $\text{Na}_2\text{SO}_4$ ,  $\text{Na}_2\text{SO}_3$  were commercial reagents (Acros, Sigma-Aldrich). Other secondary alcohols were synthesized according to the literature<sup>1</sup>.

### Experimental for Table 1

To a solution of alcohol **1a** (1 mmol, 88.2 mg) and HBr (48% aqueous, 1.2-6 mmol, 0.136-0.679 ml) in 1 ml of solvent at 65-70  $^\circ\text{C}$  and vigorous stirring, a solution of  $\text{H}_2\text{O}_2$  (35% aqueous, 10-15

mmol, 0.860-1.290 ml) was added portionwise (0.2-0.3 ml) during 6-10 h. After the addition of the first portion, brown vapors and a bright orange color of the reaction mass were observed. The next portions of H<sub>2</sub>O<sub>2</sub> were added after the decolorization of the reaction mixture (a pale-yellow color), then the reaction mass was cooled, diethyl ether (15 mL) and Na<sub>2</sub>SO<sub>3</sub> (1 g) were added. The organic layer was decanted and washed with water (5 ml), then dried over Na<sub>2</sub>SO<sub>4</sub>. The solvent was evaporated in a vacuum of a water jet pump (20 mmHg). Yields **2a**, **3a** and **7a** were determined by GLC using heptan-4-one and undecane-6-one as the internal standards.

### Experimental for the Table 2

To a solution of alcohol **1a-h**, **4a-e** (1 mmol, 88.2-256.5 mg) and HBr (48% aqueous, 1.2 mmol, 0.136 ml) in CH<sub>3</sub>CN (1 ml) at 65-70 °C and vigorous stirring, a solution of H<sub>2</sub>O<sub>2</sub> (35% aqueous, 10 mmol, 0.860 ml) in CH<sub>3</sub>CN (1 ml) was added portionwise (0.2-0.3 ml) for 6 hours. After the addition of the first portion, brown vapors and a bright orange color of the reaction mass were observed. The next portions of H<sub>2</sub>O<sub>2</sub> were added after the decolorization of the reaction mixture (a pale-yellow color), then the reaction mass was cooled, diethyl ether (15 mL) and Na<sub>2</sub>SO<sub>3</sub> (1 g) were added. The organic layer was decanted and washed with water (5 ml), then dried over Na<sub>2</sub>SO<sub>4</sub>. The solvent was evaporated in a vacuum of a water jet pump (20 mmHg). The products **2a-h** and **5a-e** were isolated by column chromatography on silica gel in a solvent system PE: EA (100:1).

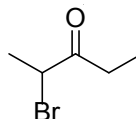
### Experimental for the Table 3

To a solution of alcohol **1a-h**, **4a-e** (1 mmol, 88.2-256.5 mg) and HBr (48% aqueous, 6 mmol, 0.679 ml) in CH<sub>3</sub>CN (1 ml) at 65-70 °C and vigorous stirring, a solution of H<sub>2</sub>O<sub>2</sub> (35% aqueous, 15 mmol, 1.290 ml) in CH<sub>3</sub>CN (1 ml) was added portionwise (0.2-0.3 ml) for 6 hours. After the addition of the first portion, brown vapors and a bright orange color of the reaction mass were observed. The next portion of hydrogen peroxide was added after the decolorization of the reaction mixture (a pale-yellow color), then the reaction mass was cooled, diethyl ether (15 mL) and Na<sub>2</sub>SO<sub>3</sub> (1 g) were added. The organic layer was decanted and washed with water (5 ml) and then dried over Na<sub>2</sub>SO<sub>4</sub>. The solvent was evaporated in a vacuum of a water jet pump (20 mmHg). The products **3a-g** and **6a,b,d,e** were isolated by column chromatography on silica gel in a solvent system PE: EA (100:1).

## Characterization of the products

All the new compounds were characterized using  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectroscopy, HR-MS spectroscopy.  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectra of the known compounds were in agreement with the literature data<sup>2-11</sup>.

### 2-Bromopentan-3-one, 2a<sup>9</sup>

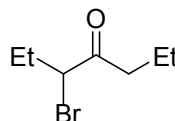


Colorless oil (130 mg, 79%)

$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 1.10 (t, 3H,  $\text{CH}_3$ ,  $J = 7.2$  Hz), 1.72 (d, 3H,  $\text{CH}_3\text{CHBr}$ ,  $J = 6.9$  Hz), 2.51-2.65 (m, 1H,  $\text{CH}_2$ ), 2.78-2.92 (m, 1H,  $\text{CH}_2$ ), 4.40 (q,  $\text{CHBr}$ ,  $J = 6.9$  Hz);

$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 8.17 ( $\text{CH}_3$ ), 20.14 ( $\text{CH}_3\text{CHBr}$ ), 31.95 ( $\text{CH}_2$ ), 47.26 ( $\text{CHBr}$ ), 205.09 (CO).

### 3-Bromoheptan-4-one, 2b<sup>10</sup>

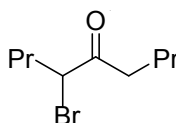


Colorless oil (158 mg, 82%)

$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 0.93 (t, 3H,  $\text{CH}_3$ ,  $J = 7.3$  Hz), 1.00 (t, 3H,  $\text{CH}_3$ ,  $J = 7.3$  Hz), 1.58-1.70 (m, 2H,  $\text{CH}_2$ ), 1.90-2.07 (m, 2H,  $\text{CH}_2\text{CHBr}$ ), 2.57-2.71 (m, 2H,  $\text{CH}_2\text{CO}$ ), 4.16 (dd, 1H,  $\text{CHBr}$ ,  $J = 6.4$  Hz,  $J = 8.0$  Hz);

$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 11.97 ( $\text{CH}_3$ ), 13.58 ( $\text{CH}_3$ ), 17.39 ( $\text{CH}_2$ ), 26.88 ( $\text{CH}_2\text{CHBr}$ ), 40.90 ( $\text{CH}_2\text{CO}$ ), 55.48 ( $\text{CHBr}$ ), 204.21 (CO).

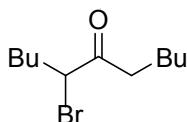
### 4-Bromononan-5-one, 2c<sup>11</sup>



Colorless oil (161 mg, 73%)

$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 0.88-0.95 (m, 6H, 2 $\text{CH}_3$ ), 1.28-1.61 (m, 6H, 3 $\text{CH}_2$ ), 1.84-2.00 (m, 2H,  $\underline{\text{CH}_2\text{CHBr}}$ ), 2.56-2.75 (m, 2H,  $\text{CH}_2\text{CO}$ ), 4.23 (dd, 1H,  $\text{CHBr}$ ,  $J = 6.5$  Hz,  $J = 8.0$  Hz);  
 $^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 13.39 ( $\text{CH}_3$ ), 13.78 ( $\text{CH}_3$ ), 20.60 ( $\text{CH}_2$ ), 22.18 ( $\text{CH}_2$ ), 26.04 ( $\text{CH}_2$ ), 35.39 ( $\underline{\text{CH}_2\text{CHBr}}$ ), 38.64 ( $\underline{\text{CH}_2\text{CO}}$ ), 53.53 ( $\text{CHBr}$ ), 204.37 (CO).

**5-Bromoundecan-6-one, 2d<sup>7,10</sup>**

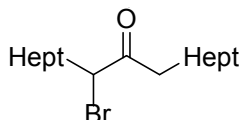


Colorless oil (201 mg, 81%)

$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 0.86-0.92 (m, 6H, 2 $\text{CH}_3$ ), 1.25-1.46 (m, 8H, 4 $\text{CH}_2$ ), 1.55-1.65 (m, 2H,  $\text{CH}_2$ ), 1.85-2.04 (m, 2H,  $\underline{\text{CH}_2\text{CHBr}}$ ), 2.57-2.72 (m, 2H,  $\text{CH}_2\text{CO}$ ), 4.22 (dd, 1H,  $\text{CHBr}$ ,  $J = 6.7$  Hz,  $J = 7.9$  Hz);

$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 13.80 ( $\text{CH}_3$ ), 13.87 ( $\text{CH}_3$ ), 22.10 ( $\text{CH}_2$ ), 22.40 ( $\text{CH}_2$ ), 23.64 ( $\text{CH}_2$ ), 29.47 ( $\text{CH}_2$ ), 31.23 ( $\text{CH}_2$ ), 33.18 ( $\underline{\text{CH}_2\text{CHBr}}$ ), 38.91 ( $\underline{\text{CH}_2\text{CO}}$ ), 53.79 ( $\text{CHBr}$ ), 204.40 (CO).

**8-Bromoheptadecan-9-one, 2e**



Colorless oil (213 mg, 64%)

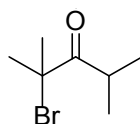
$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 0.87 (t, 6H, 2 $\text{CH}_3$ ,  $J = 6.6$  Hz), 1.27 (m, 20H,  $\text{CH}_2$ ), 1.58-1.62 (m, 2H,  $\text{CH}_2$ ), 1.88-1.97 (m, 2H,  $\underline{\text{CH}_2\text{CHBr}}$ ), 2.58-2.72 (m, 2H,  $\text{CH}_2\text{CO}$ ), 4.22 (t, 1H,  $\text{CHBr}$ ,  $J = 7.3$  Hz);

$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 14.03 ( $\text{CH}_3$ ), 14.05 ( $\text{CH}_3$ ), 22.58 ( $\text{CH}_2$ ), 22.63 ( $\text{CH}_2$ ), 23.99 ( $\text{CH}_2$ ), 27.36 ( $\text{CH}_2$ ), 28.95 ( $\text{CH}_2$ ), 28.98 ( $\text{CH}_2$ ), 29.08 ( $\text{CH}_2$ ), 29.11 ( $\text{CH}_2$ ), 29.31 ( $\text{CH}_2$ ), 31.68 ( $\text{CH}_2$ ), 31.81 ( $\text{CH}_2$ ), 33.49 ( $\text{CH}_2$ ), 38.95 ( $\underline{\text{CH}_2\text{CO}}$ ), 53.84 ( $\text{CHBr}$ ), 204.41 (CO);

HRMS (ESI)  $m/z$   $[\text{M}+\text{Na}]^+$ : Calcd for  $[\text{C}_{17}\text{H}_{33}\text{BrNaO}]^+$ : 355.1607. Found: 355.1603.

HRMS-ESI: calculated 355.1607 ( $^{79}\text{Br}$ ) and 357.1587 ( $^{81}\text{Br}$ )  $[\text{C}_{17}\text{H}_{33}\text{BrNaO}]^+$  found 355.1603 ( $^{79}\text{Br}$ ) and 357.1584 ( $^{81}\text{Br}$ )

**2-Bromo-2,4-dimethylpentan-3-one, 2h<sup>10</sup>**

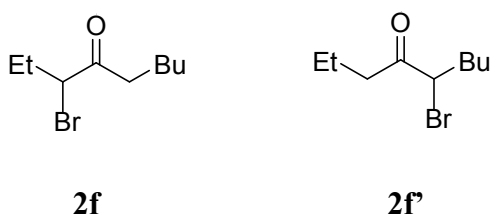


Colorless oil (168 mg, 87%)

$^1\text{H NMR}$  (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 1.16 (d, 6H, 2 $\text{CH}_3$ ,  $J = 6.6$  Hz), 1.85 (s, 6H, 2 $\text{CH}_3$ ), 3.37-3.50 (m, 1H CH);

$^{13}\text{C NMR}$  (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 20.89, 29.30, 34.54, 64.56, 209.93.

**Mixture of 3-bromononan-4-one (2f) and 5-bromononan-4-one (2f')**<sup>5</sup> (ratio **2f** : **2f'** according to NMR spectroscopy data  $\sim 1 : 1$ )

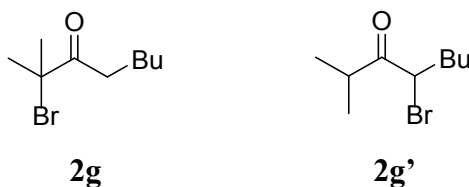


Colorless oil (172 mg, 78%)

$^1\text{H NMR}$  (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 0.86-0.95 (m, 9H, 3 $\text{CH}_3$ ), 1.00 (t, 3H,  $\text{CH}_3$ ,  $J = 7.3$  Hz), 1.23-1.39 (m, 8H, 4 $\text{CH}_2$ ), 1.58-1.70 (m, 4H, 2 $\text{CH}_2$ ), 1.87-2.08 (m, 4H, 2 $\text{CH}_2\text{CHBr}$ ), 2.54-2.75 (m, 4H, 2 $\text{CH}_2\text{CO}$ ), 4.17 (dd, H,  $\text{CHBr}$ ,  $J = 6.4$  Hz), 4.21 (dd, H,  $\text{CHBr}$ ,  $J = 6.3$  Hz);

$^{13}\text{C NMR}$  (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 11.97 ( $\text{CH}_3$ ), 13.58 ( $\text{CH}_3$ ), 13.78 ( $\text{CH}_3$ ), 13.87 ( $\text{CH}_3$ ), 17.40 ( $\text{CH}_2$ ), 22.10 ( $\text{CH}_2$ ), 22.40 ( $\text{CH}_2$ ), 23.63 ( $\text{CH}_2$ ), 26.88 ( $\text{CH}_2$ ), 29.46 ( $\text{CH}_2$ ), 31.22 ( $\text{CH}_2$ ), 33.15 ( $\text{CH}_2$ ), 39.00 ( $\text{CH}_2\text{CO}$ ), 40.80 ( $\text{CH}_2\text{CO}$ ), 53.78 ( $\text{CHBr}$ ), 55.48 ( $\text{CHBr}$ ), 204.23 (CO), 204.34 (CO).

**Mixture of 2-bromo-2-methyloctan-3-one (2g) and 4-bromo-2-methyloctan-3-one (2g')** (ratio **2g** : **2g'** according to NMR spectroscopy data  $\sim 2 : 1$ )



Colorless oil (181 mg, 82%)

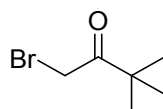
$^1\text{H NMR}$  (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 0.89 (t, 4.5H, 2 $\text{CH}_3$ ,  $J = 6.8$  Hz), 1.12 (d, 1.5H,  $\text{CH}_3$ ,  $J = 6.9$  Hz), 1.16 (d, 1.5H,  $\text{CH}_3$ ,  $J = 6.7$  Hz), 1.26-1.36 (m, 6H, 4 $\text{CH}_2$ ), 1.56-1.70 (m, 3H, 2 $\text{CH}_2$ ), 1.84 (s,

6H, 2CH<sub>3</sub>), 2.78 (t, 2H, CH<sub>2</sub>CO, *J* = 7.3 Hz), 2.97-3.07 (m, 0.5H, CHCO), 4.36 (t, 0.5H, CHBr, *J* = 7.2 Hz);

<sup>13</sup>C NMR (75.47 MHz, CDCl<sub>3</sub>) δ: 13.81(CH<sub>3</sub>), 13.90 (CH<sub>3</sub>), 18.65 (CH<sub>2</sub>), 19.36 (CH<sub>2</sub>), 22.18 (CH<sub>3</sub>), 22.45 (CH<sub>2</sub>), 24.44 (CH<sub>2</sub>), 29.57 (CH<sub>3</sub>), 31.24 (CH<sub>2</sub>), 32.98 (CH<sub>2</sub>), 36.04 (CH<sub>2</sub>CO), 37.97 (CHCO), 51.70 (CHBr), 64.03 (CBr), 205.75 (CO), 207.63 (CO).

HRMS-ESI: calculated 243.0355 (<sup>79</sup>Br) and 245.0335 (<sup>81</sup>Br) [C<sub>9</sub>H<sub>17</sub>BrNaO]<sup>+</sup> found 243.0348 (<sup>79</sup>Br) and 245.0340 (<sup>81</sup>Br)

### 1-Bromo-3,3-dimethylbutan-2-one, 5a<sup>9</sup>

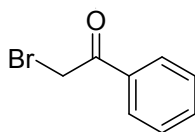


Colorless oil (163 mg, 91%)

<sup>1</sup>H NMR (300.13 MHz, CDCl<sub>3</sub>) δ: 1.21 (s, 9H, CH<sub>3</sub>), 4.16 (s, 2H, CH<sub>2</sub>);

<sup>13</sup>C NMR (75.47 MHz, CDCl<sub>3</sub>) δ: 26.70 (3CH<sub>3</sub>), 31.60 (CH<sub>2</sub>Br), 44.21 (C(CH<sub>3</sub>)<sub>3</sub>), 206.03 (CO).

### 2-Bromo-1-phenylethanone, 5b<sup>8</sup>

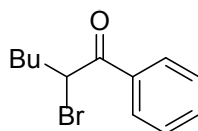


Pale yellow powder (169 mg, 85%); mp = 48-50 °C.

<sup>1</sup>H NMR (300.13 MHz, CDCl<sub>3</sub>) δ: 4.45 (s, 2H, CH<sub>2</sub>Br), 7.48 (t, 2H, 2CH, *J* = 7.3 Hz), 7.60 (t, 1H, CH, *J* = 7.3 Hz), 7.98 (d, 2H, 2CH, *J* = 7.3 Hz);

<sup>13</sup>C NMR (75.47 MHz, CDCl<sub>3</sub>) δ: 30.88 (CH<sub>2</sub>Br), 128.83 (2CH), 128.91 (2CH), 133.93 (2CH), 191.25 (CO).

### 2-Bromo-1-phenylhexan-1-one, 5c<sup>3</sup>



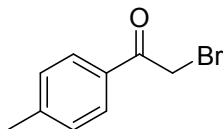
Pale yellow oil (196 mg, 77%)

<sup>1</sup>H NMR (300.13 MHz, CDCl<sub>3</sub>) δ: 0.92 (t, 3H, CH<sub>3</sub>, *J* = 7.3 Hz), 1.33-1.53 (m, 4H, 2CH<sub>2</sub>), 2.07-2.27 (m, 2H, CH<sub>2</sub>CHBr), 5.13 (t, 1H, CHBr, *J* = 7.3 Hz), 7.48 (t, 2H, 2CH, *J* = 7.3 Hz), 7.59 (t, 1H, CH, *J* = 7.3 Hz), 8.01 (d, 2H, 2CH, *J* = 7.3 Hz);



$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 13.84 ( $\text{CH}_3$ ), 22.25 ( $\text{CH}_2$ ), 29.63 ( $\text{CH}_2$ ), 33.22 ( $\text{CH}_2$ ), 47.26 ( $\text{CHBr}$ ), 128.73 (2CH), 128.80 (2CH), 133.61(CH), 134.52 (C), 193.27 (CO).

### 2-Bromo-1-(p-tolyl)ethan-1-one, 5d<sup>12</sup>

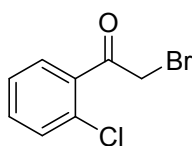


White solid (166 mg, 78%); mp 53-54°C

$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 2.41 (s, 3H,  $\text{CH}_3$ ), 4.41 (s, 2H;  $\text{CH}_2$ ), 7.27 (d,  $J = 8.0$  Hz, 2H), 7.86 (d,  $J = 8.0$  Hz, 2H);

$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 21.71 ( $\text{CH}_3$ ), 30.90 ( $\text{CH}_2$ ), 129.01 (CH), 129.50 (CH), 131.44 (C), 144.96 (C), 190.90 (CO).

### 2-Bromo-1-(2-chlorophenyl)ethan-1-one, 5e<sup>13</sup>

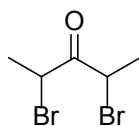


Pale yellow oil (121 mg, 52%)

$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 4.51 (s, 2H;  $\text{CH}_2$ ), 7.34-7.38 (m, 1H), 7.43-7.44 (m, 2H), 7.54-7.56 (m, 1H);

$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 34.45 ( $\text{CH}_2$ ), 127.13 (CH), 130.25 (CH), 130.57 (CH), 131.30 (CH), 132.73 (C), 136.24 (C), 194.01 (CO).

### 2,4-Dibromopentan-3-one (mixture of *meso*- and *rac*-isomers 1:2), 3a<sup>4,9</sup>

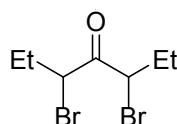


Colorless oil (192 mg, 79%)

$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : **pair dl (rac)**: 1.79 (d, 3H,  $\text{CH}_3$ ,  $J = 6.6$  Hz), 4.97 (q, 1H,  $\text{CHBr}$ ,  $J = 6.6$  Hz), **meso**: 1.86 (d, 3H,  $\text{CH}_3$ ,  $J = 6.6$  Hz), 4.76 (q, 1H,  $\text{CHBr}$ ,  $J = 6.6$  Hz);

$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : **pair dl (rac)**: 19.50 (2 $\text{CH}_3$ ), 43.82 ( $\text{CHBr}$ ), 195.99 (CO), **meso**: 21.74 (2 $\text{CH}_3$ ), 44.01 ( $\text{CHBr}$ ), 197.99 (CO).

### 3,5-Dibromoheptan-4-one, **3b**<sup>2,9</sup>

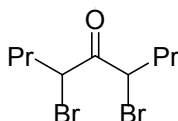


Colorless oil (225 mg, 83%)

<sup>1</sup>H NMR (300.13 MHz, CDCl<sub>3</sub>) δ: **pair dl (rac)**: 1.03 (t, 6H, 2CH<sub>3</sub>, *J* = 7.3 Hz), 1.94-2.04 (m, 2H, CH<sub>2</sub>), 2.12-2.21 (m, 2H, CH<sub>2</sub>), 4.65 (t, 2H, CHBr, *J* = 7.3 Hz);

<sup>13</sup>C NMR (75.47 MHz, CDCl<sub>3</sub>) δ: **pair dl (rac)**: 11.88 (2CH<sub>3</sub>), 26.06 (2CH<sub>2</sub>), 51.70 (2CHBr), 194.34(CO).

### 4,6-Dibromononane-5-one, **3c**<sup>6,9</sup>

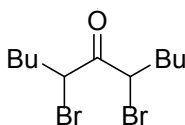


Colorless oil (264 mg, 88%)

<sup>1</sup>H NMR (300.13 MHz, CDCl<sub>3</sub>) δ: **pair dl (rac)**: 0.97 (t, 6H, CH<sub>3</sub>, *J* = 7.3 Hz), 1.38-1.52 (m, 4H, 2CH<sub>2</sub>), 1.90-2.01 (m, 2H, CH<sub>2</sub>), 2.05-2.15 (m, 2H, CH<sub>2</sub>), 4.73 (t, 2H, 2CHBr, *J* = 7.3 Hz);

<sup>13</sup>C NMR (75.47 MHz, CDCl<sub>3</sub>) δ: **pair dl (rac)**: 13.46 (2CH<sub>3</sub>), 20.52 (2CH<sub>2</sub>), 34.56 (2CH<sub>2</sub>), 49.87 (2CHBr), 194.38 (CO).

### 5,7-Dibromoundecan-6-one, **3d**



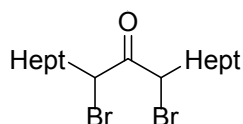
Pale yellow oil (242 mg, 74%)

<sup>1</sup>H NMR (300.13 MHz, CDCl<sub>3</sub>) δ: **pair dl (rac)**: 0.91 (t, 6H, 2CH<sub>3</sub>, *J* = 6.6 Hz), 1.38-1.45 (m, 8H, 4CH<sub>2</sub>), 1.92-1.99 (m, 2H, CH<sub>2</sub>), 2.08-2.20 (m, 2H, CH<sub>2</sub>), 4.71 (t, 2H, 2CHBr, *J* = 7.3 Hz);

<sup>13</sup>C NMR (75.47 MHz, CDCl<sub>3</sub>) δ: **pair dl (rac)**: 13.78 (2CH<sub>3</sub>), 22.16 (2CH<sub>2</sub>), 29.30 (2CH<sub>2</sub>), 32.27 (2CH<sub>2</sub>), 50.15 (2CHBr), 194.38 (CO);

HRMS-ESI: calculated 350.9753 (<sup>79</sup>Br) and 352.9732 (<sup>81</sup>Br) [C<sub>11</sub>H<sub>20</sub>Br<sub>2</sub>NaO]<sup>+</sup> found 350.9749 (<sup>79</sup>Br) and 352.9730 (<sup>81</sup>Br)

### 8,10-Dibromoheptadecan-9-one, 3e



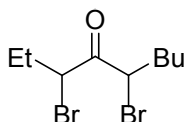
Pale yellow oil (276 mg, 67%)

$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : **pair dl (rac)**: 0.87 (t, 6H,  $2\text{CH}_3$ ,  $J = 6.6$  Hz), 1.27-1.39 (m, 20H,  $10\text{CH}_2$ ), 1.92-1.98 (m, 2H,  $\text{CH}_2$ ), 2.07-2.14 (m, 2H,  $\text{CH}_2$ ), 4.71 (t, 2H,  $2\text{CHBr}$ ,  $J = 7.3$  Hz);

$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : **pair dl (rac)**: 14.05 ( $2\text{CH}_3$ ), 22.59 ( $2\text{CH}_2$ ), 27.19 ( $2\text{CH}_2$ ), 28.98 ( $2\text{CH}_2$ ), 31.69 ( $2\text{CH}_2$ ), 32.55 ( $2\text{CH}_2$ ), 50.19 ( $2\text{CHBr}$ ), 194.40 (CO);

HRMS-ESI: calculated 433.0712 ( $^{79}\text{Br}$ ) and 435.0692 ( $^{81}\text{Br}$ ) [ $\text{C}_{17}\text{H}_{32}\text{Br}_2\text{NaO}$ ] $^+$  found 433.0716 ( $^{79}\text{Br}$ ) and 435.0703 ( $^{81}\text{Br}$ )

### 3,5-Dibromononan-4-one, 3f



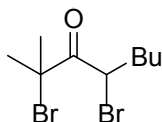
Pale yellow oil (216 mg, 72%)

$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : **pair dl (rac)**: 0.91 (t, 3H,  $\text{CH}_3$ ,  $J = 6.6$  Hz), 1.03 (t, 3H,  $\text{CH}_3$ ,  $J = 7.3$  Hz), 1.36-1.39 (m, 4H,  $2\text{CH}_2$ ), 1.92-2.04 (m, 2H,  $\text{CH}_2\text{CHBr}$ ), 2.08-2.21 (m, 2H,  $\text{CH}_2\text{CHBr}$ ), 4.65 (t, 1H,  $\text{CHBr}$ ,  $J = 7.3$  Hz), 4.71 (t, 1H,  $\text{CHBr}$ ,  $J = 7.3$  Hz);

$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : **pair dl (rac)**: 11.89 ( $\text{CH}_3$ ), 13.80 ( $\text{CH}_3$ ), 22.16 ( $\text{CH}_2$ ), 26.04 ( $\text{CH}_2$ ), 29.30 ( $\text{CH}_2$ ), 32.26 ( $\text{CH}_2$ ), 50.09 ( $\text{CHBr}$ ), 51.74 ( $\text{CHBr}$ ), 194.35 (CO);

HRMS-ESI: calculated 320.9460 ( $^{79}\text{Br}$ ) and 322.9440 ( $^{81}\text{Br}$ ) [ $\text{C}_9\text{H}_{16}\text{Br}_2\text{NaO}$ ] $^+$  found 320.9459 ( $^{79}\text{Br}$ ) and 322.9440 ( $^{81}\text{Br}$ )

### 2,4-Dibromo-2-methyloctan-3-one, 3g



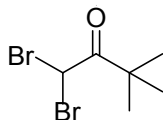
Pale yellow oil (195 mg, 65%)

$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 0.91 (t, 3H,  $\text{CH}_3$ ,  $J = 6.6$  Hz), 1.33-1.54 (m, 4H,  $2\text{CH}_2$ ), 1.88 (s, 3H  $\text{CH}_3$ ), 2.05-2.10 (m, 5H,  $\text{CH}_2$ ,  $\text{CH}_3$ ), 4.94 (t, 1H,  $\text{CHBr}$ ,  $J = 7.3$  Hz);

$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 13.78 ( $\text{CH}_3$ ), 22.07 ( $\text{CH}_2$ ), 29.19 ( $\text{CH}_3$ ), 29.39 ( $\text{CH}_3$ ), 31.00 ( $\text{CH}_2$ ), 34.32 ( $\text{CH}_2$ ), 45.65 ( $\text{CHBr}$ ), 64.02 ( $(\text{CH}_3)_2\text{CBr}$ ), 198.04 (CO);

HRMS-ESI: calculated 320.9460 ( $^{79}\text{Br}$ ) and 322.9440 ( $^{81}\text{Br}$ ) [ $\text{C}_9\text{H}_{16}\text{Br}_2\text{NaO}$ ] $^+$  found 320.9452 ( $^{79}\text{Br}$ ) and 322.9435 ( $^{81}\text{Br}$ )

**1,1-Dibromo-3,3-dimethylbutan-2-one, 6a<sup>9</sup>**

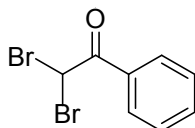


White crystals (216 mg, 84%); mp = 74-75 °C.

$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 1.27 (s 9H, 3 $\text{CH}_3$ ), 6.32 (s, 1H,  $\text{CHBr}_2$ );

$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 26.79 (2 $\text{CH}_3$ ), 37.34 ( $\text{CH}_3$ ), 43.98 ( $\text{CHBr}_2$ ), 201.52 (CO).

**2,2-Dibromo-1-phenylethanone, 6b<sup>8</sup>**

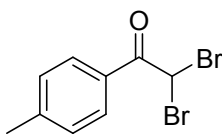


White crystals (222 mg, 80%); mp = 35-36 °C.

$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 6.72 (s, 1H,  $\text{CHBr}_2$ ), 7.49 (t, 2H, 2 $\text{CH}_{\text{ar}}$ ,  $J = 7.3$  Hz), 7.62 (t, 1H,  $\text{CH}_{\text{ar}}$ ,  $J = 7.3$  Hz), 8.06 (d, 2H, 2 $\text{CH}_{\text{ar}}$ ,  $J = 7.3$  Hz);

$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 39.71( $\text{CHBr}_2$ ), 128.88 (2CH), 129.61 (2CH), 134.39 (2CH), 185.88 (CO).

**2,2-Dibromo-1-(p-tolyl)ethan-1-one, 6d<sup>8</sup>**

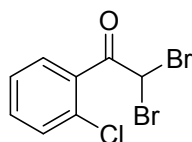


White crystals (190 mg, 65%); mp 97-98°C

$^1\text{H}$  NMR (300.13 MHz,  $\text{CDCl}_3$ )  $\delta$ : 2.44 (s, 3H,  $\text{CH}_3$ ), 6.68 (s, 1H; CH), 7.29 (d,  $J = 8.4$  Hz, 2H), 7.98 (d,  $J = 8.4$  Hz, 2H);

$^{13}\text{C}$  NMR (75.47 MHz,  $\text{CDCl}_3$ )  $\delta$ : 21.81 ( $\text{CH}_3$ ), 39.81 (CH), 128.10 (C), 129.64 (CH), 129.82 (C), 145.70 (C), 185.62 (CO).

## 2,2-Dibromo-1-(2-chlorophenyl)ethan-1-one, 6e<sup>14</sup>

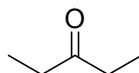


Pale yellow oil (146 mg, 47%)

<sup>1</sup>H NMR (300.13 MHz, CDCl<sub>3</sub>) δ: 6.78 (s, 1H; CH<sub>2</sub>), 7.35-7.40 (m, 1H), 7.43-7.47 (m, 2H), 7.59-7.62 (m, 1H);

<sup>13</sup>C NMR (75.47 MHz, CDCl<sub>3</sub>) δ: 42.05 (CH), 127.20 (CH), 130.45 (CH), 130.90 (CH), 130.95 (C), 132.97 (CH), 134.07 (C), 188.76 (CO).

## Pentan-3-one, 7a



Colorless oil (28 mg, 33%)

<sup>1</sup>H NMR (300.13 MHz, CDCl<sub>3</sub>) δ: 0.97 (t, 6H, 2CH<sub>3</sub>, *J* = 7.3 Hz), 2.35 (t, 4H, 2CH<sub>2</sub>, *J* = 7.3 Hz).

## References

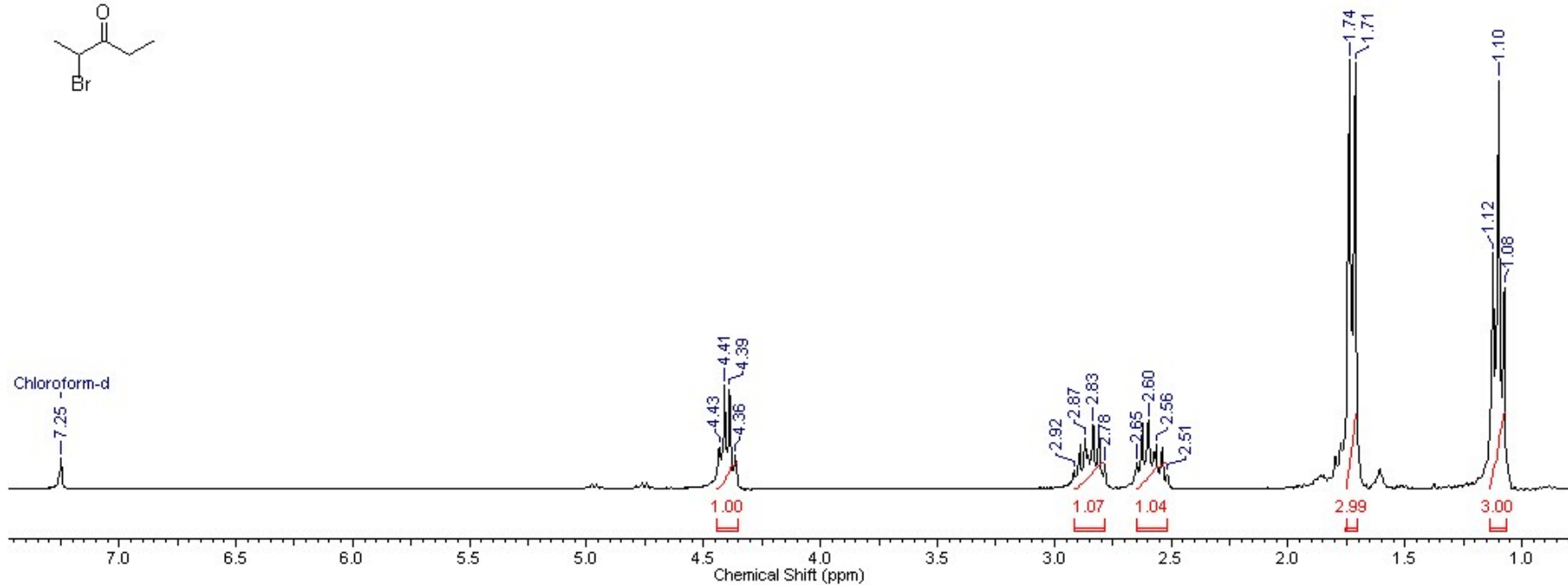
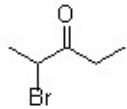
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Copies of  $^1\text{H}$ ,  $^{13}\text{C}$  NMR and HRMS spectra of synthesized products

$^1\text{H}$  NMR of 2-bromopentan-3-one, **2a**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	$^1\text{H}$	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg3	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	24.700						

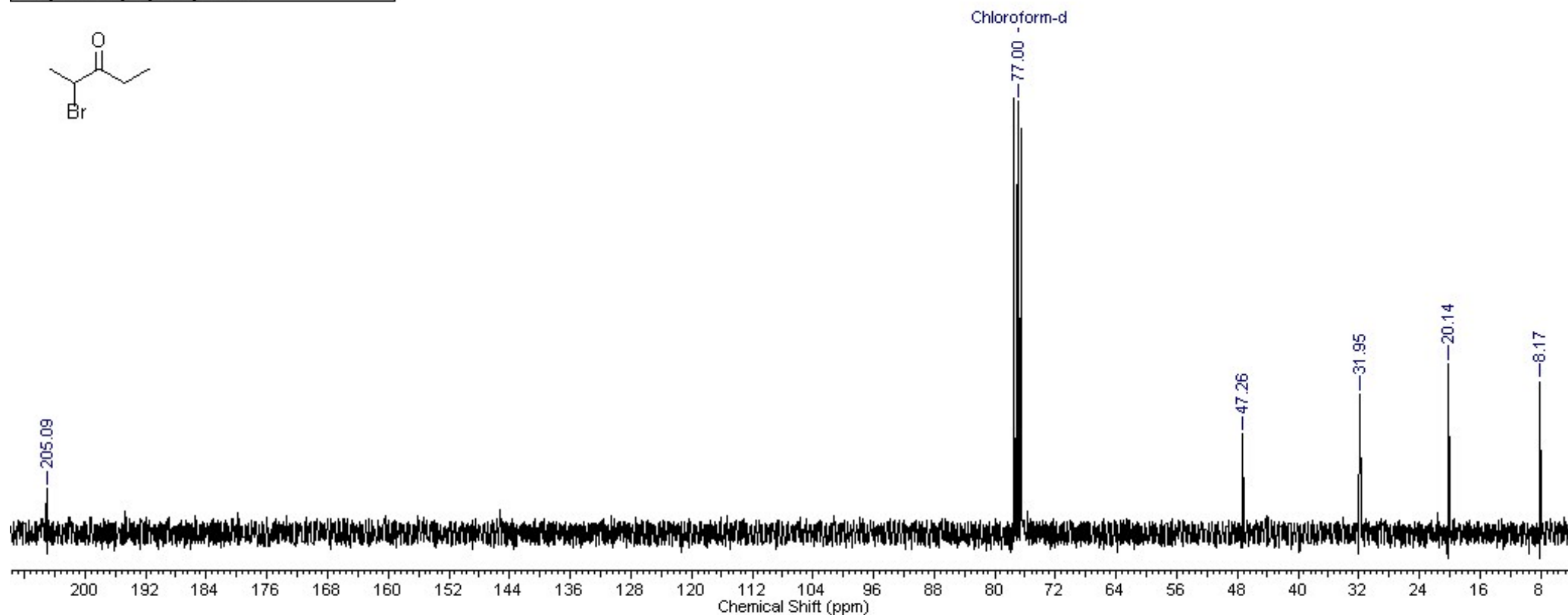
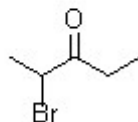


No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height	No.	Annotation	(ppm)
1	1.08	322.7	0.4716	10	2.78	835.5	0.0576	1	Chloroform-d	7.25
2	1.10	330.0	0.9535	11	2.83	850.2	0.1513			
3	1.12	337.3	0.5519	12	2.87	860.5	0.1203			
4	1.71	514.2	0.9941	13	2.92	875.1	0.0453			
5	1.74	520.8	1.0000	14	4.36	1309.5	0.0819			
6	2.51	754.8	0.0363	15	4.39	1316.8	0.2348			
7	2.56	769.5	0.1055	16	4.41	1323.4	0.2433			
8	2.60	779.8	0.1614	17	4.43	1330.0	0.0996			
9	2.65	794.4	0.0636	18	7.25	2176.0	0.0734			

<sup>13</sup>C NMR of 2-bromopentan-3-one, **2a**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	230	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	24.800						



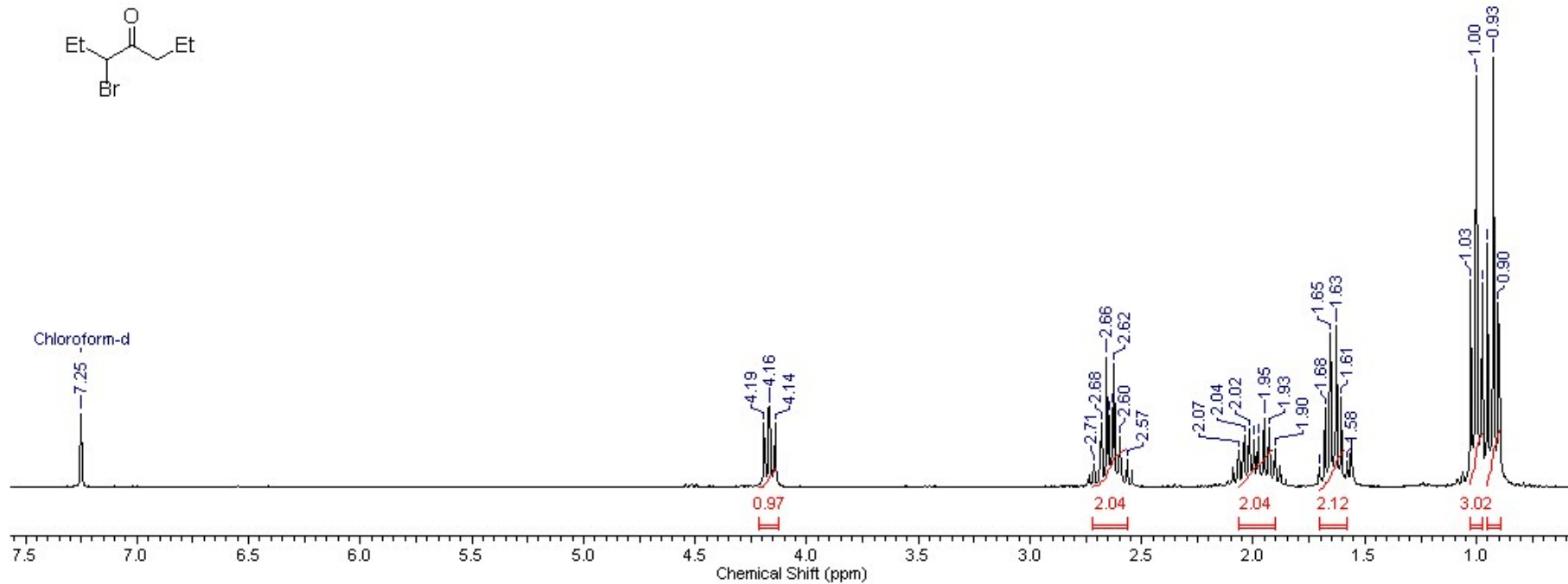
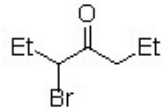
No.	(ppm)	(Hz)	Height
1	8.17	616.7	0.3504
2	20.14	1520.1	0.3913
3	31.95	2411.4	0.3224
4	47.26	3566.9	0.2309
5	77.00	5811.7	0.9903
6	205.09	15479.5	0.1063

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 3-bromoheptan-4-one, **2b**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	27.900						



No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height
1	0.90	270.6	0.4289	12	1.70	511.2	0.0463	23	2.62	787.1	0.2893
2	0.93	277.9	1.0000	13	1.90	571.4	0.0906	24	2.63	790.0	0.1869
3	0.95	285.3	0.5676	14	1.93	578.7	0.1395	25	2.65	794.4	0.1686
4	0.98	293.3	0.4744	15	1.95	586.1	0.1618	26	2.66	797.4	0.3035
5	1.00	300.7	0.9563	16	1.98	593.4	0.1166	27	2.68	804.7	0.1511
6	1.03	308.0	0.4828	17	2.00	599.3	0.1118	28	2.71	814.2	0.0550
7	1.58	474.5	0.0599	18	2.02	605.9	0.1362	29	4.14	1243.4	0.1482
8	1.61	481.9	0.2097	19	2.04	612.5	0.1215	30	4.16	1250.0	0.1893
9	1.63	489.2	0.3750	20	2.07	619.8	0.0853	31	4.17	1251.5	0.1827
10	1.65	496.6	0.3575	21	2.57	770.2	0.0641	32	4.19	1258.1	0.1507
11	1.68	503.9	0.1831	22	2.60	780.5	0.1187	33	7.25	2176.0	0.1724

No.	Annotation	(ppm)
1	Chloroform-d	7.25

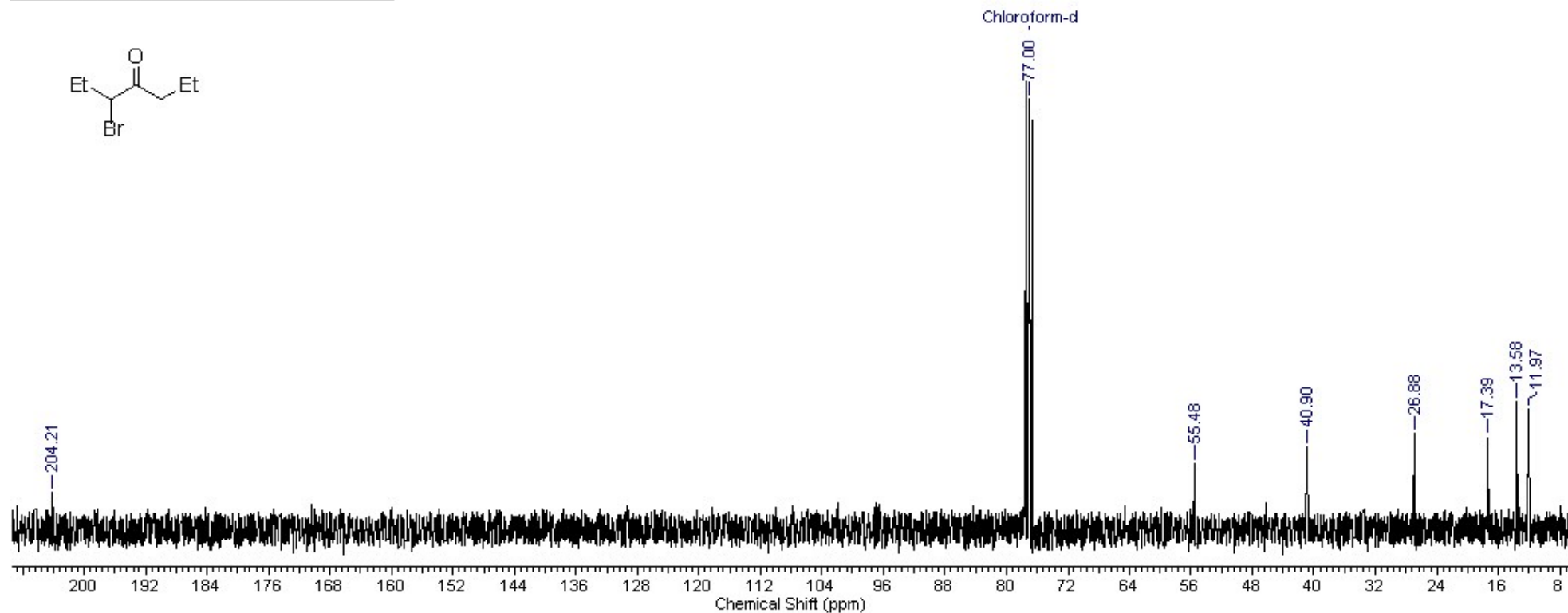
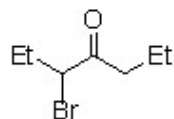
No.	(ppm)	Value	Absolute Value
1	[0.89 ..0.95]	3.000	2.46317e+8
2	[0.97 ..1.03]	3.022	2.48118e+8
3	[1.58 ..1.70]	2.118	1.73930e+8
4	[1.90 ..2.07]	2.044	1.67822e+8
5	[2.56 ..2.72]	2.043	1.67725e+8
6	[4.13 ..4.21]	0.974	8.00050e+7



<sup>13</sup>C NMR of 3-bromoheptan-4-one, **2b**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	111	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	28.100						



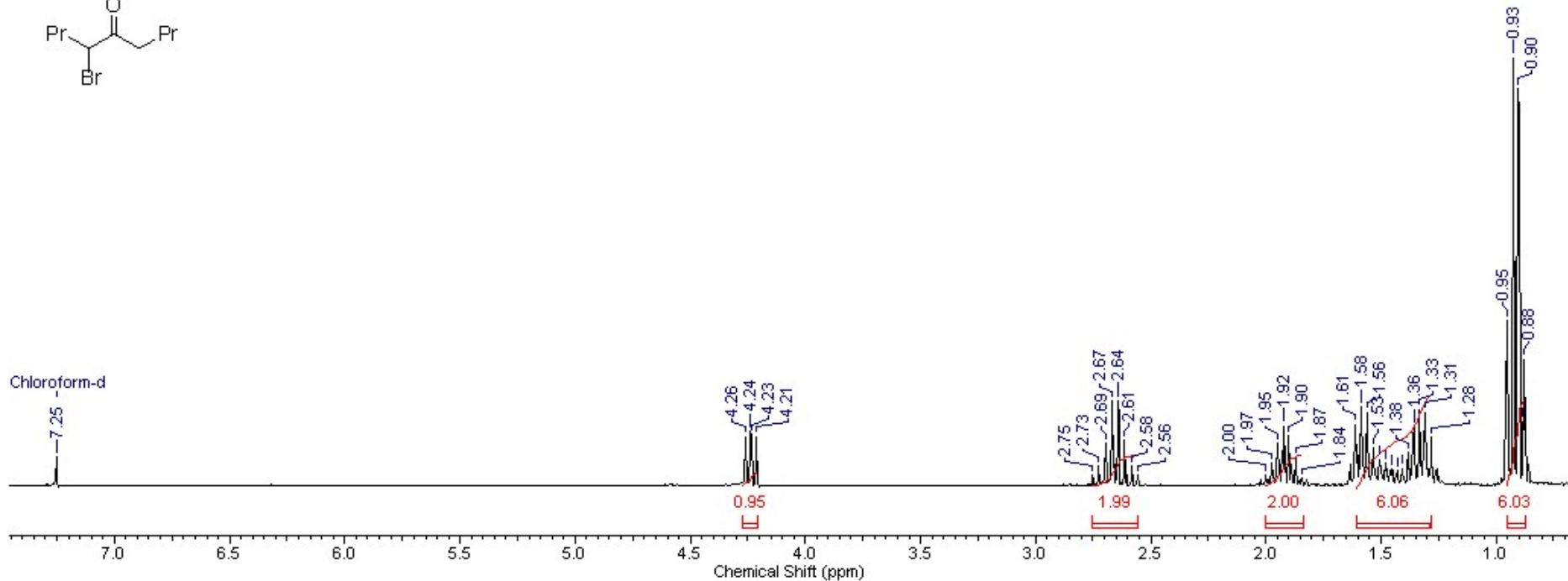
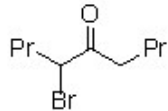
No.	(ppm)	(Hz)	Height
1	11.97	903.1	0.2666
2	13.58	1024.7	0.2838
3	17.39	1312.3	0.2039
4	26.88	2028.8	0.2108
5	40.90	3087.0	0.1821
6	55.48	4187.3	0.1457
7	77.00	5811.7	0.9564
8	204.21	15413.1	0.0807

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 4-bromononan-5-one, **2c**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	65536	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	27.500						



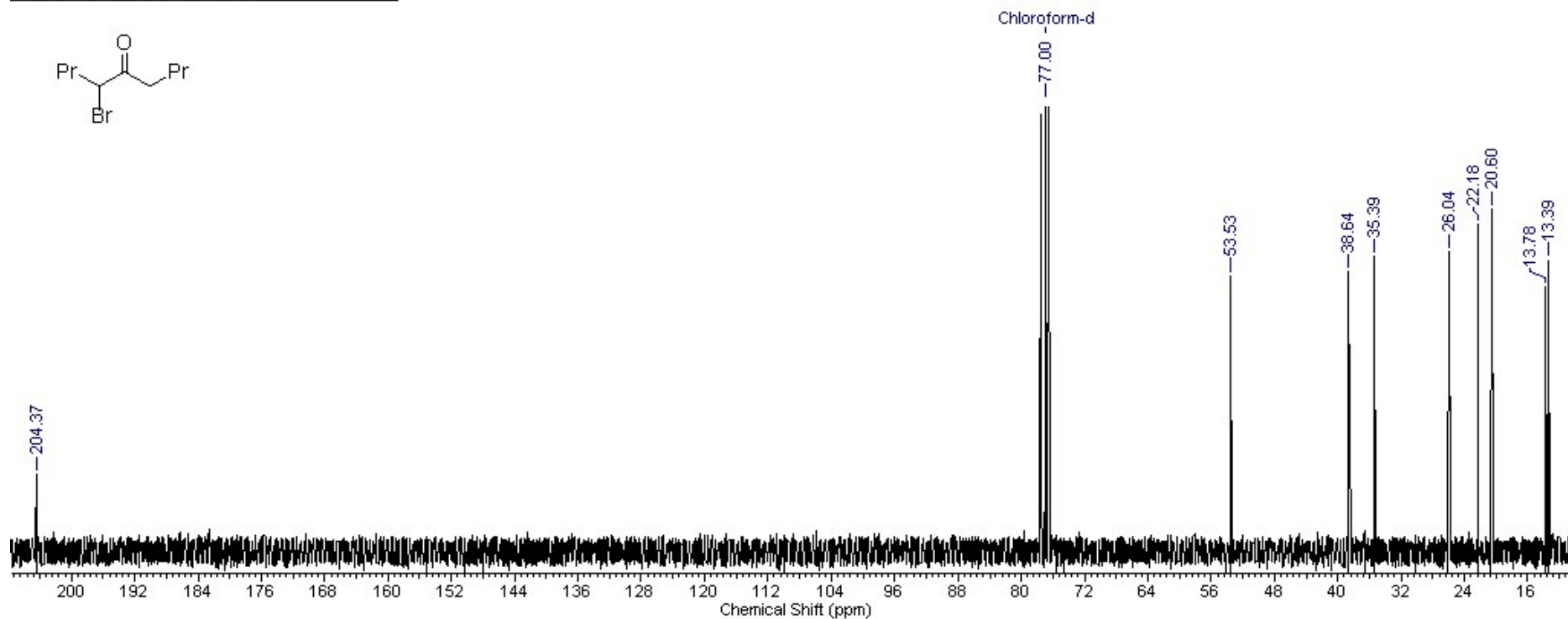
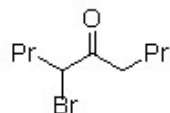
No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height
1	0.88	263.1	0.2954	11	1.41	421.8	0.0404	21	1.87	561.1	0.0651	31	2.67	801.0	0.1976
2	0.88	264.7	0.1493	12	1.43	428.9	0.0337	22	1.90	569.9	0.1174	32	2.69	808.3	0.0972
3	0.90	270.5	0.9289	13	1.45	436.1	0.0389	23	1.92	576.2	0.1391	33	2.73	818.1	0.0454
4	0.93	278.1	1.0000	14	1.48	443.6	0.0528	24	1.95	585.5	0.0992	34	2.75	825.5	0.0229
5	0.95	285.6	0.3865	15	1.50	451.2	0.0608	25	1.97	592.0	0.0524	35	4.21	1263.9	0.1148
6	1.28	384.6	0.1120	16	1.53	460.2	0.0883	26	2.00	599.8	0.0254	36	4.23	1270.4	0.1199
7	1.31	391.8	0.1711	17	1.56	467.8	0.1718	27	2.56	767.3	0.0243	37	4.24	1272.0	0.1268
8	1.33	399.5	0.1787	18	1.58	475.6	0.1836	28	2.58	774.5	0.0441	38	4.26	1278.5	0.1151
9	1.36	407.1	0.1377	19	1.61	483.0	0.1428	29	2.61	784.4	0.1049	39	7.25	2176.0	0.0659
10	1.38	414.6	0.0759	20	1.84	552.2	0.0176	30	2.64	791.6	0.1980				

No.	Annotation	(ppm)
1	Chloroform-d	7.25

<sup>13</sup>C NMR of 4-bromononan-5-one, **2c**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	156	Original Points Count	16316
Points Count	131072	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	27.500						



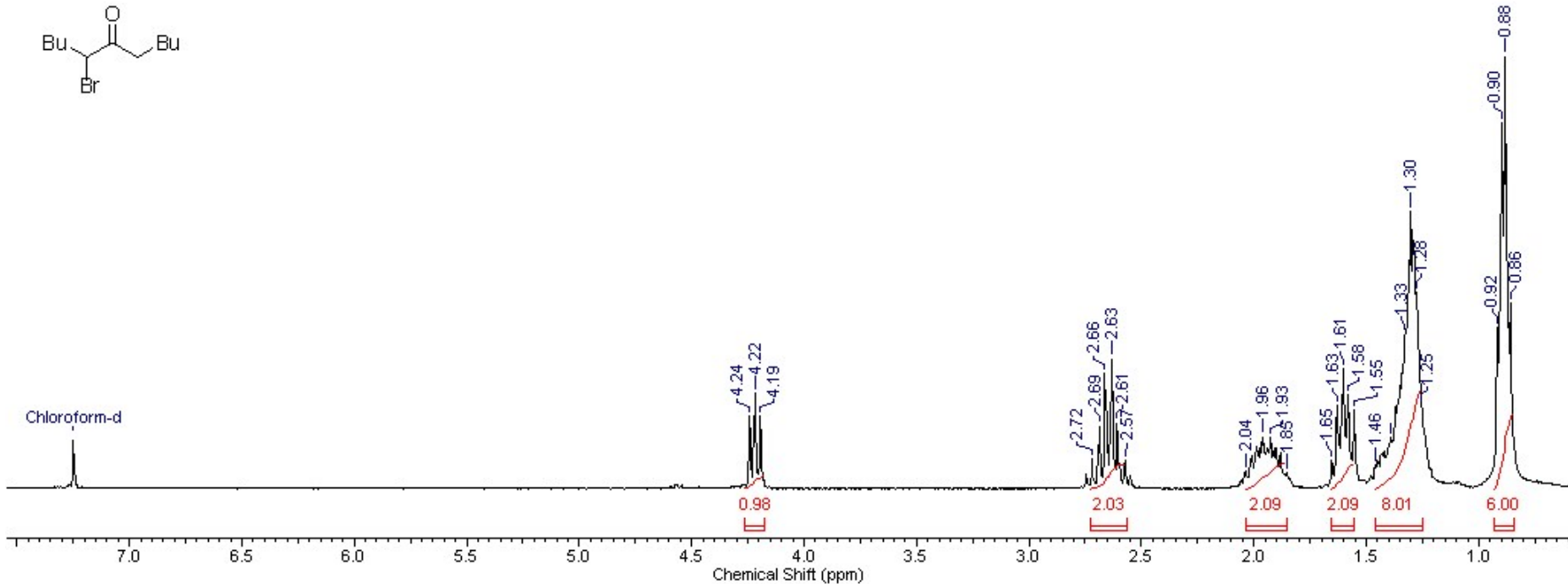
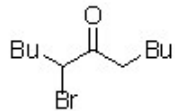
No.	(ppm)	(Hz)	Height
1	13.39	1010.6	0.6440
2	13.78	1039.9	0.5852
3	20.60	1555.1	0.7583
4	22.18	1674.3	0.7229
5	26.04	1965.7	0.6627
6	35.39	2670.7	0.6519
7	38.64	2916.1	0.6180
8	53.53	4040.6	0.6095
9	77.00	5811.7	1.0000
10	204.37	15424.8	0.1687

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 5-bromoundecan-6-one, **2d**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	<sup>1</sup> H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	27.900						

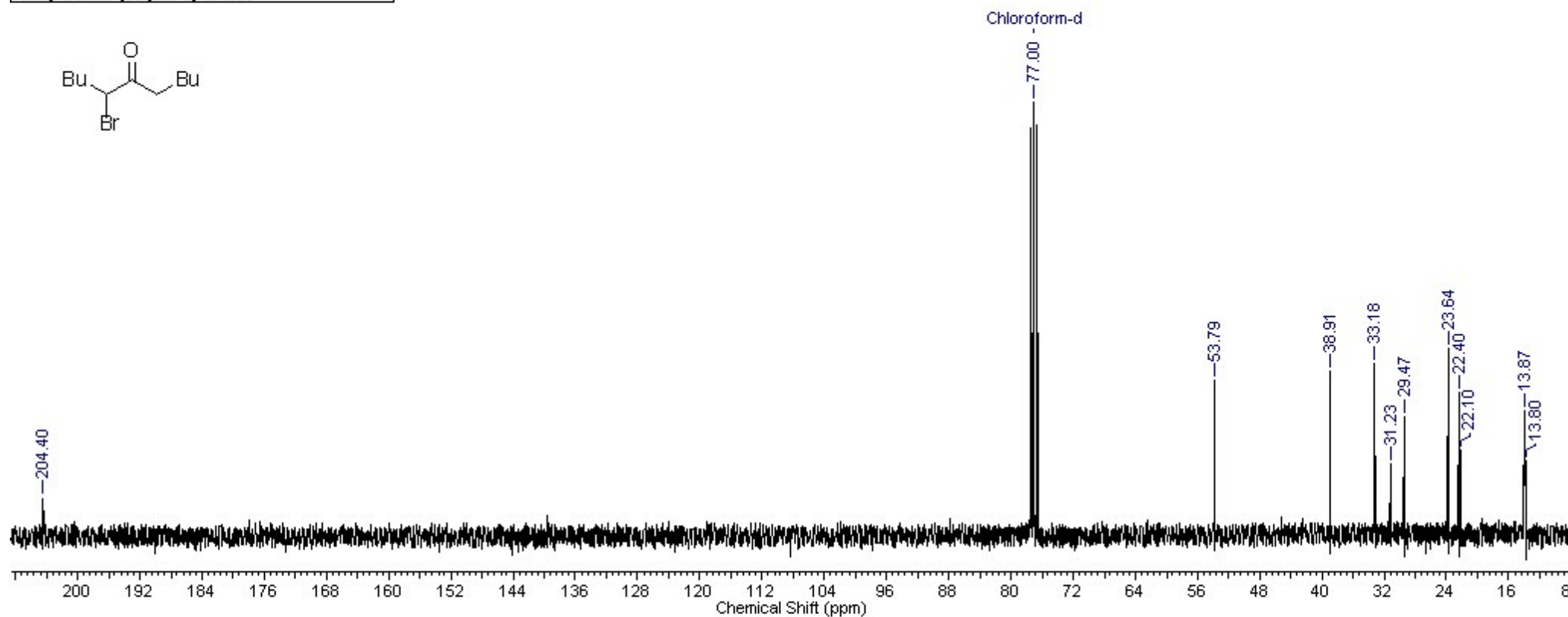
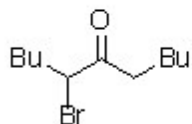


No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height	No.	Annotation	(ppm)	No.	(ppm)	Value	Absolute Value
1	0.86	258.1	0.4292	11	1.55	466.5	0.1821	21	2.61	782.7	0.1524	1	Chloroform-d	7.25	1	[0.84 .. 0.93]	6.000	3.68038e+8
2	0.88	264.7	1.0000	12	1.58	474.5	0.2170	22	2.63	790.0	0.3009	2			2	[1.25 .. 1.46]	8.010	4.91373e+8
3	0.90	269.1	0.8476	13	1.61	481.9	0.2779	23	2.66	798.8	0.2662	3			3	[1.55 .. 1.65]	2.093	1.28423e+8
4	0.92	275.7	0.3739	14	1.63	489.2	0.1931	24	2.69	806.9	0.1459	4			4	[1.85 .. 2.04]	2.094	1.28475e+8
5	1.25	376.2	0.1949	15	1.65	496.6	0.0665	25	2.72	816.4	0.0694	5			5	[2.57 .. 2.73]	2.025	1.24228e+8
6	1.28	382.8	0.4551	16	1.85	556.0	0.0387	26	4.19	1258.9	0.1673	6			6	[4.17 .. 4.27]	0.980	6.01175e+7
7	1.30	390.2	0.6426	17	1.93	578.0	0.1182	27	4.22	1265.5	0.2208							
8	1.33	399.7	0.3567	18	1.96	587.5	0.1207	28	4.24	1273.5	0.1681							
9	1.39	418.1	0.1203	19	2.04	611.7	0.0413											
10	1.46	438.6	0.0554	20	2.57	772.4	0.0652											

<sup>13</sup>C NMR of 5-bromoundecan-6-one, **2d**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	230	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	27.900						



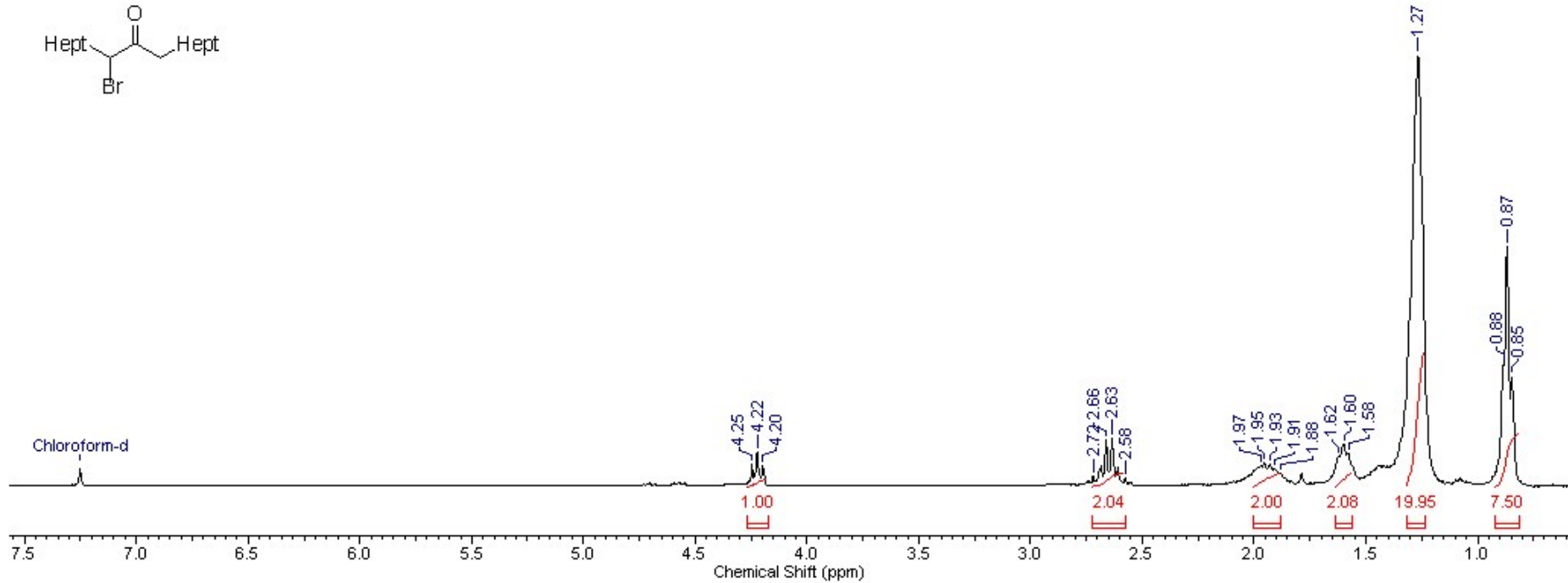
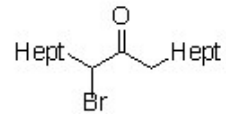
No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height
1	13.80	1041.3	0.1695	7	31.23	2357.2	0.1618
2	13.87	1046.9	0.2853	8	33.18	2504.3	0.3945
3	22.10	1668.3	0.1946	9	38.91	2936.6	0.3766
4	22.40	1690.4	0.3270	10	53.79	4060.1	0.3547
5	23.64	1784.4	0.4289	11	77.00	5811.7	1.0000
6	29.47	2224.5	0.2719	12	204.40	15427.5	0.0839

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 8-bromoheptadecan-9-one, **2e**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	27.100						

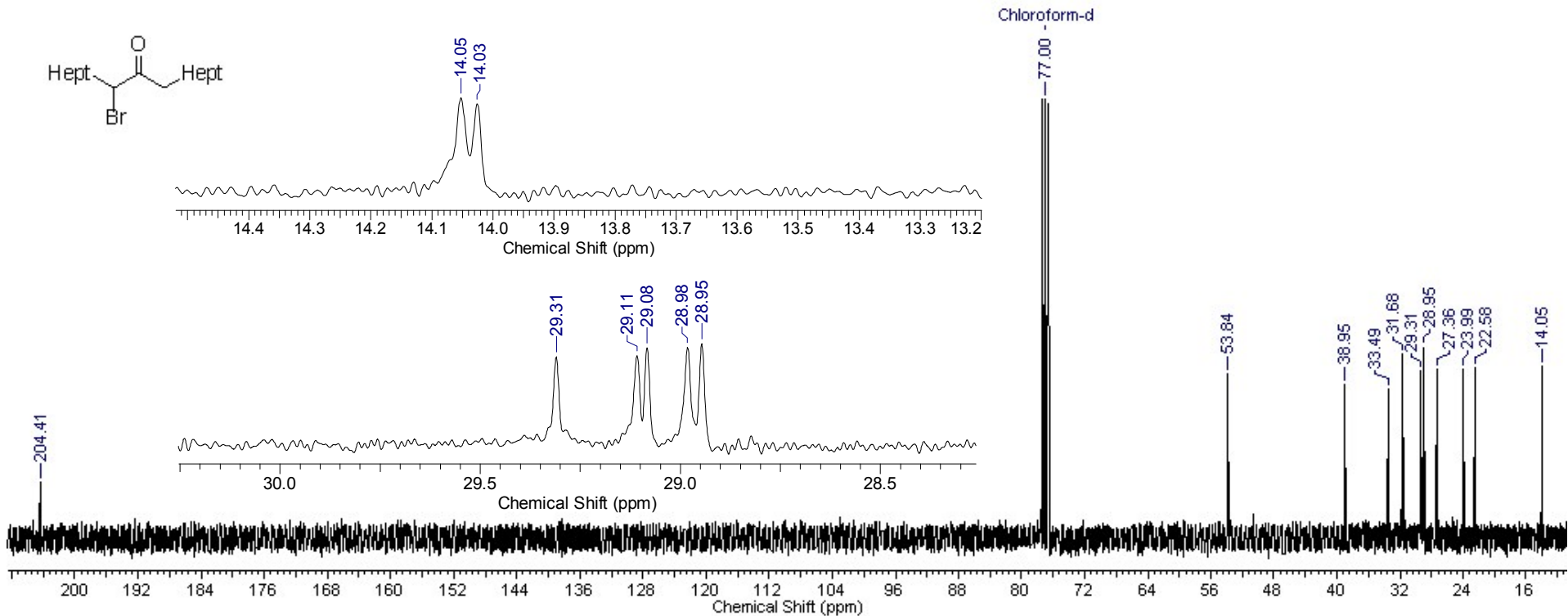


No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height	No.	Annotation	(ppm)	No.	(ppm)	Value	Absolute Value
1	0.85	253.7	0.2537	11	1.95	586.1	0.0544	1	Chloroform-d	7.25	1	[0.81 .. 0.92]	7.500	3.56878e+8
2	0.87	260.3	0.5569	12	1.97	591.2	0.0491	2			2	[1.23 .. 1.31]	19.954	9.49445e+8
3	0.88	265.4	0.2841	13	2.58	773.2	0.0184	3			3	[1.56 .. 1.63]	2.079	9.89329e+7
4	1.27	379.9	1.0000	14	2.63	790.8	0.1129	4			4	[1.88 .. 2.00]	2.000	9.51624e+7
5	1.58	473.1	0.0770	15	2.66	798.8	0.1083	5			5	[2.58 .. 2.72]	2.036	9.68686e+7
6	1.60	479.7	0.0966	16	2.72	815.7	0.0231	6			6	[4.17 .. 4.27]	1.000	4.75818e+7
7	1.62	486.3	0.0696	17	4.20	1259.6	0.0490							
8	1.88	564.8	0.0299	18	4.22	1266.9	0.0794							
9	1.91	572.9	0.0407	19	4.25	1274.3	0.0499							
10	1.93	579.5	0.0510											

<sup>13</sup>C NMR of 8-bromoheptadecan-9-one, 2e

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	413	Original Points Count	16316
Points Count	262144	Pulse Sequence	zcpq30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	29.200						



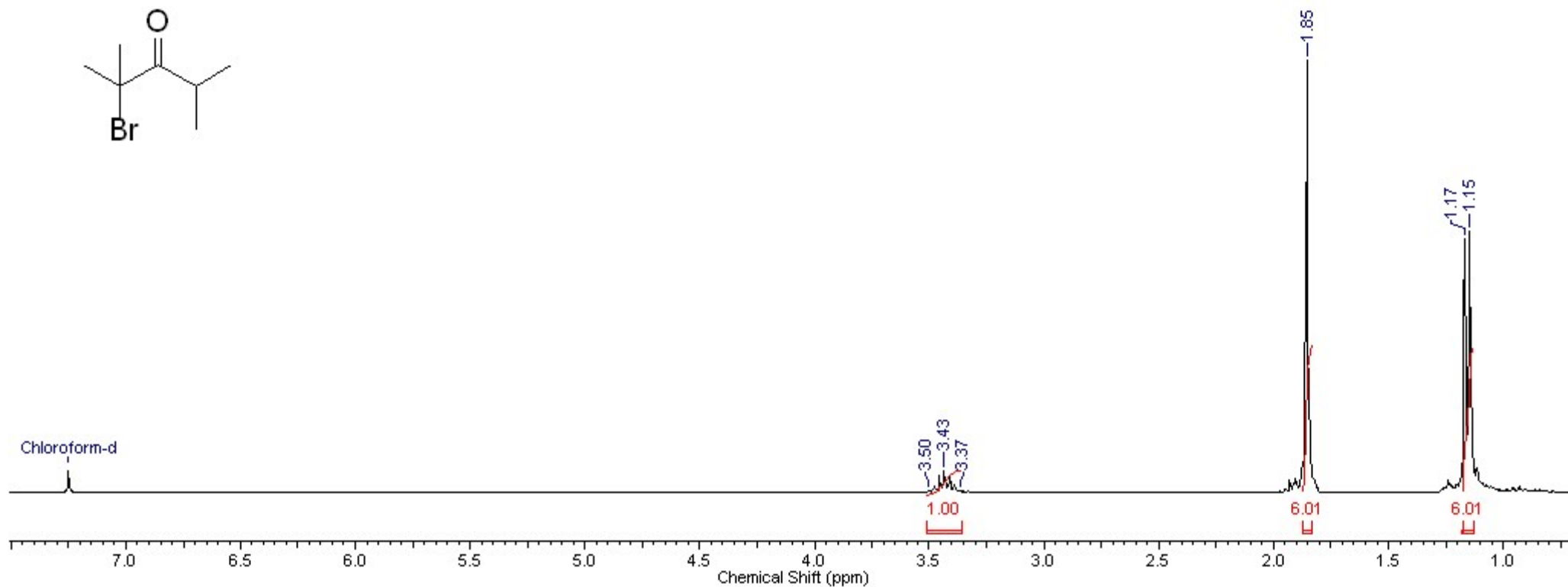
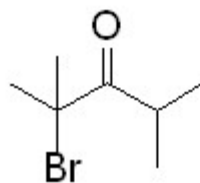
No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height	No.	Annotation	(ppm)
1	14.03	1058.6	0.3704	10	29.11	2197.0	0.3884	1	Chloroform-d	77.00
2	14.05	1060.6	0.3945	11	29.31	2212.2	0.3839			
3	22.58	1704.2	0.3934	12	31.68	2391.2	0.4225			
4	22.63	1707.7	0.3764	13	31.81	2400.5	0.3765			
5	23.99	1810.6	0.3893	14	33.49	2527.7	0.3447			
6	27.36	2064.7	0.3892	15	38.95	2939.6	0.3531			
7	28.95	2184.8	0.4380	16	53.84	4063.3	0.3776			
8	28.98	2187.5	0.4240	17	77.00	5811.7	0.9973			
9	29.08	2195.1	0.4222	18	204.41	15427.7	0.1345			



<sup>1</sup>H NMR of 2-bromo-2,4-dimethylpentan-3-one, **2h**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zgq	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	27.600						



No.	(ppm)	(Hz)	Height
1	1.15	343.9	0.6056
2	1.17	350.6	0.5890
3	1.85	556.7	1.0000
4	3.37	1010.1	0.0046
5	3.43	1030.7	0.0508
6	3.50	1050.5	0.0046

No.	Annotation	(ppm)
1	Chlbroform-d	7.25

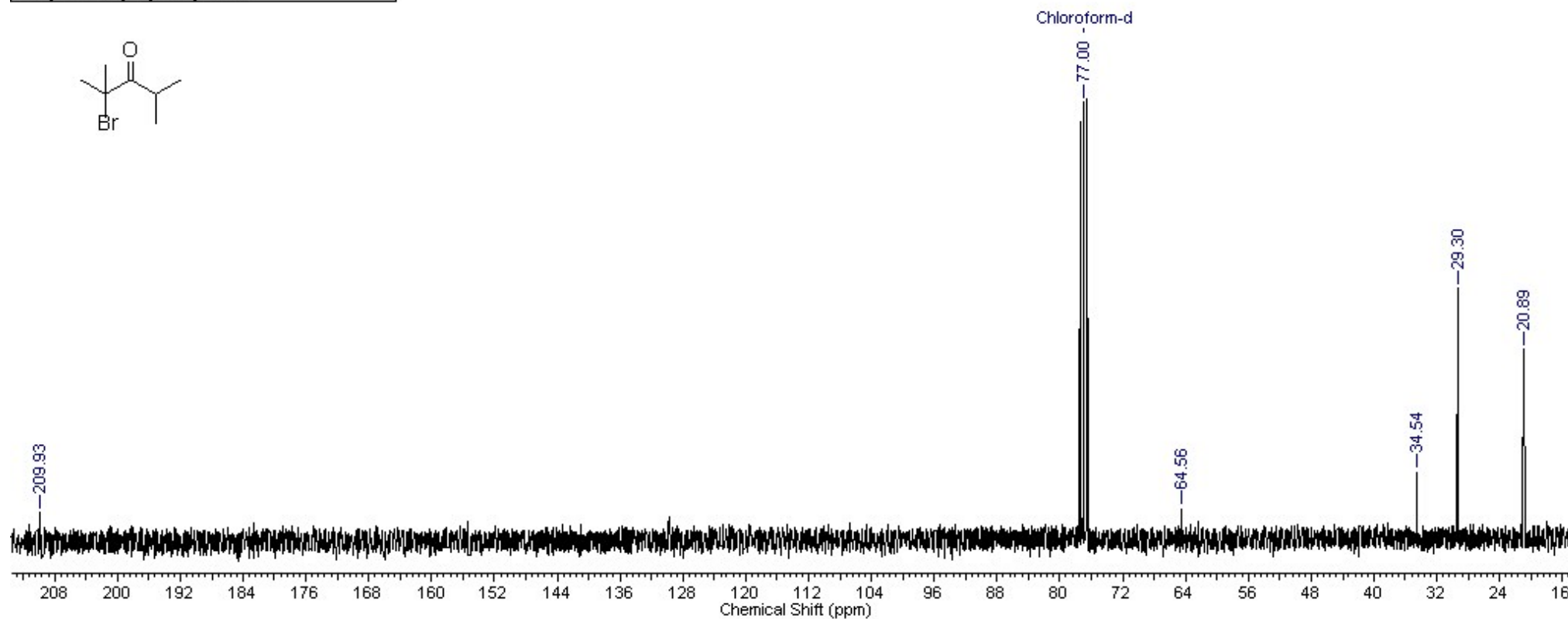
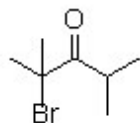
No.	(ppm)	Value	Absolute Value
1	[1.13 .. 1.18]	6.013	3.93017e+8
2	[1.84 .. 1.87]	6.011	3.92933e+8
3	[3.36 .. 3.51]	1.000	6.53656e+7



<sup>13</sup>C NMR of 2-bromo-2,4-dimethylpentan-3-one, **2h**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	307	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	27.500						



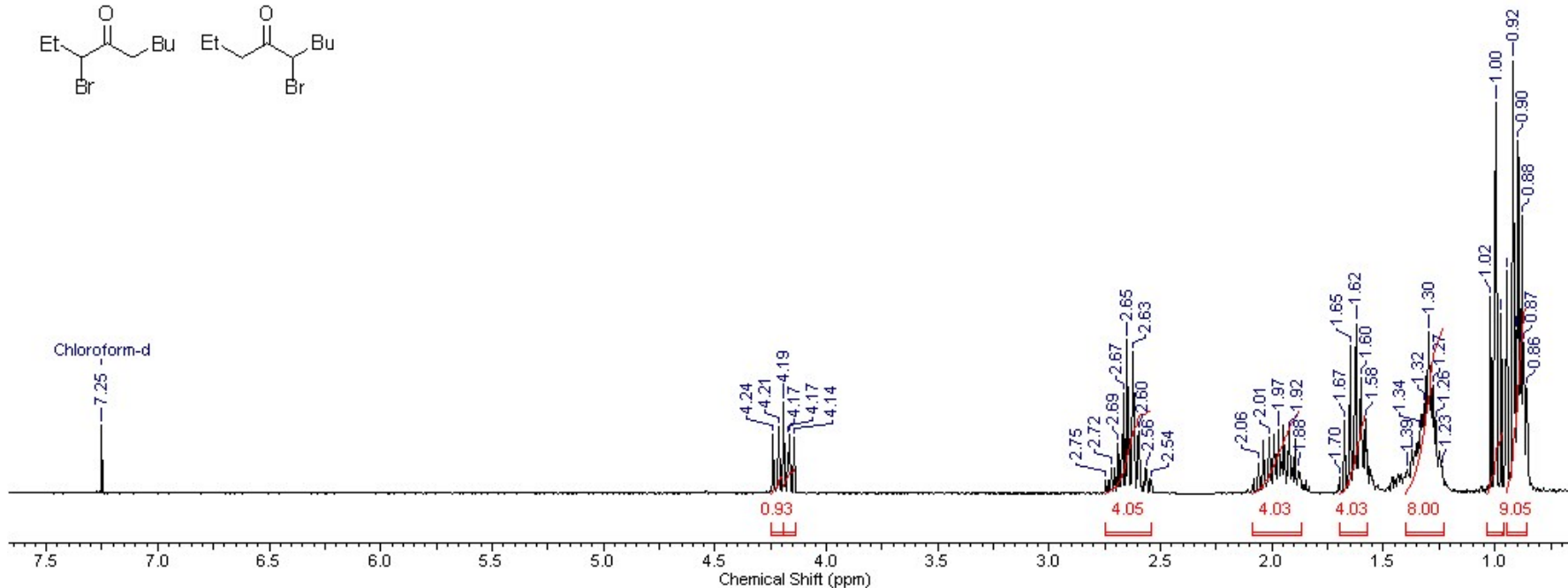
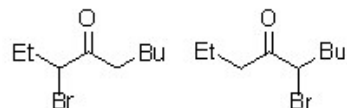
No.	(ppm)	(Hz)	Height
1	20.89	1576.5	0.4342
2	29.30	2211.2	0.5723
3	34.54	2607.1	0.1576
4	64.56	4872.9	0.0755
5	77.00	5811.7	0.9926
6	209.93	15844.4	0.0656

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of mixture 3-bromononan-4-one (2f) и 5-bromononan-4-one (2f') 1:1

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	131072	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	26.700						



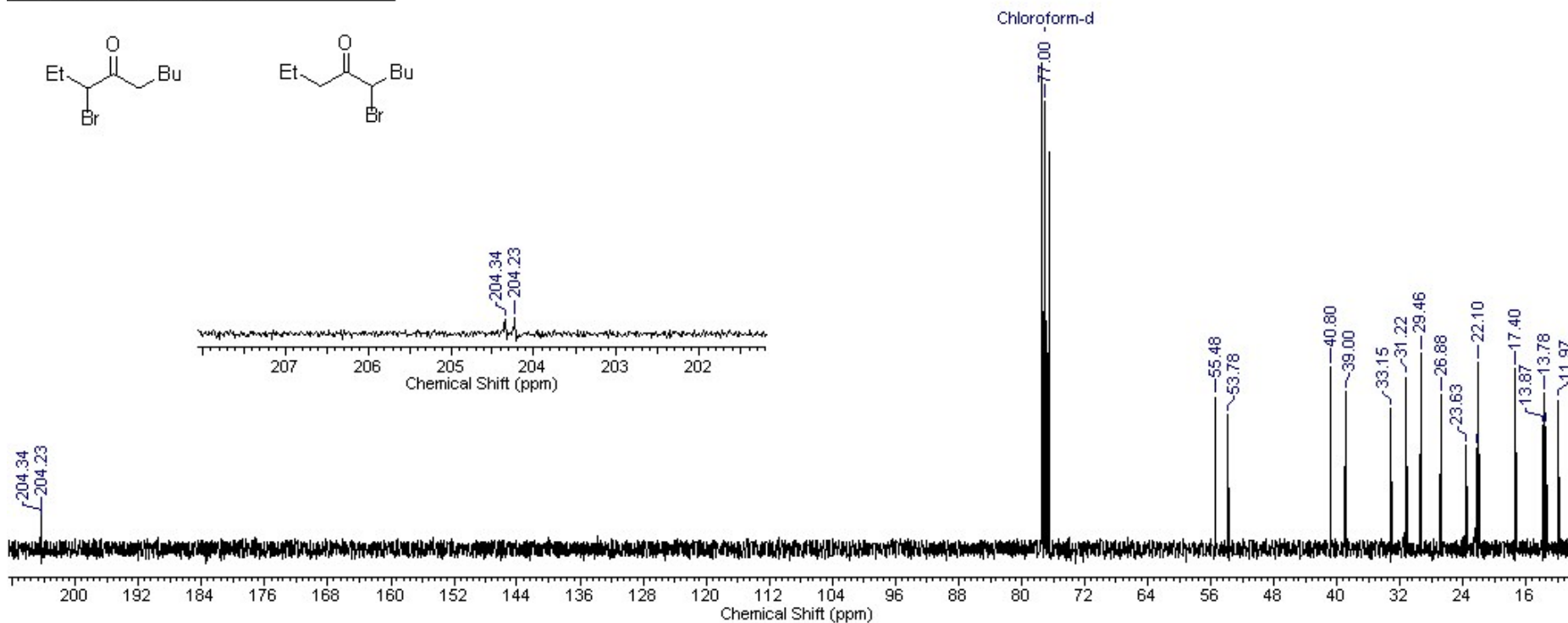
No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height
1	0.86	257.0	0.2431	13	1.27	382.3	0.2486	25	1.88	564.7	0.0529	37	2.72	817.0	0.0600
2	0.87	261.0	0.3479	14	1.30	389.5	0.3720	26	1.92	576.8	0.1431	38	2.75	824.4	0.0300
3	0.88	264.0	0.6413	15	1.32	395.0	0.2074	27	1.97	591.6	0.1484	39	4.14	1243.8	0.1283
4	0.90	268.7	0.8133	16	1.34	401.9	0.1449	28	2.01	603.7	0.1291	40	4.17	1250.2	0.1358
5	0.90	270.6	0.3775	17	1.37	411.6	0.1008	29	2.06	618.2	0.0715	41	4.17	1251.8	0.1310
6	0.92	276.5	1.0000	18	1.39	417.6	0.0545	30	2.54	762.4	0.0291	42	4.19	1257.7	0.2112
7	0.95	283.9	0.5131	19	1.58	474.6	0.1712	31	2.56	769.5	0.0538	43	4.21	1264.0	0.1523
8	0.97	291.6	0.4163	20	1.60	480.0	0.2672	32	2.60	779.6	0.1428	44	4.22	1265.5	0.1451
9	1.00	298.9	0.9031	21	1.62	487.3	0.3919	33	2.63	788.3	0.3253	45	4.24	1272.0	0.1370
10	1.02	306.2	0.4541	22	1.65	494.6	0.3410	34	2.65	795.4	0.3535	46	7.25	2176.0	0.1574
11	1.23	370.2	0.0616	23	1.67	502.0	0.1682	35	2.67	799.9	0.2309				
12	1.26	379.5	0.1669	24	1.70	509.4	0.0364	36	2.69	807.3	0.1139				

No.	Annotation	(ppm)
1	Chloroform-d	7.25

<sup>13</sup>C NMR of mixture 3-bromononan-4-one (**2f**) и 5-bromononan-4-one (**2f'**) 1:1

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	592	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	26.700						



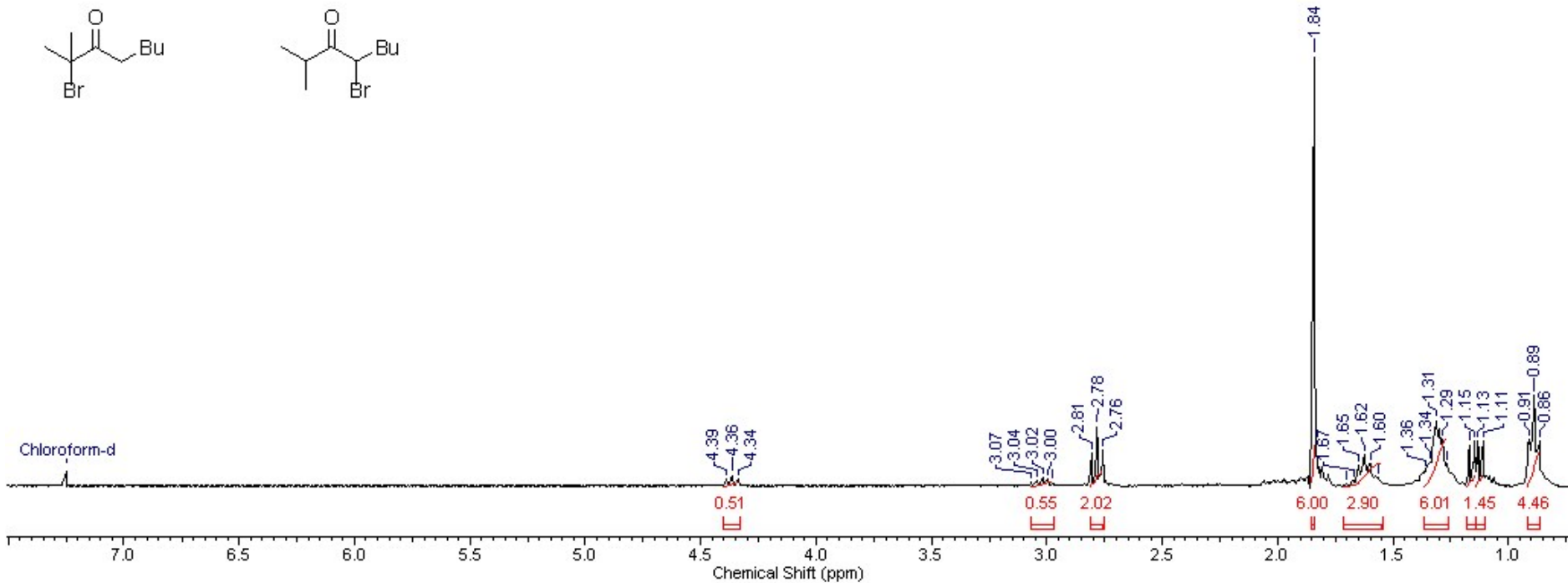
No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height
1	11.97	903.1	0.3044	11	31.22	2356.1	0.3519
2	13.58	1024.7	0.2510	12	33.15	2502.1	0.2880
3	13.78	1040.2	0.3174	13	39.00	2943.3	0.3224
4	13.87	1046.9	0.2526	14	40.80	3079.3	0.3734
5	17.40	1313.4	0.3686	15	53.78	4059.0	0.2757
6	22.10	1668.3	0.3816	16	55.48	4187.3	0.3109
7	22.40	1690.4	0.2065	17	77.00	5811.7	0.9184
8	23.63	1783.3	0.2131	18	204.23	15414.2	0.0673
9	26.88	2028.8	0.3152	19	204.34	15423.1	0.0586
10	29.46	2223.4	0.4005				

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of mixture 2-bromo-2-methyloctan-3-one (**2g**) и 4-bromo-2-methyloctan-3-one (**2g'**) 2:1

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	65536	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	26.600						

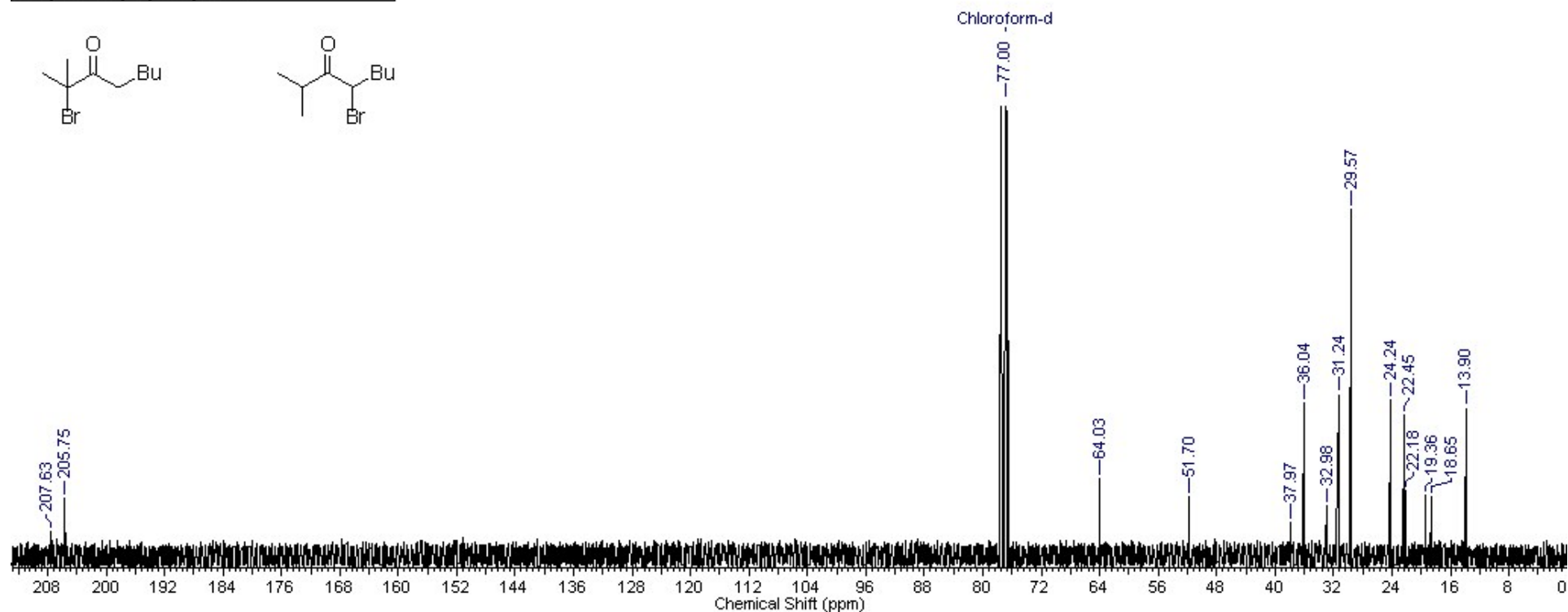


No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height	No.	Annotation	(ppm)
1	0.86	259.6	0.1040	11	1.34	402.8	0.0566	21	2.78	835.0	0.1400	1	Chloroform-d	7.25
2	0.89	266.4	0.2110	12	1.36	408.5	0.0360	22	2.81	842.3	0.0783			
3	0.91	273.2	0.1073	13	1.56	469.7	0.0209	23	2.97	892.5	0.0080			
4	1.11	332.8	0.1053	14	1.60	480.0	0.0533	24	3.00	899.3	0.0158			
5	1.13	339.7	0.1047	15	1.62	487.1	0.0735	25	3.02	906.2	0.0191			
6	1.15	344.0	0.1057	16	1.65	494.2	0.0496	26	3.04	913.1	0.0149			
7	1.17	350.7	0.0958	17	1.67	501.3	0.0152	27	3.07	919.9	0.0087			
8	1.26	379.6	0.0525	18	1.70	510.2	0.0056	28	4.34	1302.2	0.0162			
9	1.29	386.5	0.1081	19	1.84	552.9	1.0000	29	4.36	1309.7	0.0262			
10	1.31	393.8	0.1528	20	2.76	827.6	0.0847	30	4.39	1316.6	0.0160			

<sup>13</sup>C NMR of mixture 2-bromo-2-methyloctan-3-one (**2g**) и 4-bromo-2-methyloctan-3-one (**2g'**) 2:1

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	223	Original Points Count	16316
Points Count	131072	Pulse Sequence	zpgq30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	27.400						



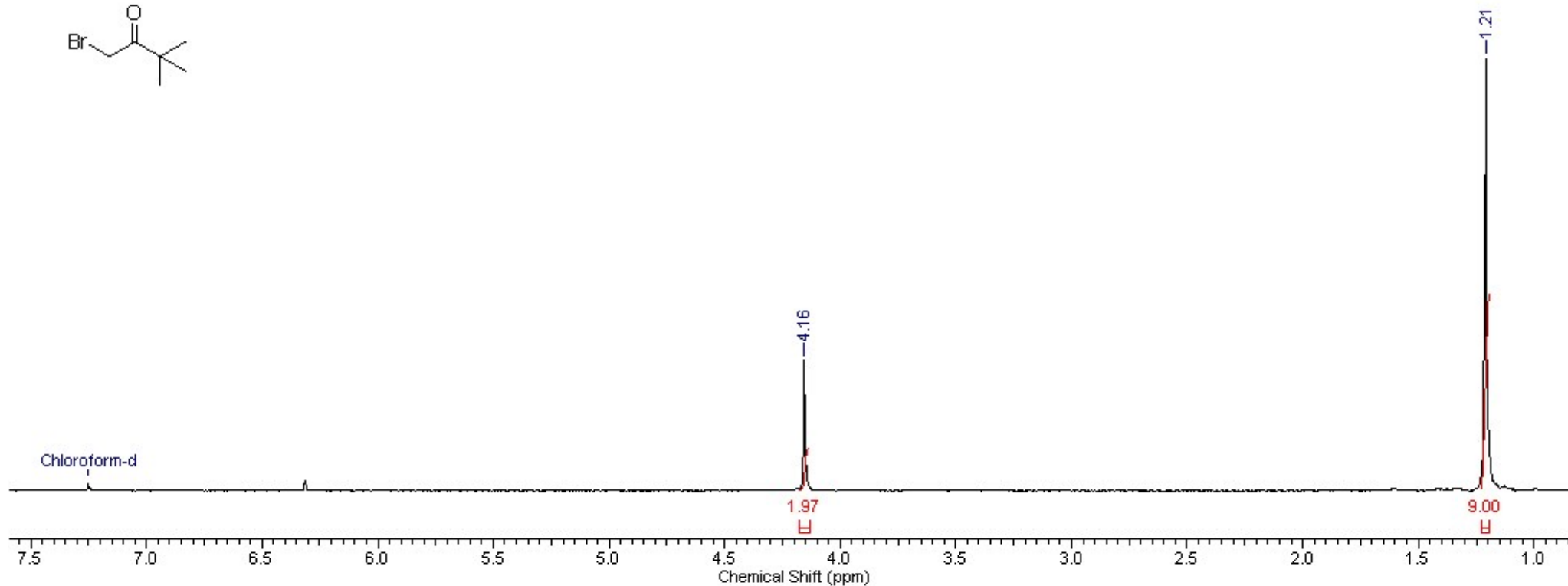
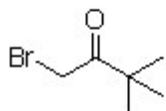
No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height
1	13.81	1042.0	0.1093	10	32.98	2489.5	0.1091
2	13.90	1049.3	0.3144	11	36.04	2719.8	0.3280
3	18.65	1407.3	0.1297	12	37.97	2865.9	0.0754
4	19.36	1460.9	0.1311	13	51.70	3902.2	0.1295
5	22.18	1673.9	0.1417	14	64.03	4832.5	0.1667
6	22.45	1694.5	0.3016	15	77.00	5811.7	1.0000
7	24.24	1829.7	0.3332	16	205.75	15529.0	0.1248
8	29.57	2232.2	0.7374	17	207.63	15670.9	0.0545
9	31.24	2357.8	0.3446				

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 1-bromo-3,3-dimethylbutan-2-one, **5a**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	26.600						

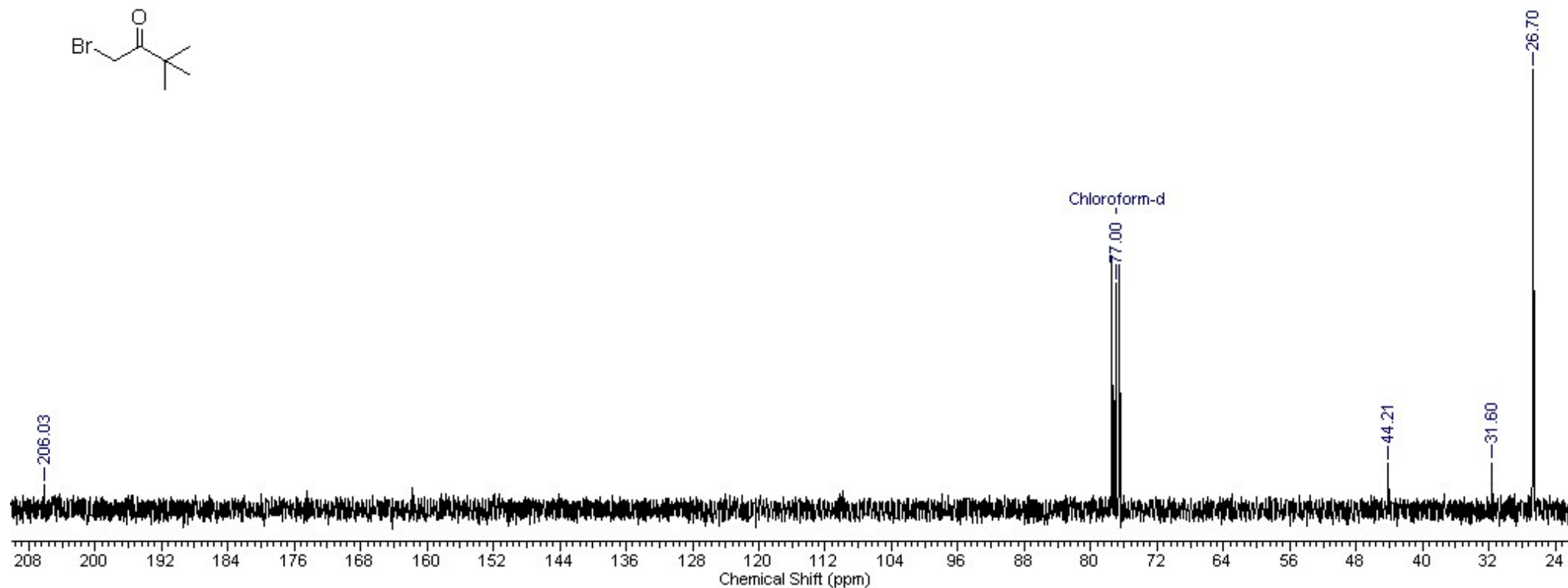
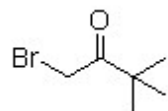


No.	(ppm)	(Hz)	Height	No.	Annotation	(ppm)	No.	(ppm)	Value	Absolute Value
1	1.21	363.0	1.0000	1	Chloroform-d	7.25	1	[1.19 .. 1.22]	9.000	9.32046e+8
2	4.16	1247.1	0.3018				2	[4.13 .. 4.17]	1.974	2.04410e+8

<sup>13</sup>C NMR of 1-bromo-3,3-dimethylbutan-2-one, 5a

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	111	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	27.500						



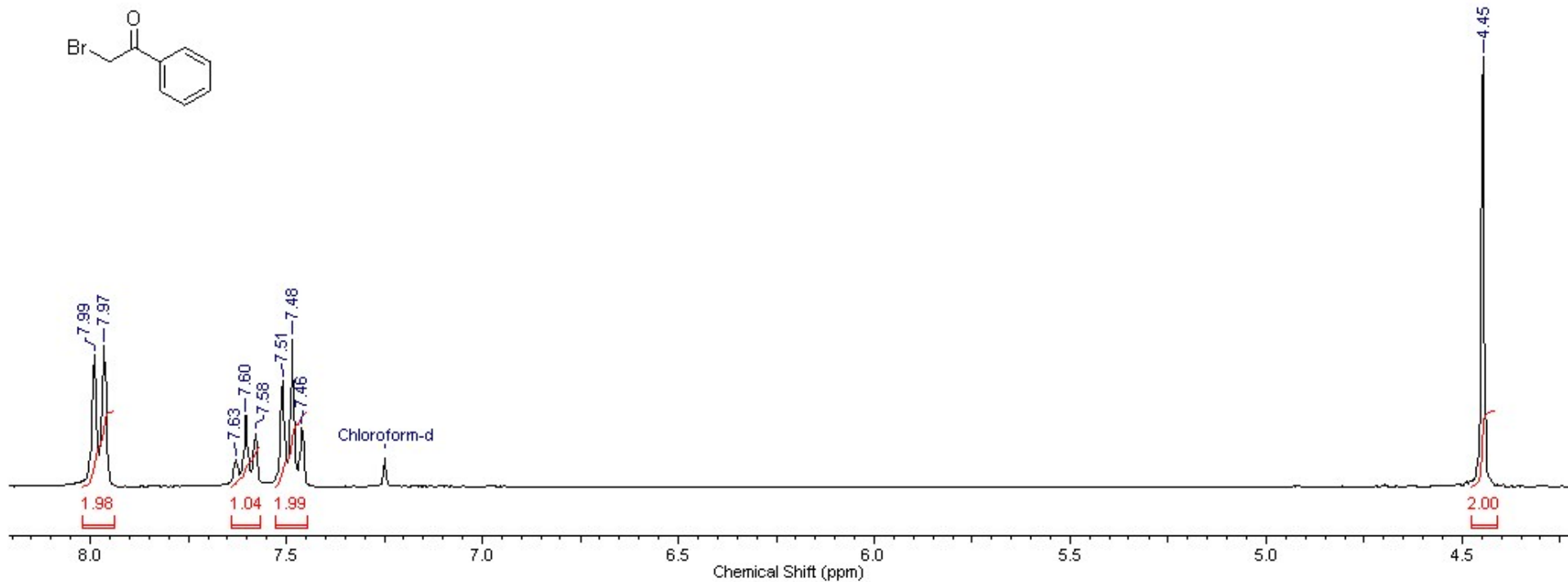
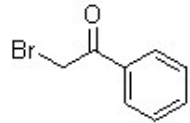
No.	(ppm)	(Hz)	Height
1	26.70	2015.5	1.0000
2	31.60	2384.9	0.1107
3	44.21	3336.9	0.1075
4	77.00	5811.7	0.5177
5	206.03	15550.2	0.0606

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 2-bromo-1-phenylethanone, **5b**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	<sup>1</sup> H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg3	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	26.600						



No.	(ppm)	(Hz)	Height
1	4.45	1334.4	1.0000
2	7.46	2239.1	0.1383
3	7.48	2246.4	0.3455
4	7.51	2253.7	0.2467
5	7.58	2275.0	0.1261
6	7.60	2282.3	0.1664
7	7.63	2289.7	0.0632
8	7.97	2390.9	0.3297
9	7.99	2398.3	0.3079

No.	Annotation	(ppm)
1	Chloroform-d	7.25

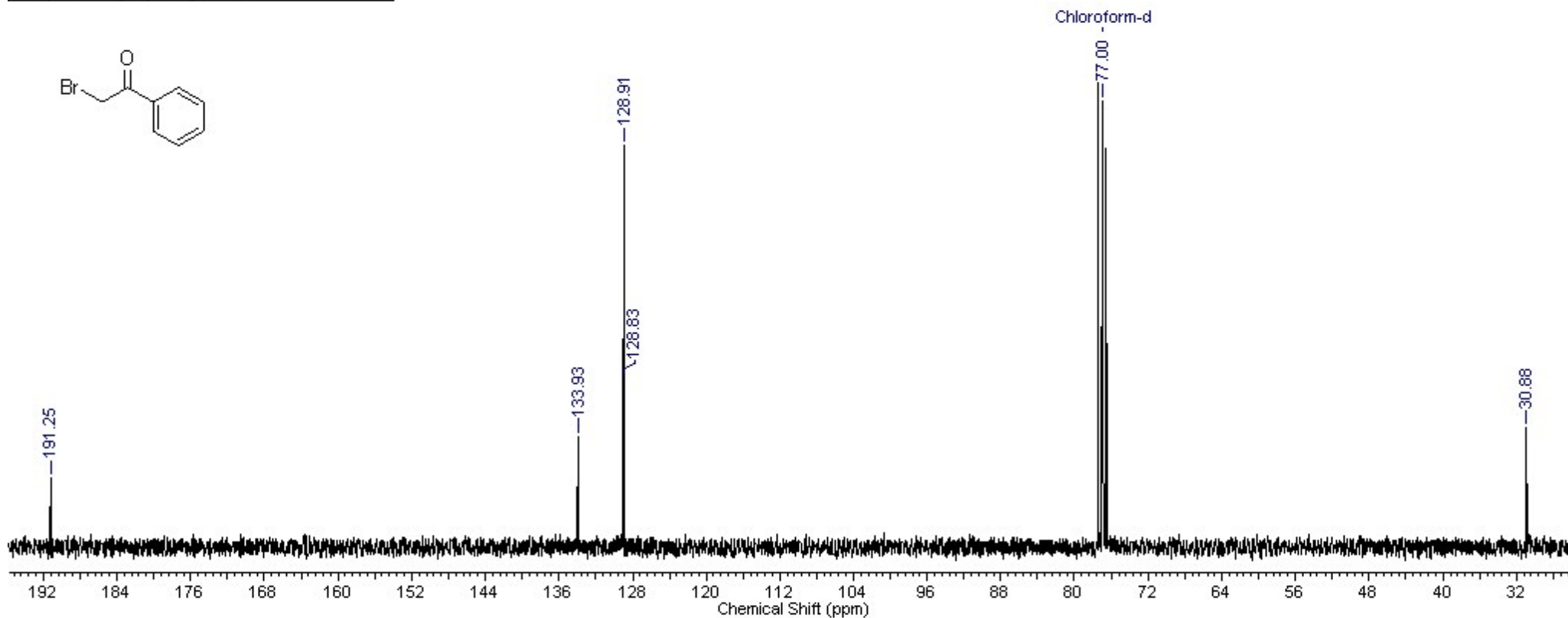
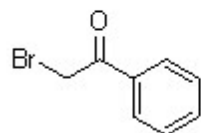
No.	(ppm)	Value	Absolute Value
1	[4.41 .. 4.48]	2.000	3.26962e+8
2	[7.45 .. 7.53]	1.986	3.24704e+8
3	[7.57 .. 7.64]	1.042	1.70354e+8
4	[7.94 .. 8.02]	1.985	3.24433e+8



<sup>13</sup>C NMR of 2-bromo-1-phenylethanone, **5b**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	330	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	24.700						



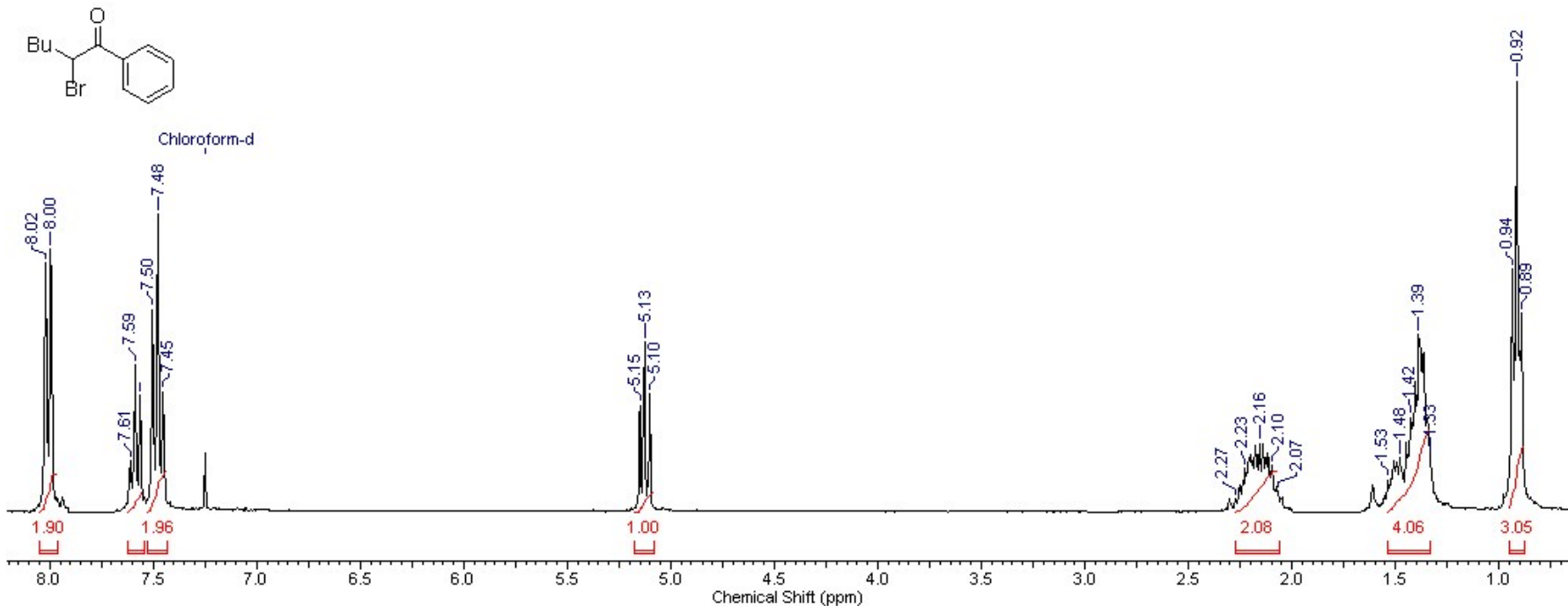
No.	(ppm)	(Hz)	Height
1	30.88	2330.7	0.2519
2	77.00	5811.7	0.9618
3	128.83	9723.9	0.3605
4	128.91	9729.4	0.8657
5	133.93	10108.7	0.2335
6	191.25	14434.5	0.1443

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 2-bromo-1-phenylhexan-1-one, 5c

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	24.900						



No.	(ppm)	(Hz)	Height
1	0.89	267.6	0.4603
2	0.92	275.0	1.0000
3	0.94	281.6	0.5633
4	1.33	399.7	0.1299
5	1.39	416.6	0.4103
6	1.42	427.6	0.2195
7	1.48	443.7	0.1241
8	1.53	460.6	0.0753
9	2.07	619.8	0.0487
10	2.10	629.4	0.1089
11	2.16	647.0	0.1592
12	2.23	668.2	0.1013

No.	(ppm)	(Hz)	Height
13	2.27	682.2	0.0311
14	5.10	1531.8	0.2741
15	5.13	1538.4	0.3953
16	5.15	1545.7	0.2481
17	7.45	2236.9	0.2799
18	7.48	2244.2	0.6900
19	7.50	2252.3	0.4703
20	7.56	2269.9	0.2704
21	7.59	2277.2	0.3422
22	7.61	2284.5	0.1193
23	8.00	2400.5	0.6100
24	8.02	2407.8	0.5769

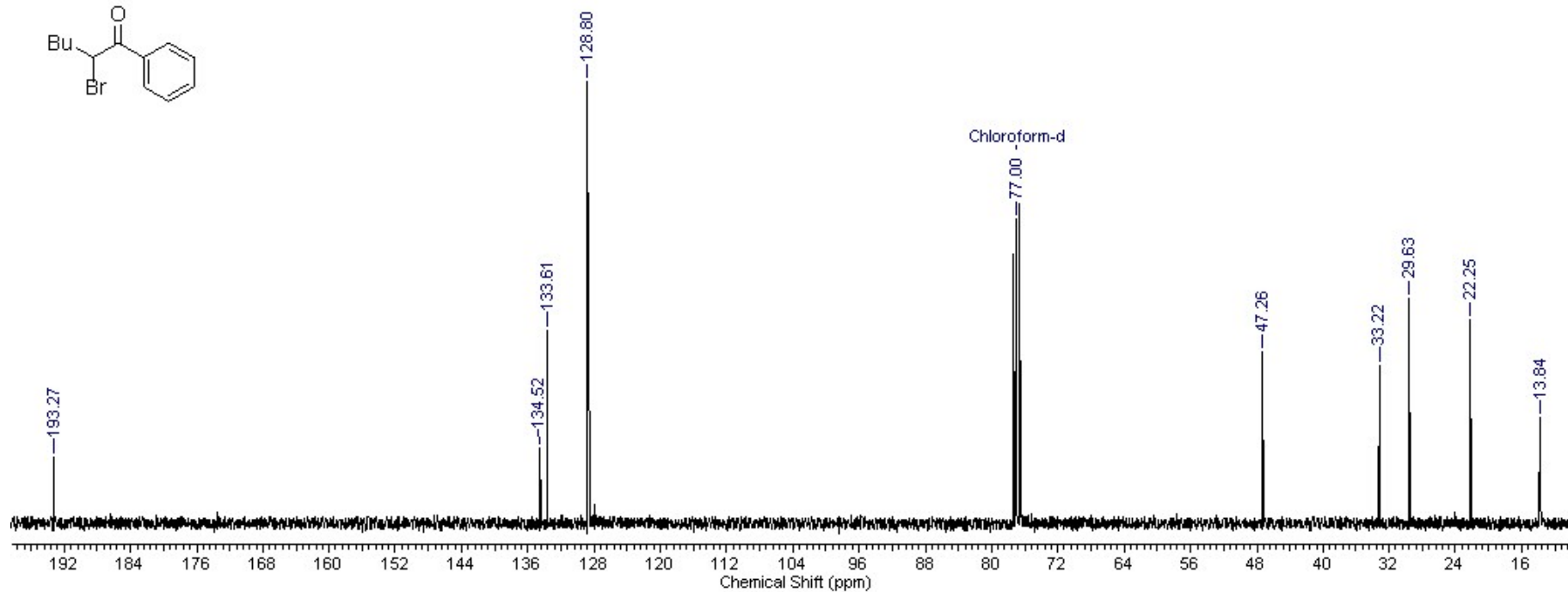
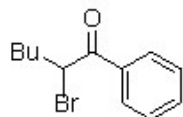
No.	Annotation	(ppm)
1	Chloroform-d	7.25

No.	(ppm)	Value	Absolute Value
1	[0.88 .. 0.95]	3.049	2.62274e+8
2	[1.33 .. 1.54]	4.057	3.49017e+8
3	[2.06 .. 2.27]	2.084	1.79310e+8
4	[5.08 .. 5.18]	1.000	8.60325e+7
5	[7.43 .. 7.52]	1.965	1.69016e+8
6	[7.54 .. 7.63]	0.997	8.57328e+7
7	[7.96 .. 8.05]	1.898	1.63306e+8

<sup>13</sup>C NMR of 2-bromo-1-phenylhexan-1-one, **5c**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	526	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	24.900						



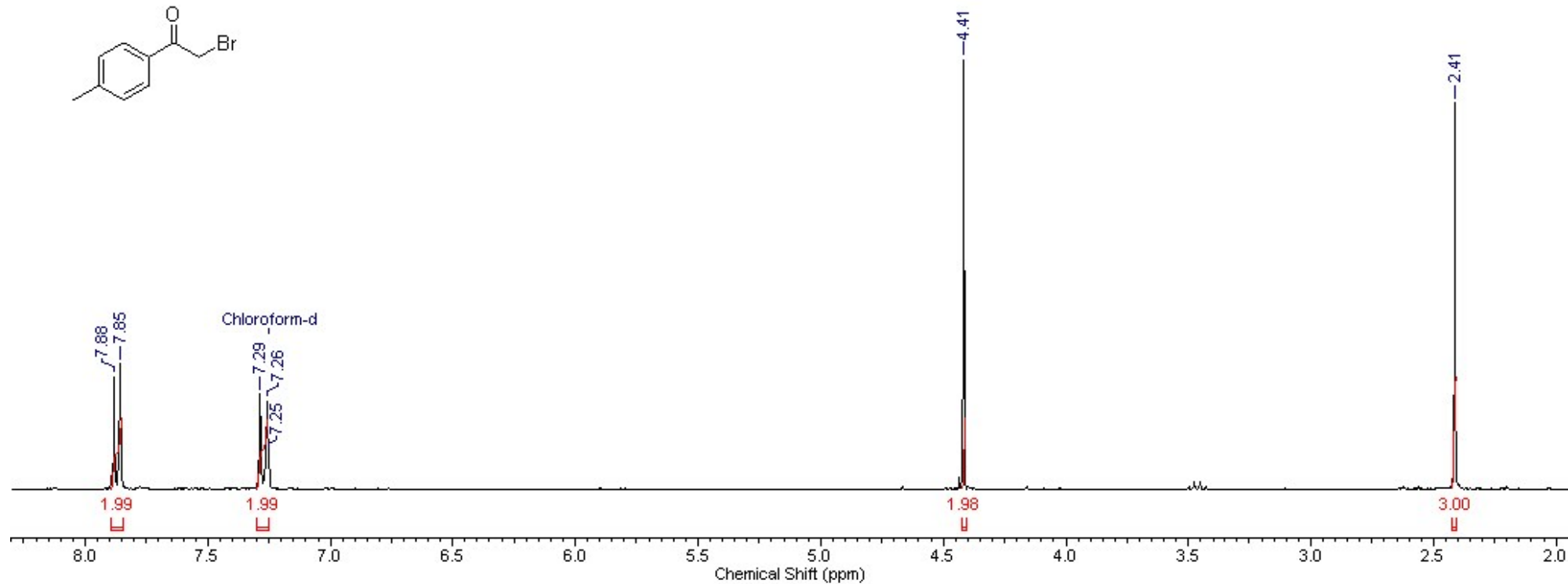
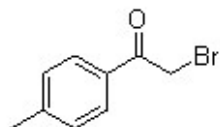
No.	(ppm)	(Hz)	Height
1	13.84	1044.7	0.2368
2	22.25	1679.4	0.4588
3	29.63	2236.7	0.5084
4	33.22	2507.6	0.3557
5	47.26	3566.9	0.3856
6	77.00	5811.7	0.6879
7	128.73	9716.2	0.4975
8	128.80	9721.7	1.0000
9	133.61	10084.4	0.4361
10	134.52	10152.9	0.1687
11	193.27	14587.1	0.1492

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 2-bromo-1-(p-tolyl)ethan-1-one, **5d**

Acquisition Time (sec) 2.7150

Frequency (MHz)	300.13	Nucleus	<sup>1</sup> H	Number of Transients	1	Original Points Count	16316
Points Count	16384	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	27.015						



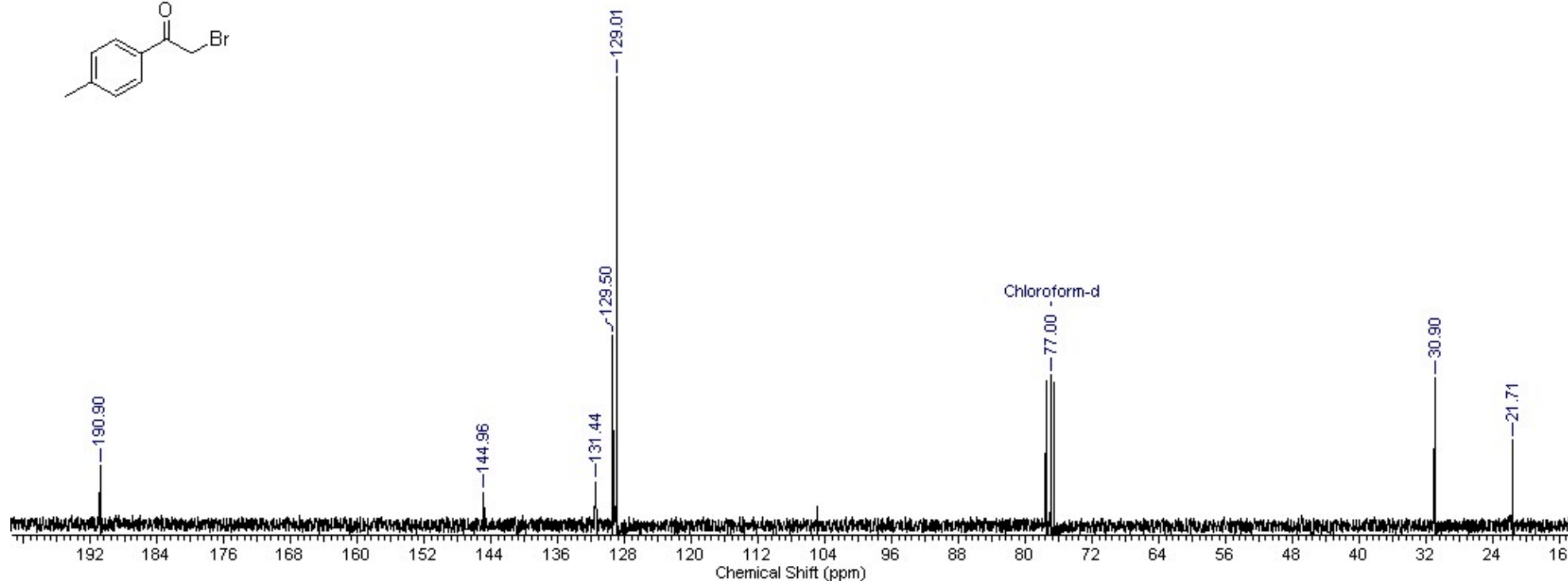
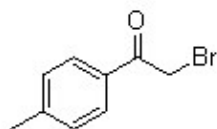
No.	(ppm)	(Hz)	Height
1	2.41	724.1	0.8993
2	4.41	1324.9	1.0000
3	7.25	2176.0	0.0813
4	7.26	2178.9	0.2045
5	7.29	2187.0	0.2205
6	7.85	2357.5	0.2922
7	7.88	2365.6	0.2618

No.	Annotation	(ppm)
1	Chloroform-d	7.25

<sup>13</sup>C NMR of 2-bromo-1-(p-tolyl)ethan-1-one, **5d**

Acquisition Time (sec) 0.9050

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	64	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18028.85
Temperature (degree C)	27.108						



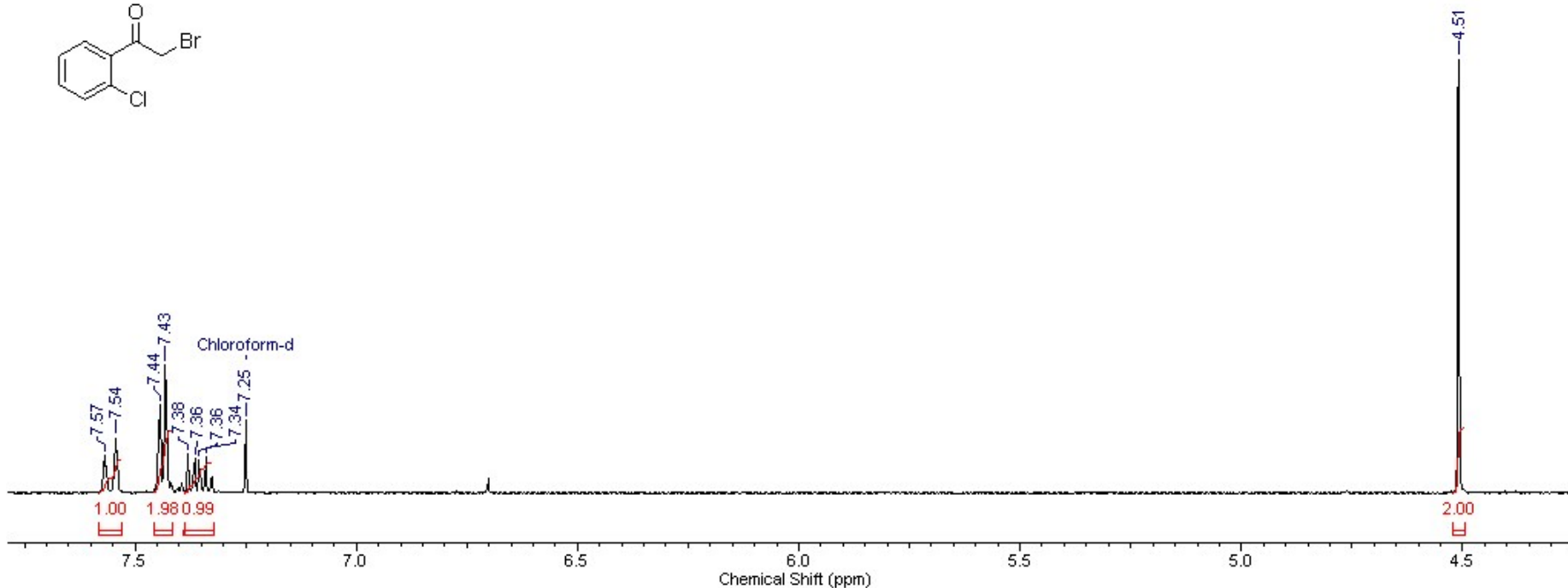
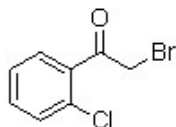
No.	(ppm)	(Hz)	Height
1	21.71	1638.7	0.1868
2	30.90	2332.0	0.3271
3	77.00	5811.6	0.3332
4	129.01	9737.0	1.0000
5	129.50	9774.4	0.4213
6	131.44	9920.7	0.0954
7	144.96	10940.9	0.0712
8	190.90	14408.4	0.1299

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 2-bromo-1-(2-chlorophenyl)ethan-1-one, **5e**

Acquisition Time (sec) 2.7150

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	16316
Points Count	16384	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	26.992						



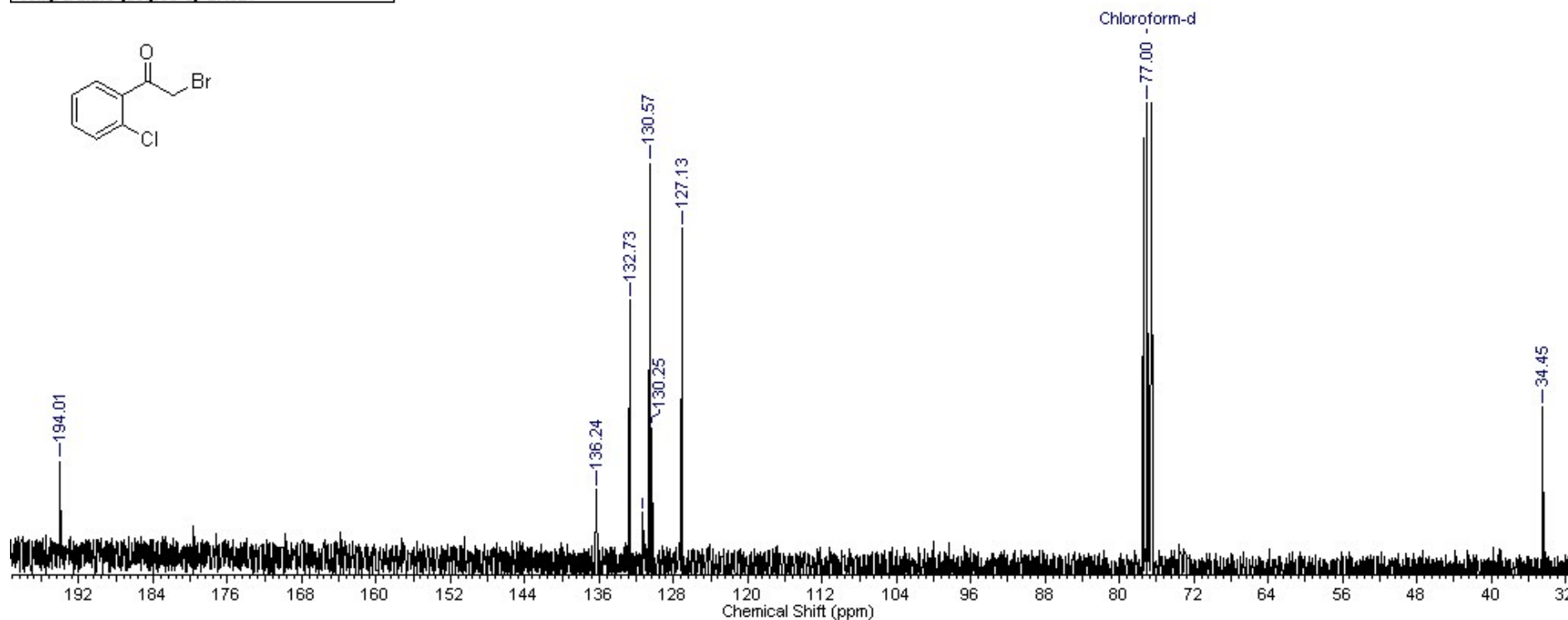
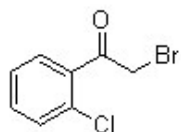
No.	(ppm)	(Hz)	Height
1	4.51	1353.2	1.0000
2	7.25	2176.0	0.1666
3	7.34	2203.1	0.0825
4	7.36	2207.5	0.0751
5	7.36	2210.4	0.0792
6	7.38	2214.8	0.0897
7	7.43	2230.6	0.2949
8	7.44	2233.9	0.2038
9	7.54	2264.0	0.1263
10	7.57	2271.7	0.0870

No.	Annotation	(ppm)
1	Chloroform-d	7.25

<sup>13</sup>C NMR of 2-bromo-1-(2-chlorophenyl)ethan-1-one, **5e**

Acquisition Time (sec) 0.9050

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	256	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18028.85
Temperature (degree C)	27.021						



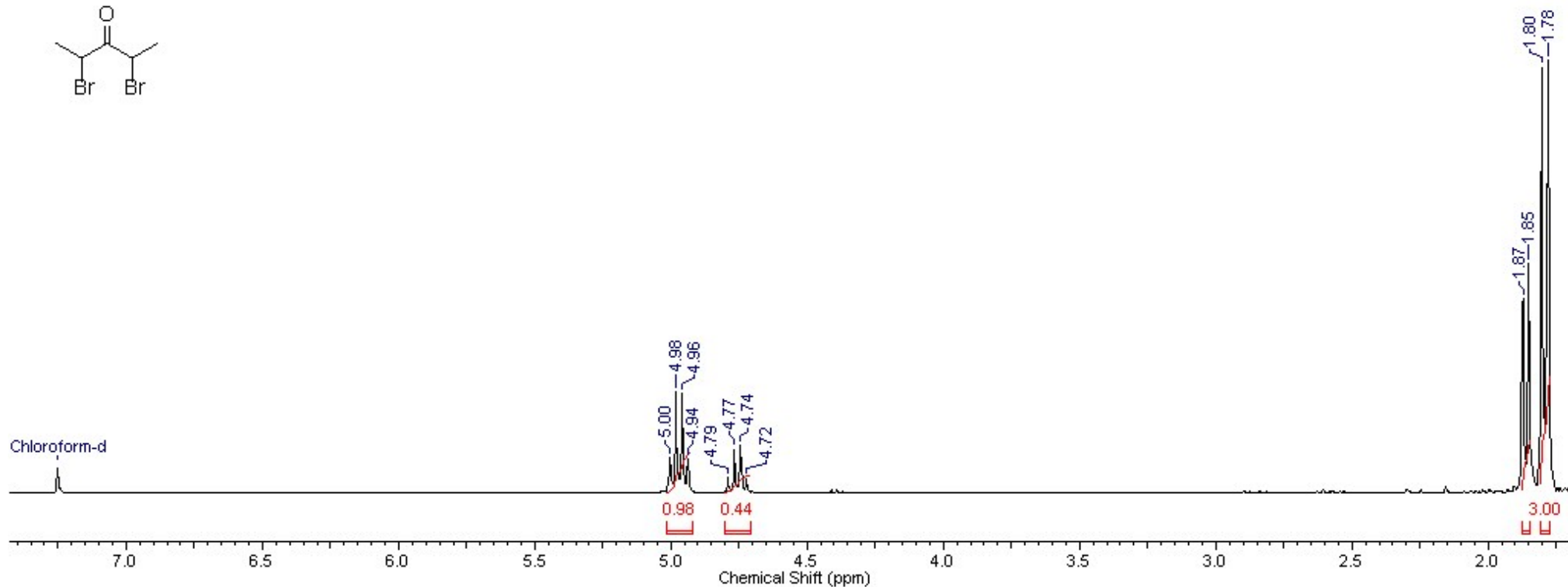
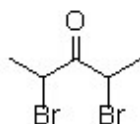
No.	(ppm)	(Hz)	Height
1	34.45	2600.5	0.3166
2	77.00	5811.6	0.9926
3	127.13	9595.0	0.6861
4	130.25	9830.5	0.2743
5	130.57	9854.7	0.8203
6	131.30	9909.7	0.0997
7	132.73	10017.6	0.5367
8	136.24	10282.8	0.1471
9	194.01	14642.8	0.2043

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 2,4-dibromopentan-3-one, **3a** (mixture of *meso*- and *rac*-isomers)

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	24.700						



No.	(ppm)	(Hz)	Height
1	1.78	534.0	1.0000
2	1.80	541.3	0.9853
3	1.85	555.2	0.5319
4	1.87	561.9	0.4495
5	4.72	1417.3	0.0344
6	4.74	1423.9	0.1109

No.	(ppm)	(Hz)	Height
7	4.77	1430.5	0.1012
8	4.79	1437.9	0.0354
9	4.94	1481.9	0.0796
10	4.96	1488.5	0.2314
11	4.98	1495.1	0.2340
12	5.00	1501.7	0.0823

No.	Annotation	(ppm)
1	Chloroform-d	7.25

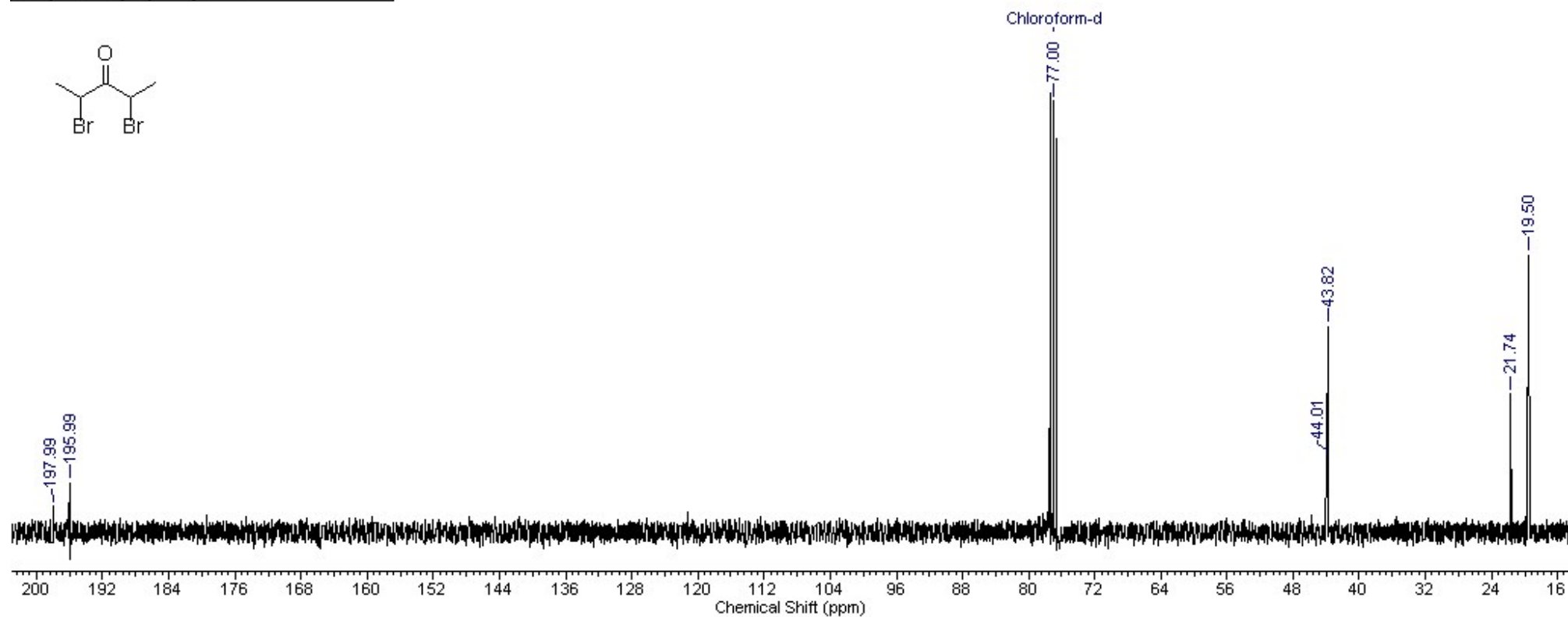
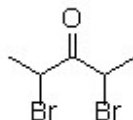
No.	(ppm)	Value	Absolute Value
1	[1.77 .. 1.81]	3.000	6.74624e+8
2	[1.85 .. 1.88]	1.380	3.10290e+8
3	[4.71 .. 4.80]	0.439	9.87598e+7
4	[4.92 .. 5.02]	0.977	2.19753e+8



<sup>13</sup>C NMR of 2,4-dibromopentan-3-one, **3a** (mixture of *meso*- and *rac*-isomers)

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	237	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	25.200						



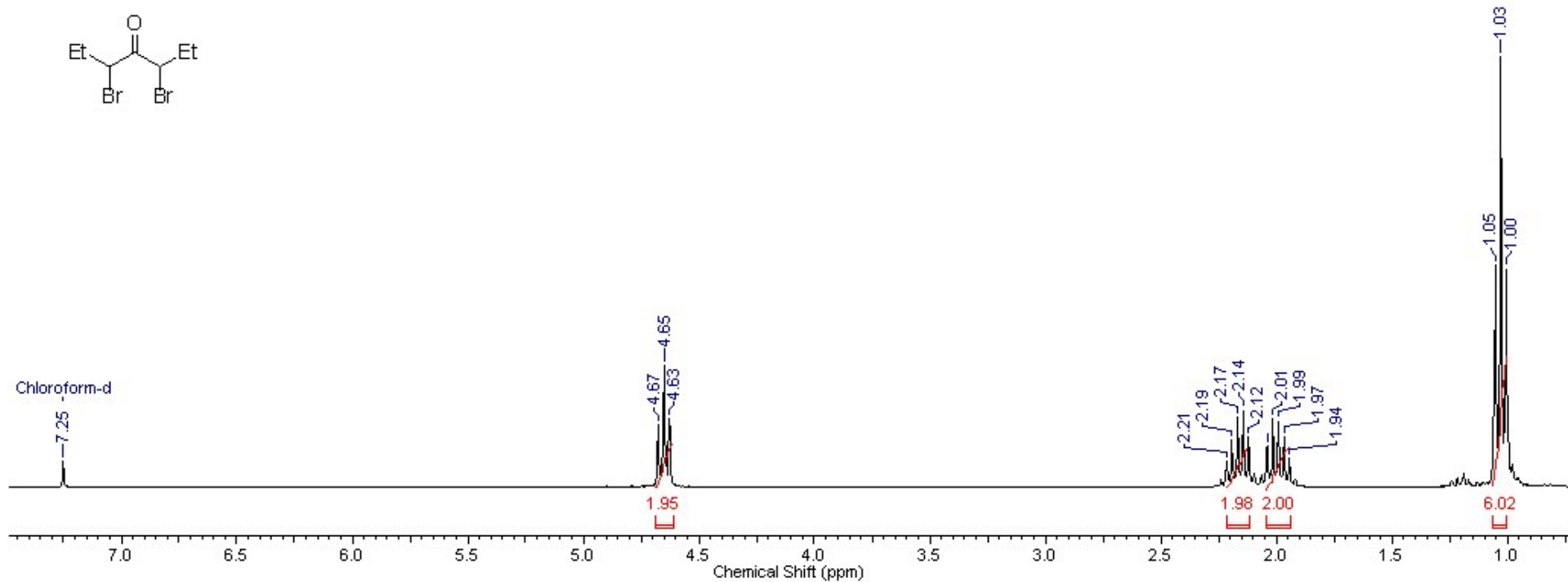
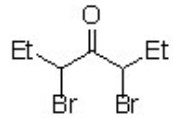
No.	(ppm)	(Hz)	Height
1	19.50	1471.5	0.6282
2	21.74	1640.7	0.3115
3	43.82	3307.1	0.4663
4	44.01	3321.4	0.1628
5	77.00	5811.7	0.9795
6	195.99	14792.8	0.1091
7	197.99	14943.2	0.0541

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 3,5-dibromoheptan-4-one, **3b**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	<sup>1</sup> H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg3	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	30.800						



No.	(ppm)	(Hz)	Height
1	1.00	301.4	0.5081
2	1.03	308.7	1.0000
3	1.05	316.1	0.5175
4	1.94	583.1	0.0670
5	1.97	590.5	0.1185
6	1.99	597.8	0.1547
7	2.01	604.4	0.1589
8	2.04	611.7	0.0958
9	2.12	636.0	0.1158

No.	(ppm)	(Hz)	Height
10	2.14	643.3	0.1796
11	2.17	650.6	0.1647
12	2.19	658.0	0.1095
13	2.21	664.6	0.0590
14	4.63	1388.7	0.1587
15	4.65	1396.1	0.2817
16	4.67	1402.7	0.1453
17	7.25	2176.0	0.0591

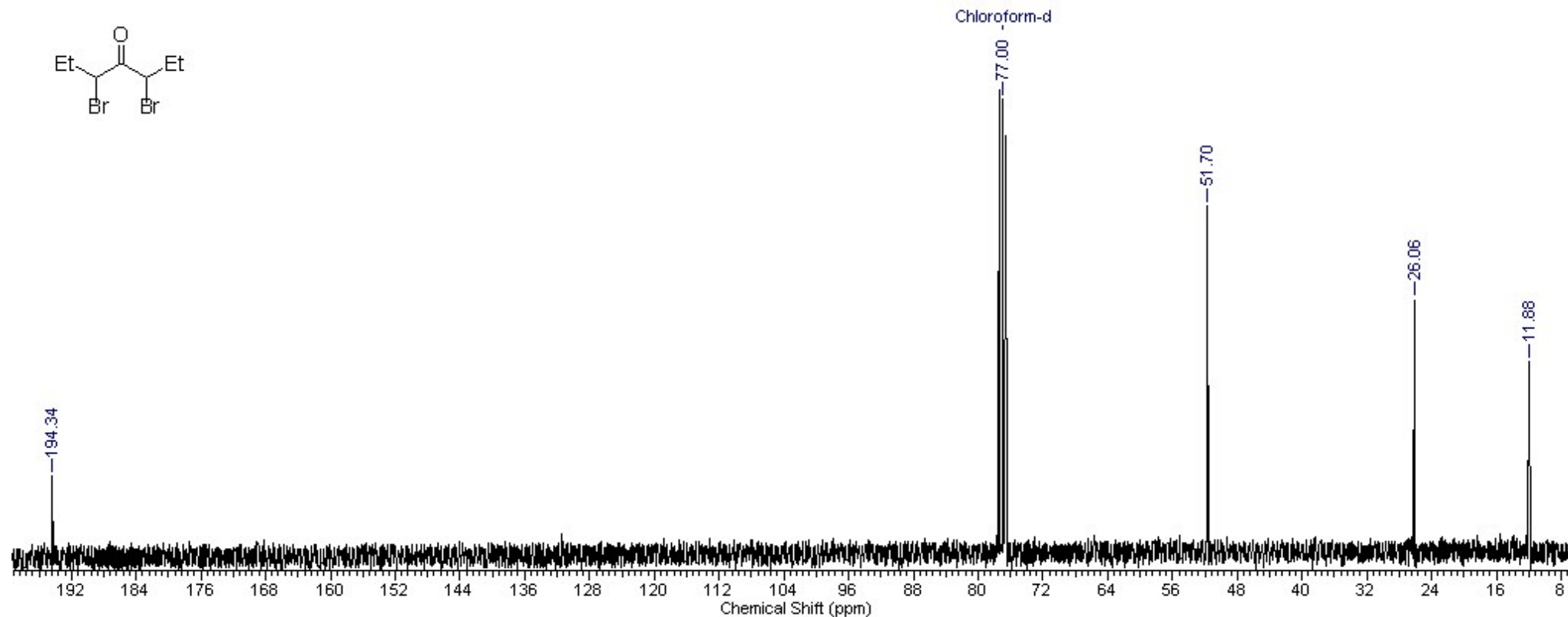
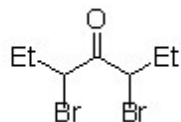
No.	Annotation	(ppm)
1	Chloroform-d	7.25

No.	(ppm)	Value	Absolute Value
1	[1.00 .. 1.06]	6.020	5.82570e+8
2	[1.94 .. 2.04]	2.004	1.93887e+8
3	[2.12 .. 2.22]	1.981	1.91721e+8
4	[4.61 .. 4.69]	1.950	1.88728e+8

<sup>13</sup>C NMR of 3,5-dibromoheptan-4-one, **3b**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	391	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	30.700						



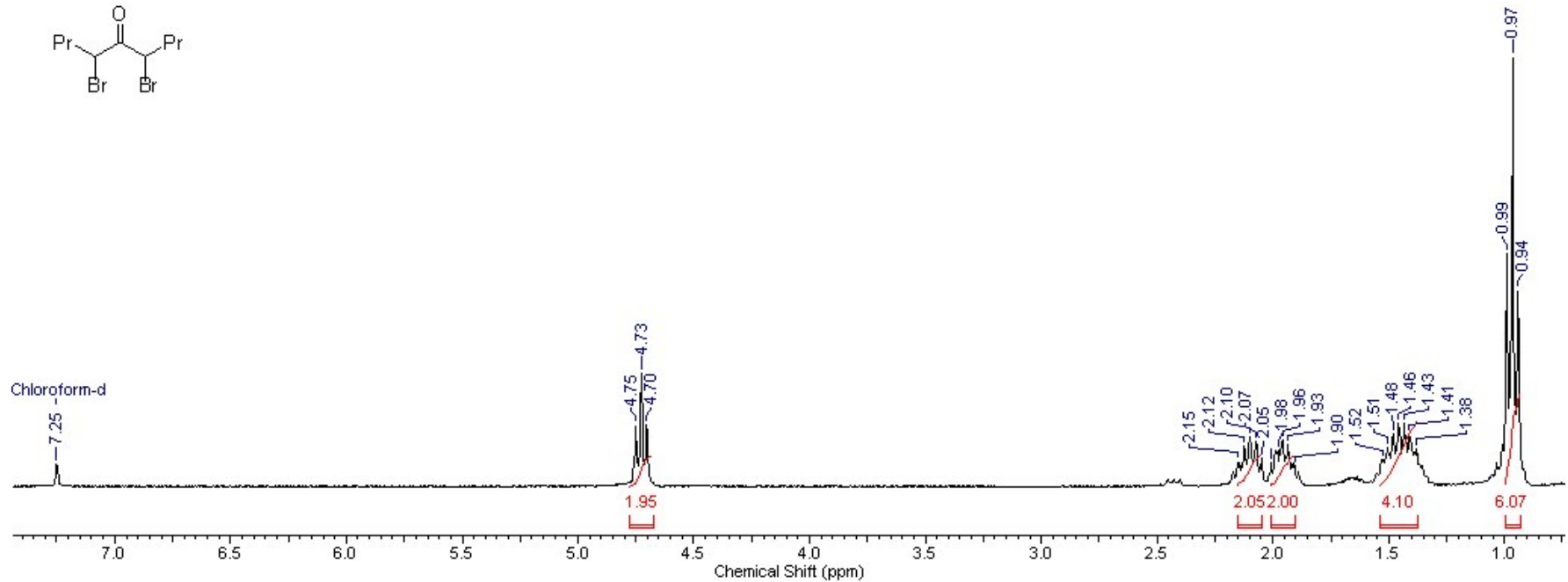
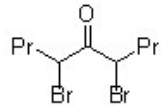
No.	(ppm)	(Hz)	Height
1	11.88	896.5	0.4164
2	26.06	1966.9	0.5491
3	51.70	3902.0	0.7500
4	77.00	5811.7	0.9776
5	194.34	14667.8	0.1700

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 4,6-dibromononane-5-one, **3c**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	31.100						



No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height
1	0.94	282.3	0.4554	13	1.96	587.5	0.1079
2	0.97	289.7	1.0000	14	1.98	593.4	0.0838
3	0.99	297.0	0.5437	15	2.01	602.9	0.0556
4	1.36	413.6	0.0883	16	2.05	614.7	0.0664
5	1.41	423.2	0.1216	17	2.07	622.0	0.1054
6	1.43	429.8	0.1465	18	2.10	630.1	0.1151
7	1.46	437.1	0.1472	19	2.12	637.4	0.0932
8	1.48	444.5	0.1242	20	2.15	645.5	0.0564
9	1.51	451.8	0.0918	21	4.70	1411.5	0.1442
10	1.52	457.7	0.0625	22	4.73	1418.8	0.2622
11	1.90	571.4	0.0480	23	4.75	1425.4	0.1412
12	1.93	580.2	0.0978	24	7.25	2176.0	0.0516

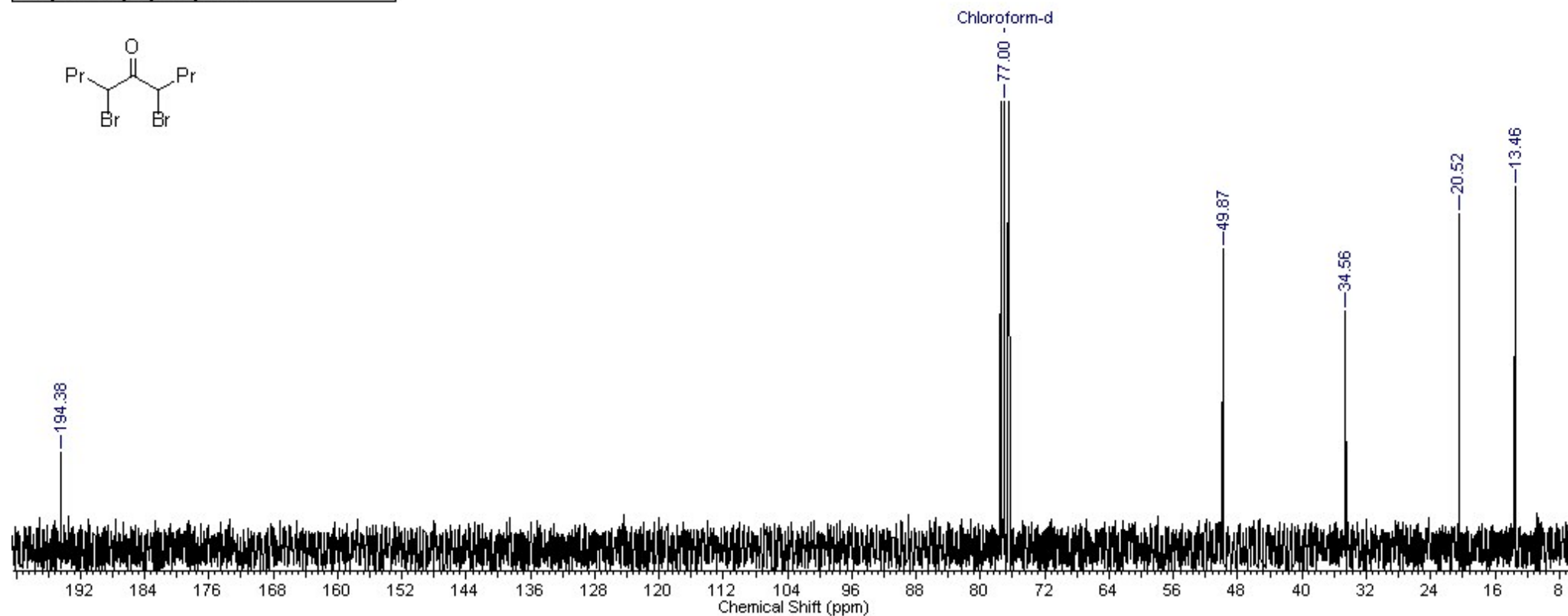
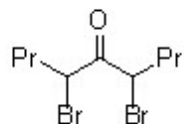
No.	Annotation	(ppm)
1	Chloroform-d	7.25

No.	(ppm)	Value	Absolute Value
1	[0.93 .. 1.00]	6.070	5.02642e+8
2	[1.38 .. 1.54]	4.097	3.39229e+8
3	[1.90 .. 2.01]	2.005	1.66016e+8
4	[2.05 .. 2.15]	2.048	1.69591e+8
5	[4.68 .. 4.78]	1.950	1.61436e+8

<sup>13</sup>C NMR of 4,6-dibromononane-5-one, **3c**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	100	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	33.200						



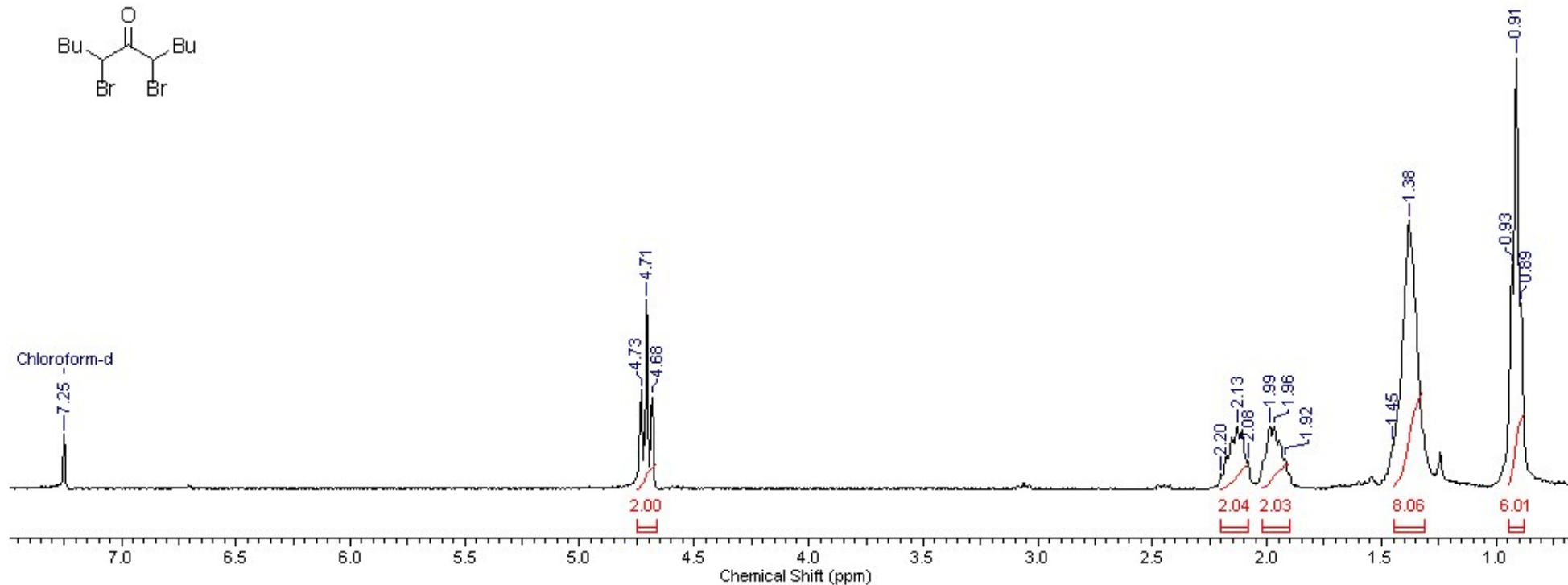
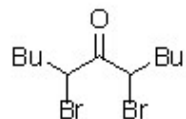
No.	(ppm)	(Hz)	Height
1	13.46	1015.9	0.6975
2	20.52	1548.9	0.6464
3	34.56	2608.2	0.4579
4	49.87	3763.8	0.5765
5	77.00	5811.7	1.0000
6	194.38	14671.1	0.1827

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 5,7-dibromoundecan-6-one, **3d**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	<sup>1</sup> H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	28.800						



No.	(ppm)	(Hz)	Height
1	0.89	267.6	0.4320
2	0.91	274.2	1.0000
3	0.93	280.1	0.5202
4	1.38	413.6	0.6216
5	1.45	435.7	0.1049
6	1.92	576.5	0.0722
7	1.96	589.7	0.1459
8	1.99	596.3	0.1471

No.	(ppm)	(Hz)	Height
9	2.08	624.2	0.0651
10	2.13	638.9	0.1443
11	2.20	660.2	0.0342
12	4.68	1405.6	0.2143
13	4.71	1412.9	0.4392
14	4.73	1420.3	0.2315
15	7.25	2176.0	0.1282

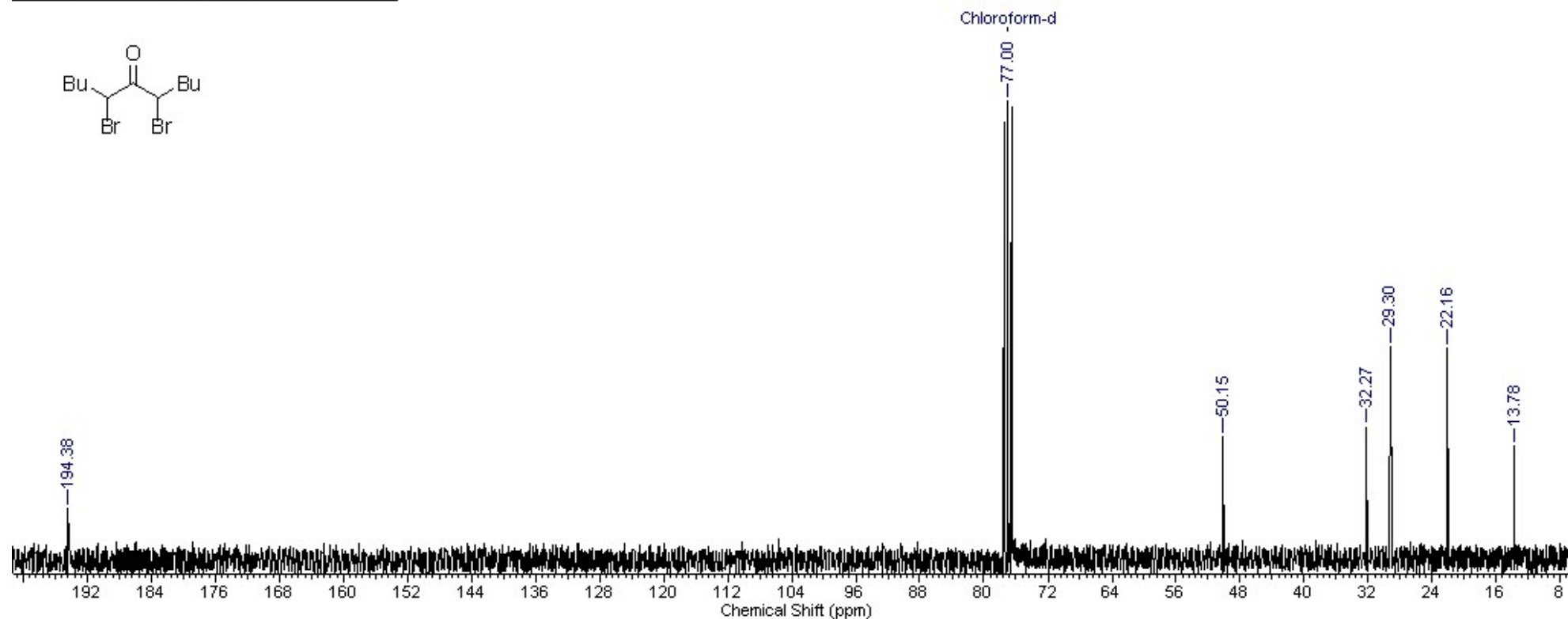
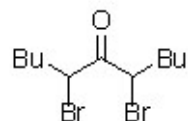
No.	Annotation	(ppm)
1	Chloroform-d	7.25

No.	(ppm)	Value	Absolute Value
1	[0.88 .. 0.95]	6.011	3.96438e+8
2	[1.31 .. 1.44]	8.059	5.31490e+8
3	[1.90 .. 2.02]	2.032	1.33993e+8
4	[2.08 .. 2.20]	2.042	1.34679e+8
5	[4.66 .. 4.75]	2.000	1.31901e+8

<sup>13</sup>C NMR of 5,7-dibromoundecan-6-one, **3d**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	179	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	29.200						



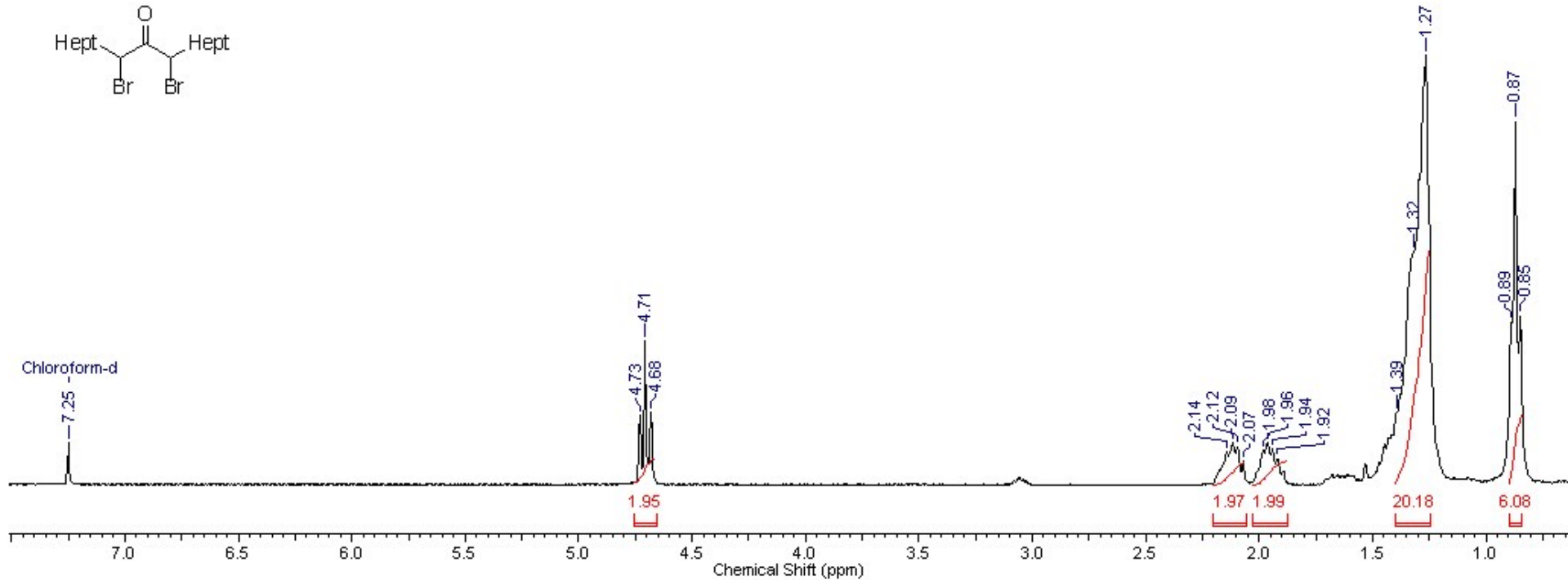
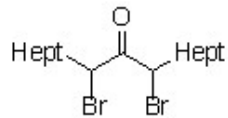
No.	(ppm)	(Hz)	Height
1	13.78	1040.2	0.2439
2	22.16	1672.7	0.4596
3	29.30	2211.2	0.4629
4	32.27	2435.7	0.2856
5	50.15	3784.8	0.2648
6	77.00	5811.7	1.0000
7	194.38	14671.1	0.1076

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 8,10-dibromoheptadecan-9-one, **3e**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	27.100						



No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height
1	0.85	254.4	0.3944	10	1.98	594.1	0.0816
2	0.87	261.8	0.8475	11	2.07	621.3	0.0559
3	0.89	266.9	0.3804	12	2.09	628.6	0.0907
4	1.27	380.6	1.0000	13	2.12	635.2	0.0995
5	1.32	396.8	0.5447	14	2.14	642.6	0.0791
6	1.39	418.1	0.1701	15	4.68	1404.9	0.1704
7	1.92	575.8	0.0623	16	4.71	1412.2	0.3348
8	1.94	582.4	0.0850	17	4.73	1419.5	0.1626
9	1.96	589.0	0.0997	18	7.25	2176.0	0.0986

No.	Annotation	(ppm)
1	Chloroform-d	7.25

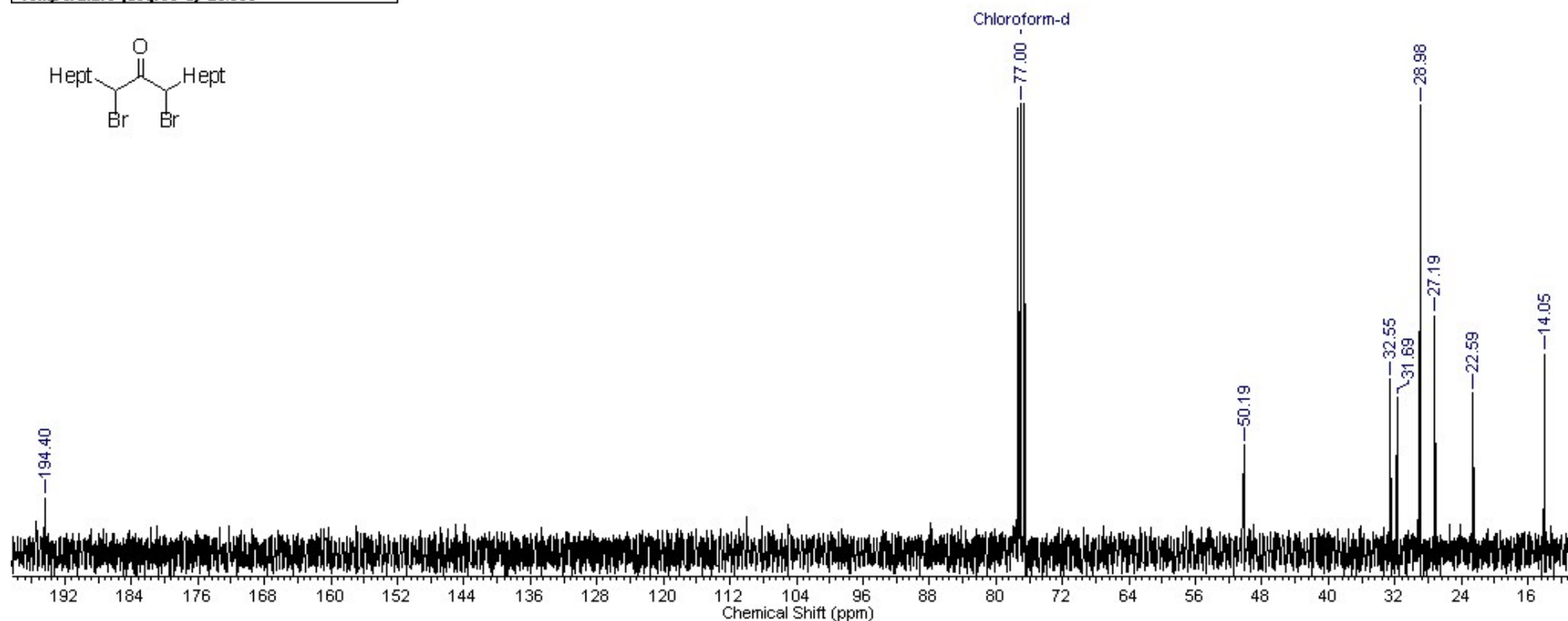
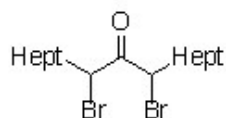
No.	(ppm)	Value	Absolute Value
1	[0.84 .. 0.90]	6.080	2.36951e+8
2	[1.25 .. 1.40]	20.178	7.86371e+8
3	[1.87 .. 2.03]	1.986	7.73928e+7
4	[2.06 .. 2.20]	1.975	7.69506e+7
5	[4.66 .. 4.76]	1.955	7.61783e+7



<sup>13</sup>C NMR of 8,10-dibromoheptadecan-9-one, **3e**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	201	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	26.900						



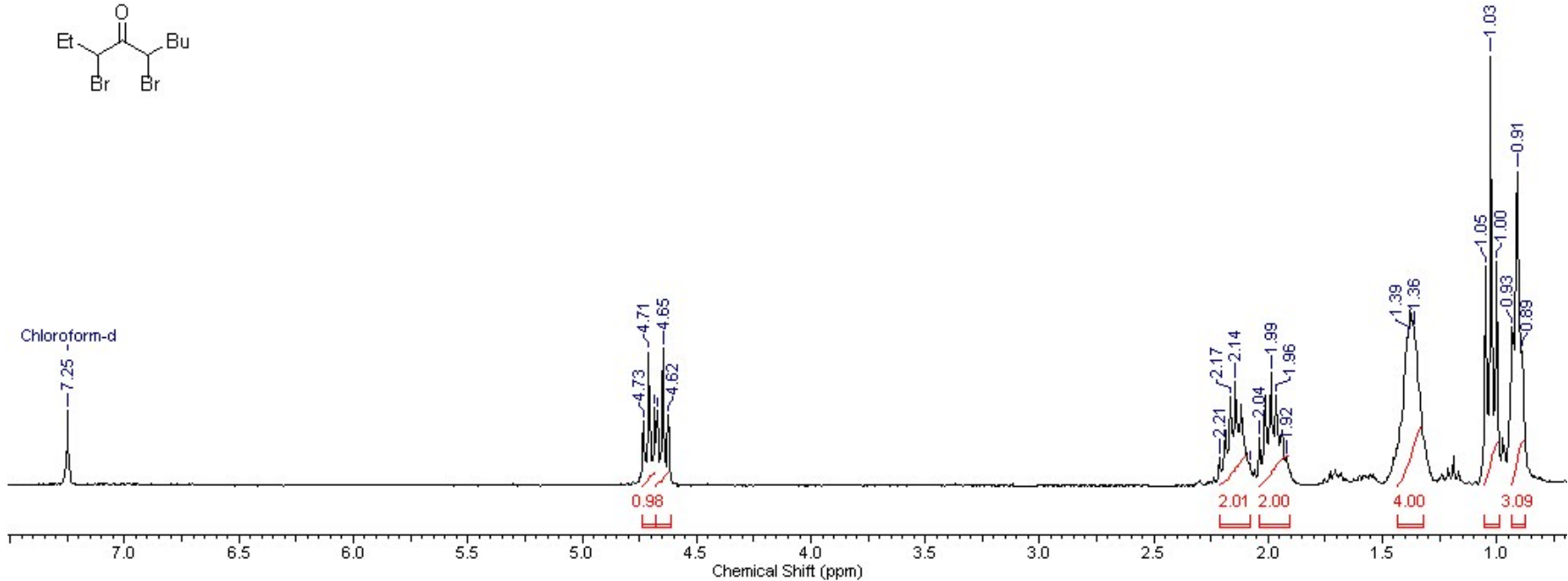
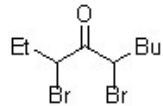
No.	(ppm)	(Hz)	Height
1	14.05	1060.1	0.4222
2	22.59	1704.8	0.3399
3	27.19	2052.0	0.5046
4	28.98	2186.9	0.9554
5	31.69	2391.5	0.3293
6	32.55	2456.7	0.3690
7	50.19	3788.1	0.2269
8	77.00	5811.7	0.9745
9	194.40	14672.2	0.1154

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 3,5-dibromononan-4-one, **3f**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	23.600						



No.	(ppm)	(Hz)	Height
1	0.89	266.9	0.3145
2	0.91	273.5	0.7324
3	0.93	280.1	0.3706
4	1.00	300.7	0.5232
5	1.03	308.0	1.0000
6	1.05	315.3	0.5117
7	1.36	408.5	0.3644
8	1.39	416.6	0.3487
9	1.92	575.1	0.0656
10	1.96	589.0	0.2118
11	1.99	596.3	0.2628
12	2.04	611.0	0.1127

No.	(ppm)	(Hz)	Height
13	2.08	624.2	0.0517
14	2.14	642.6	0.2438
15	2.17	649.9	0.2062
16	2.21	663.8	0.0669
17	4.62	1387.2	0.1660
18	4.65	1394.6	0.3195
19	4.67	1401.9	0.1754
20	4.68	1405.6	0.1818
21	4.71	1412.9	0.3111
22	4.73	1420.3	0.1527
23	7.25	2176.0	0.1758

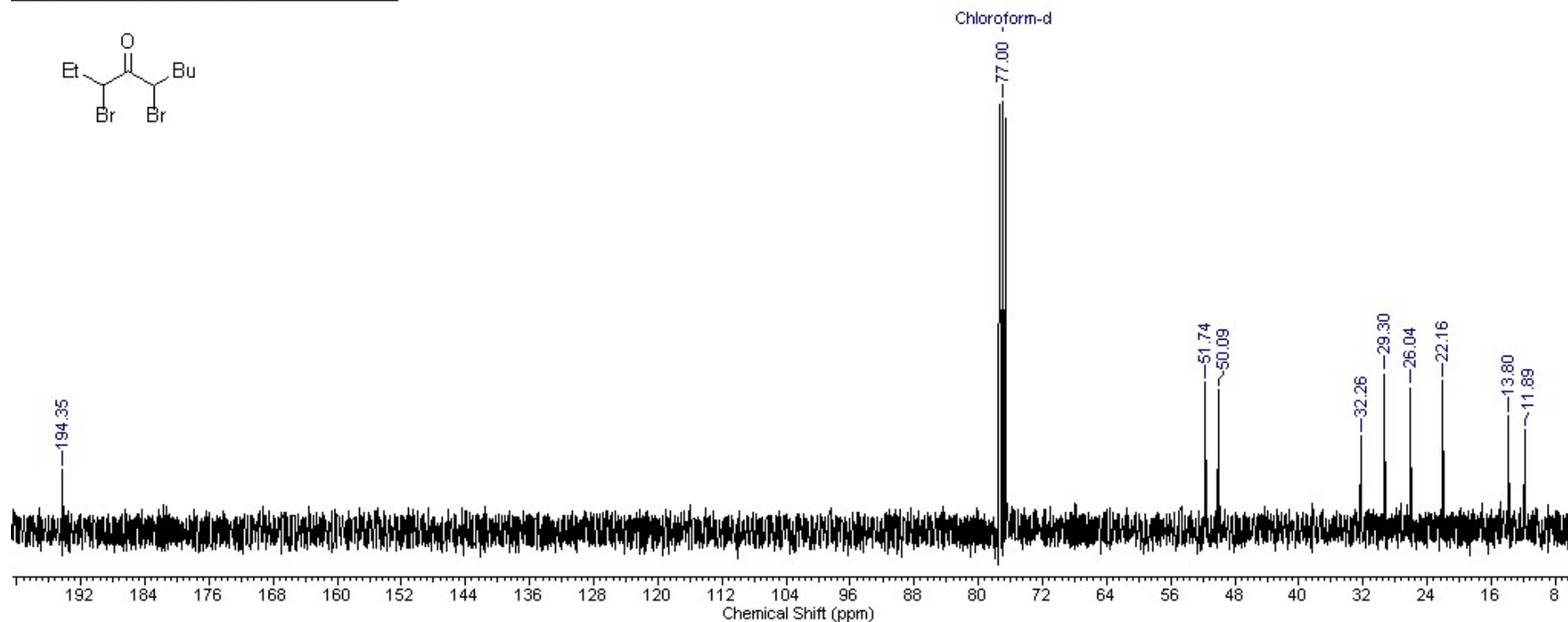
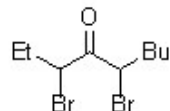
No.	Annotation	(ppm)
1	Chloroform-d	7.25

No.	(ppm)	Value	Absolute Value
1	[0.88 .. 0.94]	3.088	1.61246e+8
2	[0.99 .. 1.06]	3.010	1.57189e+8
3	[1.32 .. 1.43]	4.002	2.09014e+8
4	[1.91 .. 2.04]	2.004	1.04656e+8
5	[2.08 .. 2.21]	2.010	1.04975e+8
6	[4.61 .. 4.68]	0.972	5.07435e+7
7	[4.68 .. 4.74]	0.984	5.13641e+7

<sup>13</sup>C NMR of 3,5-dibromononan-4-one, **3f**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	133	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	25.600						



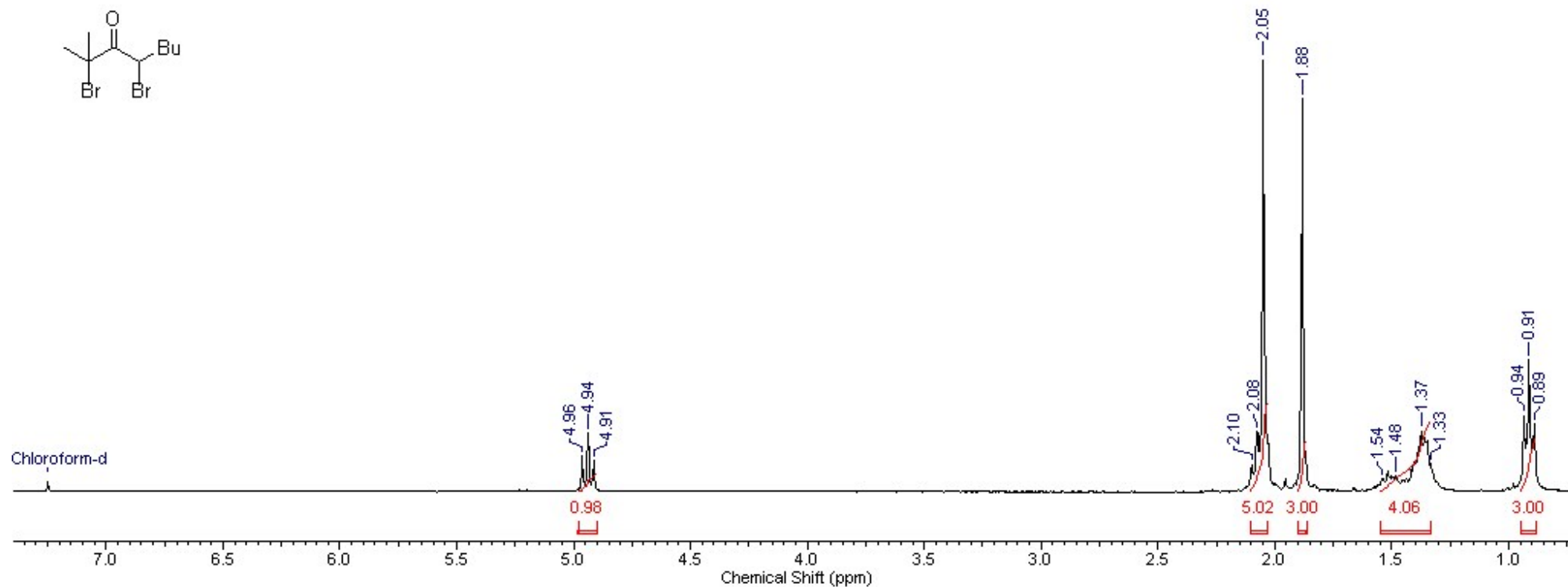
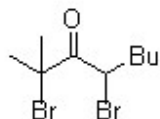
No.	(ppm)	(Hz)	Height
1	11.89	897.6	0.2315
2	13.80	1041.3	0.2639
3	22.16	1672.7	0.3443
4	26.04	1965.8	0.3299
5	29.30	2211.2	0.3622
6	32.26	2434.6	0.2162
7	50.09	3780.3	0.3254
8	51.74	3905.3	0.3417
9	77.00	5811.7	1.0000
10	194.35	14668.9	0.1387

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 2,4-dibromo-2-methyloctan-3-one, **3g**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	26.800						



No.	(ppm)	(Hz)	Height
1	0.89	266.9	0.1568
2	0.91	274.2	0.3052
3	0.94	280.9	0.1766
4	1.33	399.7	0.0658
5	1.37	412.2	0.1413
6	1.48	445.2	0.0385
7	1.54	462.1	0.0295
8	1.88	564.8	0.9104
9	2.05	614.7	1.0000
10	2.08	623.5	0.1384
11	2.10	630.1	0.0628
12	4.91	1474.6	0.0726
13	4.94	1481.9	0.1370
14	4.96	1489.2	0.0821

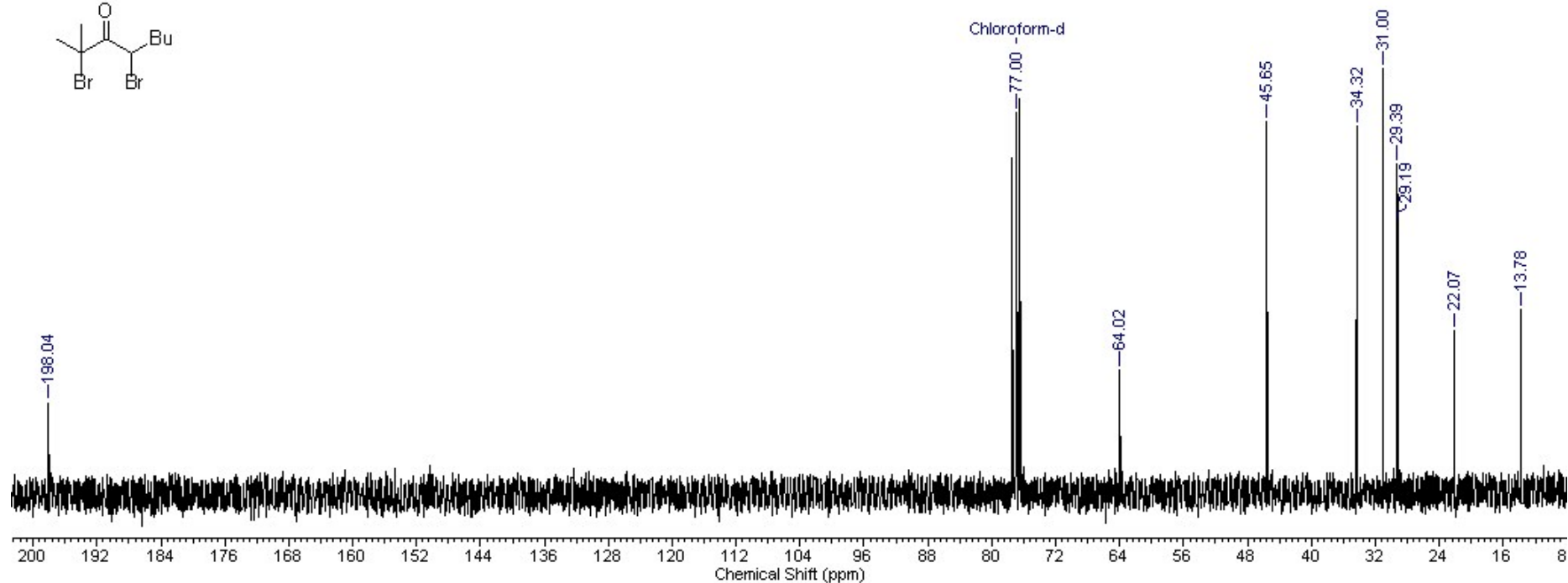
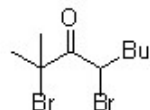
No.	Annotation	(ppm)
1	Chloroform-d	7.25

No.	(ppm)	Value	Absolute Value
1	[0.88 .. 0.95]	3.000	3.15938e+8
2	[1.33 .. 1.55]	4.059	4.27429e+8
3	[1.86 .. 1.90]	2.999	3.15848e+8
4	[2.03 .. 2.10]	5.025	5.29145e+8
5	[4.90 .. 4.98]	0.981	1.03359e+8

<sup>13</sup>C NMR of 2,4-dibromo-2-methyloctan-3-one, **3g**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	13C	Number of Transients	112	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	26.900						



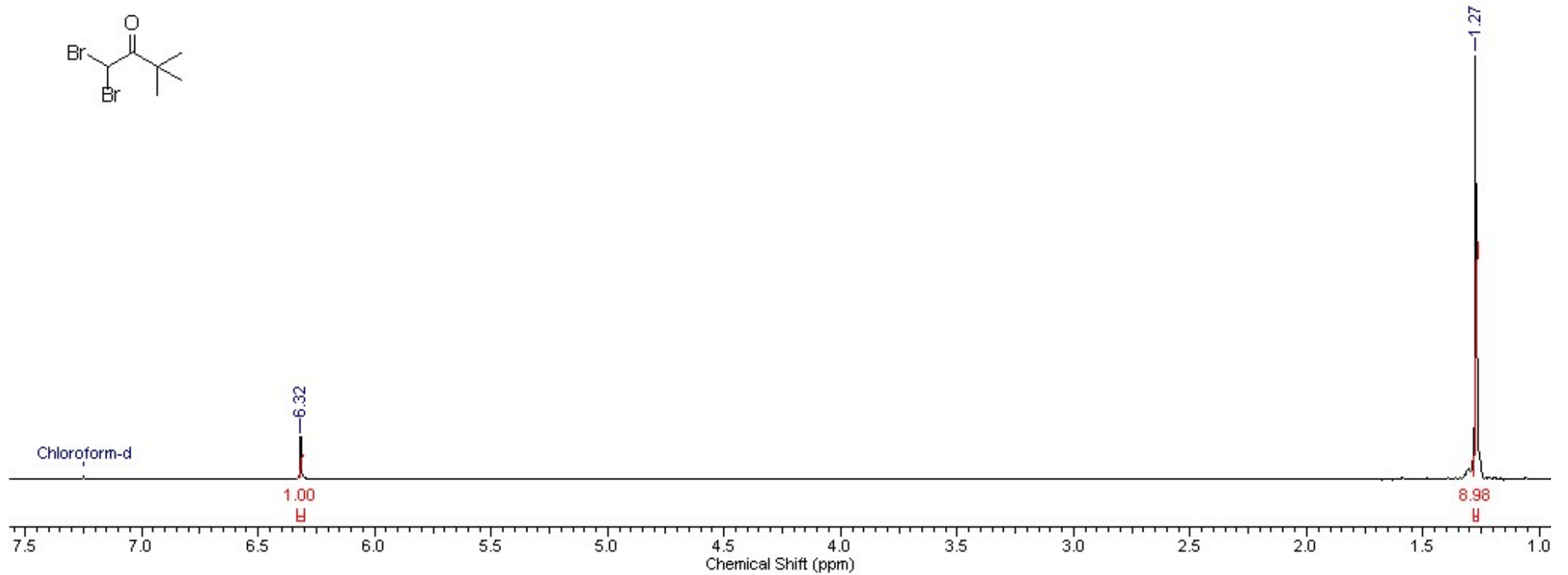
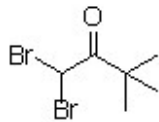
No.	(ppm)	(Hz)	Height
1	13.78	1040.2	0.4335
2	22.07	1666.1	0.3843
3	29.19	2203.5	0.6396
4	29.39	2217.9	0.7771
5	31.00	2339.5	1.0000
6	34.32	2590.5	0.8641
7	45.65	3445.3	0.8754
8	64.02	4831.9	0.2937
9	77.00	5811.7	0.8980
10	198.04	14947.6	0.2161

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 1,1-dibromo-3,3-dimethylbutan-2-one, **6a**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	27.400						

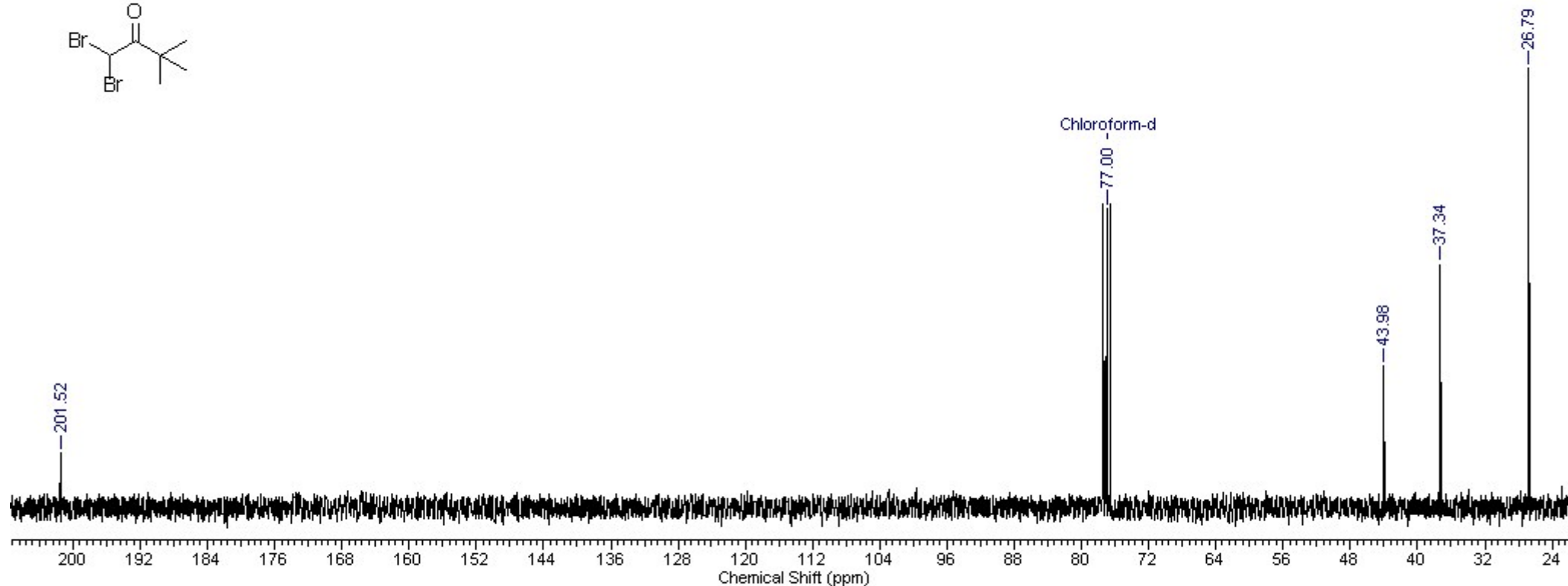
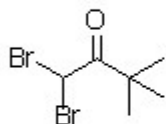


No.	(ppm)	(Hz)	Height	No.	Annotation	(ppm)	No.	(ppm)	Value	Absolute Value
1	1.27	382.1	1.0000	1	Chloroform-d	7.25	1	[1.26 .. 1.29]	8.985	1.15932e+9
2	6.32	1896.4	0.1008				2	[6.30 .. 6.33]	1.000	1.29031e+8

<sup>13</sup>C NMR of 1,1-dibromo-3,3-dimethylbutan-2-one, **6a**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	117	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	27.400						



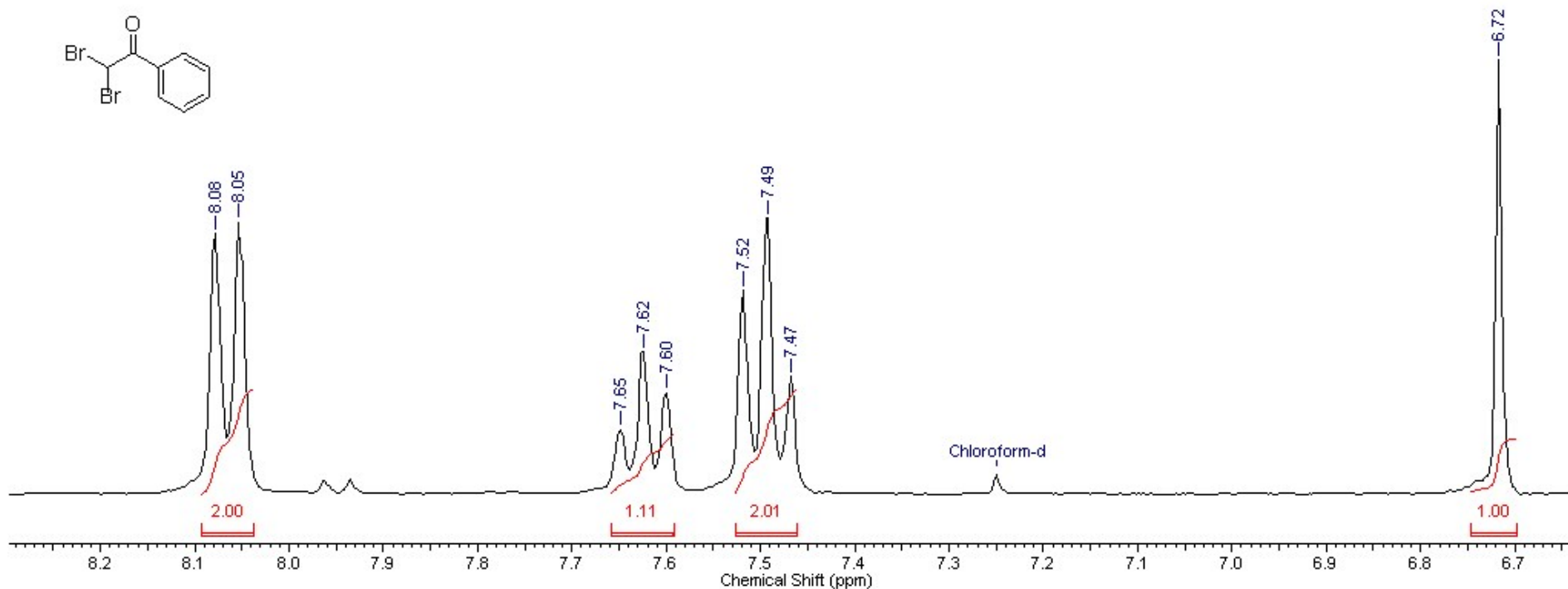
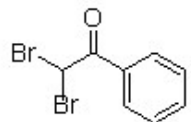
No.	(ppm)	(Hz)	Height
1	26.79	2022.2	1.0000
2	37.34	2818.3	0.5524
3	43.98	3319.2	0.3209
4	77.00	5811.7	0.6810
5	201.52	15209.7	0.1223

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 2,2-dibromo-1-phenylethanone, **6b**

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	<sup>1</sup> H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	24.700						



No.	(ppm)	(Hz)	Height
1	6.72	2016.0	1.0000
2	7.47	2241.3	0.2717
3	7.49	2248.6	0.6373
4	7.52	2256.7	0.4721
5	7.60	2280.9	0.2355
6	7.62	2288.2	0.3279
7	7.65	2295.6	0.1503
8	8.05	2417.3	0.6282
9	8.08	2424.7	0.6018

No.	Annotation	(ppm)
1	Chloroform-d	7.25

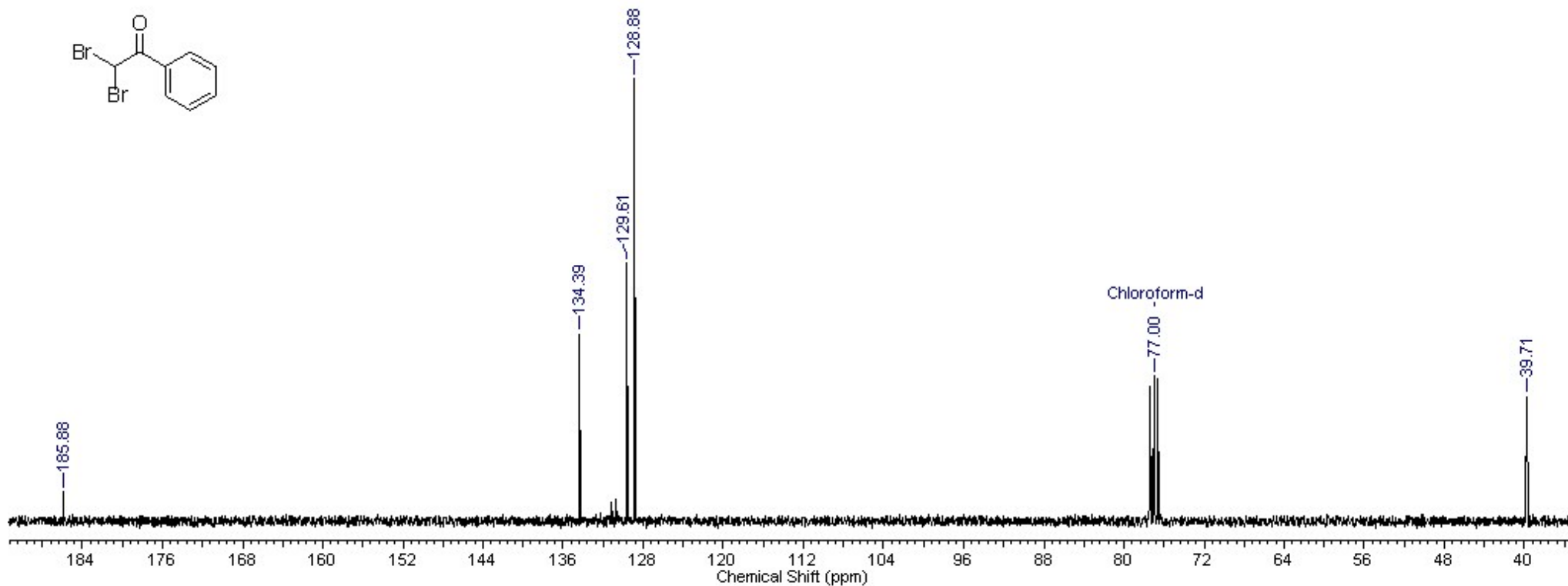
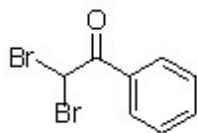
No.	(ppm)	Value	Absolute Value
1	[6.70 .. 6.75]	1.000	2.64646e+8
2	[7.46 .. 7.53]	2.014	5.32906e+8
3	[7.59 .. 7.66]	1.106	2.92664e+8
4	[8.04 .. 8.09]	1.999	5.29115e+8



<sup>13</sup>C NMR of 2,2-dibromo-1-phenylethanone, **6b**

Acquisition Time (sec) 0.9006

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	147	Original Points Count	16316
Points Count	16384	Pulse Sequence	zgpg30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18115.94
Temperature (degree C)	24.800						



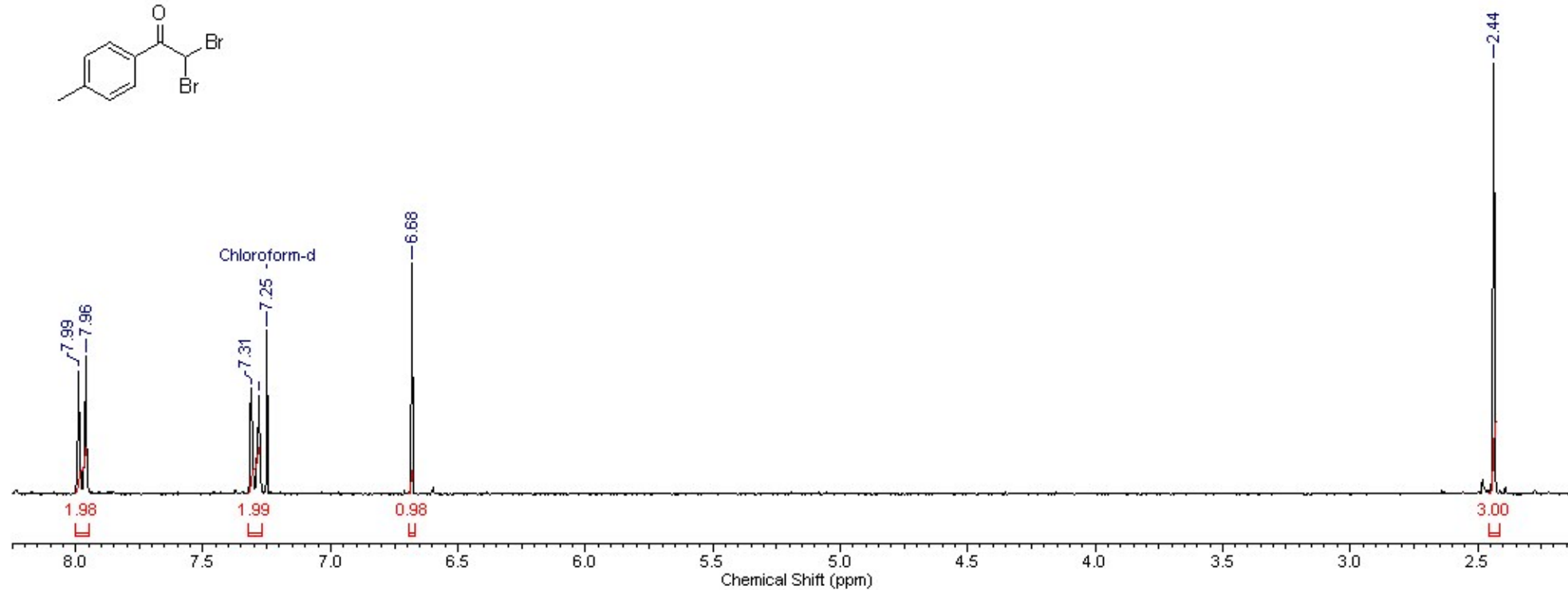
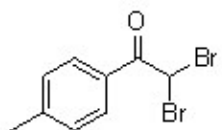
No.	(ppm)	(Hz)	Height
1	39.71	2997.5	0.2802
2	77.00	5811.7	0.3262
3	128.88	9727.2	1.0000
4	129.61	9782.5	0.5834
5	134.39	10143.0	0.4224
6	185.88	14029.8	0.0669

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 2,2-dibromo-1-(p-tolyl)ethan-1-one, **6d**

Acquisition Time (sec) 2.7150

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	16316
Points Count	16384	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	26.994						

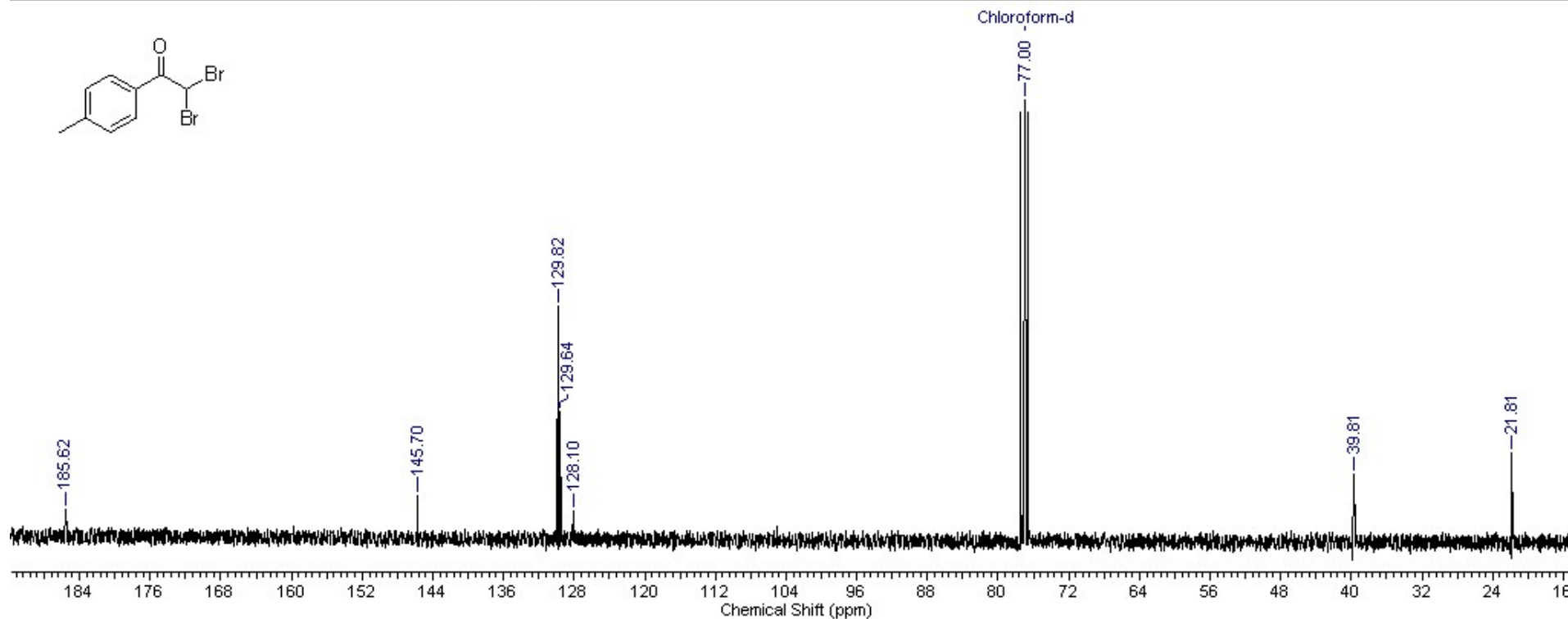
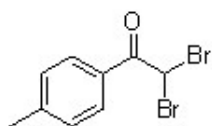


No.	(ppm)	(Hz)	Height	No.	Annotation	(ppm)
1	2.44	731.1	1.0000	1	Chloroform-d	7.25
2	6.68	2005.0	0.5349			
3	7.25	2176.0	0.3806			
4	7.28	2185.9	0.2286			
5	7.31	2194.3	0.2445			
6	7.96	2389.1	0.3200			
7	7.99	2397.5	0.2861			

<sup>13</sup>C NMR of 2,2-dibromo-1-(p-tolyl)ethan-1-one, **6d**

Acquisition Time (sec) 0.9050

Frequency (MHz)	75.48	Nucleus	<sup>13</sup> C	Number of Transients	512
Original Points Count	16316	Points Count	16384	Pulse Sequence	zgpg30
Solvent	CHLOROFORM-D	Sweep Width (Hz)	18028.85	Temperature (degree C)	27.009



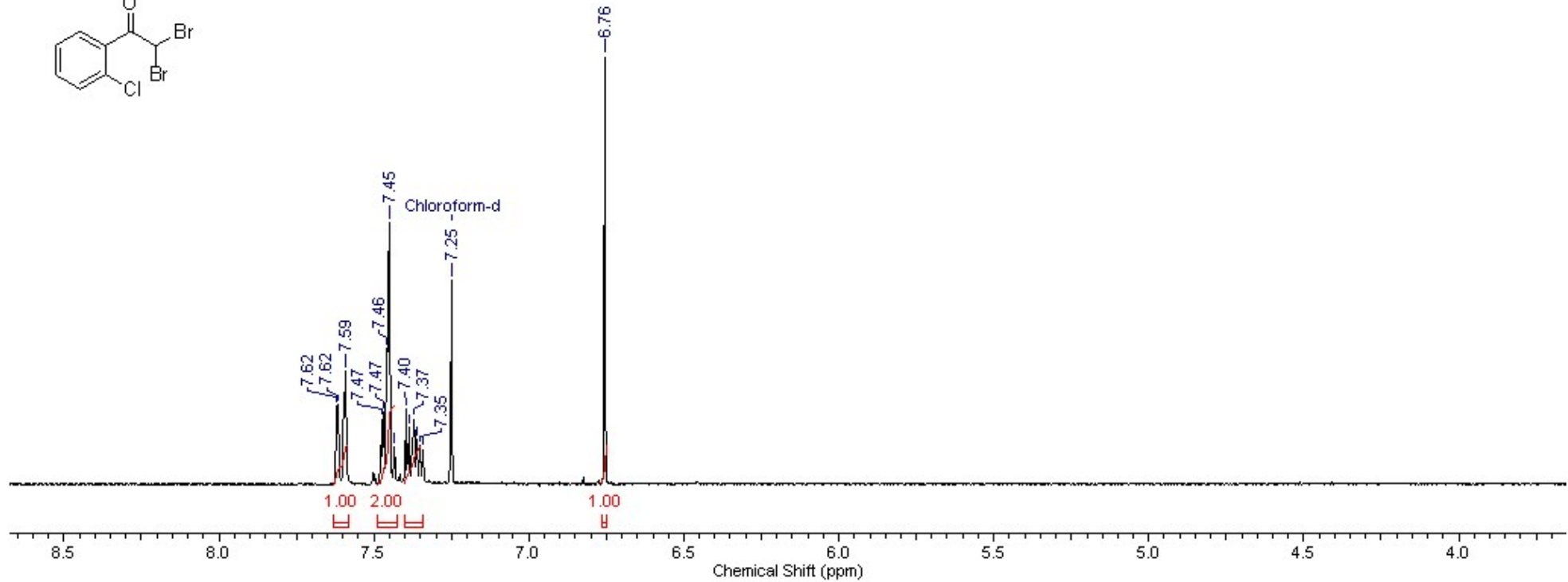
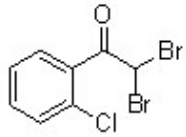
No.	(ppm)	(Hz)	Height
1	21.81	1646.4	0.1888
2	39.81	3004.4	0.1410
3	77.00	5811.6	1.0000
4	128.10	9668.7	0.0566
5	129.64	9784.3	0.2644
6	129.82	9798.6	0.5257
7	145.70	10997.0	0.0927
8	185.62	14010.1	0.0597

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of 2,2-dibromo-1-(2-chlorophenyl)ethan-1-one, **6e**

Acquisition Time (sec) 2.7150

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	16316
Points Count	16384	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	27.005						



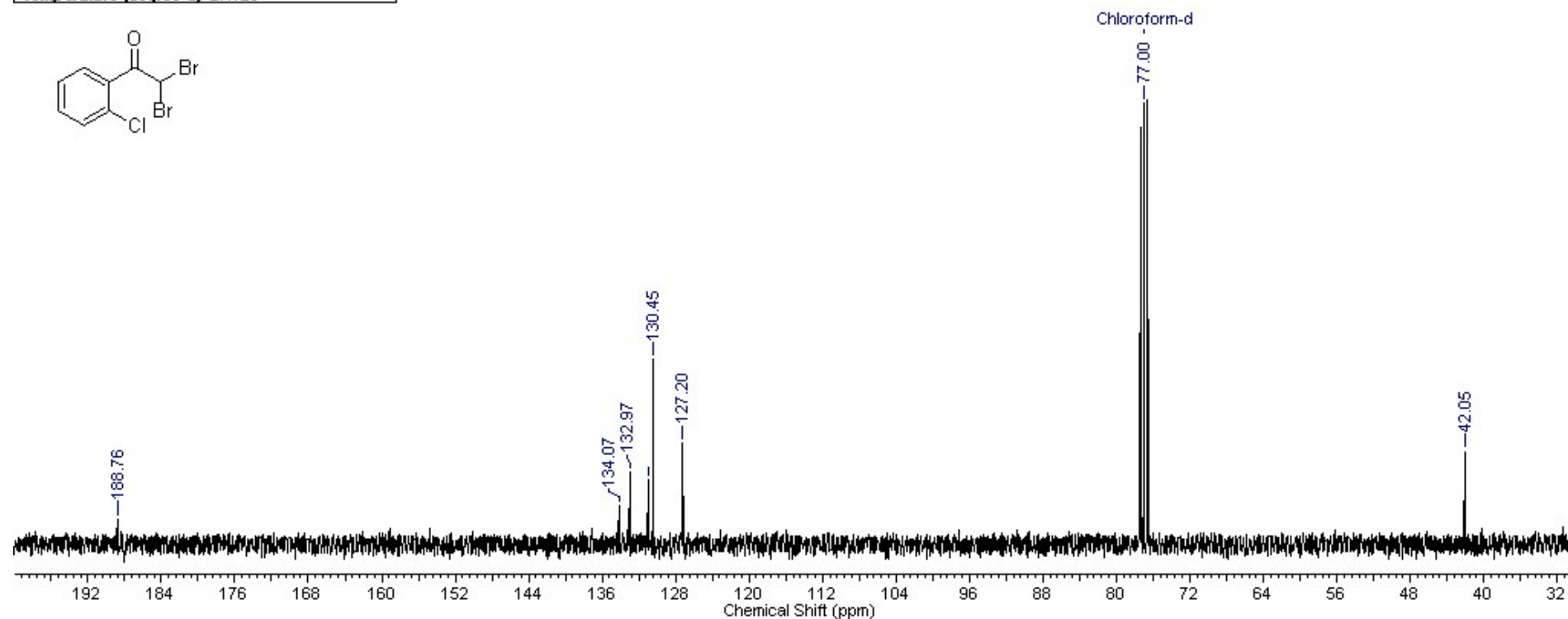
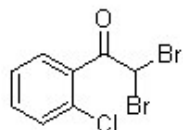
No.	(ppm)	(Hz)	Height	No.	(ppm)	(Hz)	Height
1	6.76	2027.4	1.0000	9	7.43	2231.0	0.0875
2	7.25	2176.0	0.4770	10	7.45	2236.1	0.6107
3	7.34	2203.8	0.0810	11	7.46	2239.1	0.3184
4	7.35	2206.8	0.0891	12	7.47	2242.0	0.1696
5	7.36	2209.7	0.1037	13	7.47	2243.5	0.1524
6	7.37	2212.3	0.1531	14	7.59	2279.0	0.2639
7	7.39	2217.4	0.1320	15	7.62	2286.0	0.1855
8	7.40	2220.0	0.1757	16	7.62	2287.5	0.1832

No.	Annotation	(ppm)
1	Chloroform-d	7.25

<sup>13</sup>C NMR of 2,2-dibromo-1-(2-chlorophenyl)ethan-1-one, **6e**

Acquisition Time (sec) 0.9050

Frequency (MHz)	75.48	Nucleus	13C	Number of Transients	256	Original Points Count	16316
Points Count	16384	Pulse Sequence	zpgq30	Solvent	CHLOROFORM-D	Sweep Width (Hz)	18028.85
Temperature (degree C)	27.129						



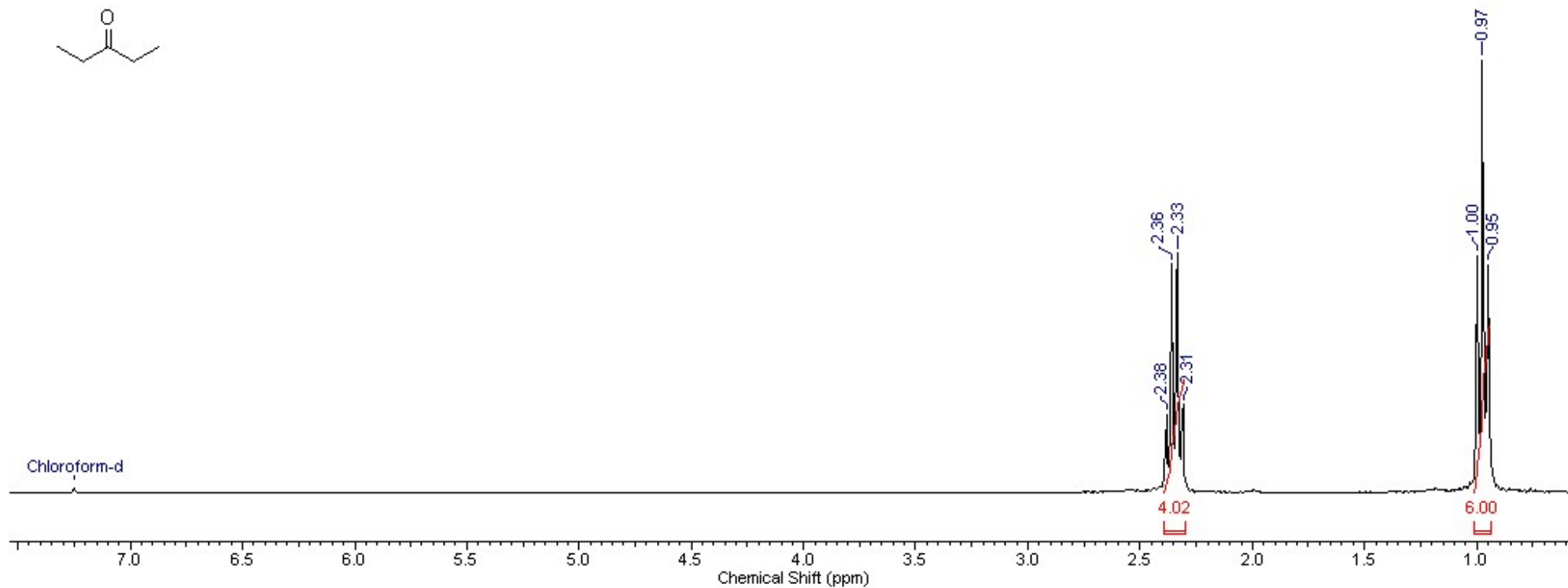
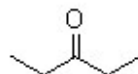
No.	(ppm)	(Hz)	Height
1	42.05	3173.8	0.1968
2	77.00	5811.6	0.9912
3	127.20	9600.5	0.2164
4	130.45	9845.9	0.4065
5	130.90	9880.0	0.1316
6	130.95	9883.3	0.0599
7	132.97	10036.3	0.1503
8	134.07	10118.8	0.0731
9	188.76	14246.7	0.0432

No.	Annotation	(ppm)
1	Chloroform-d	77.00

<sup>1</sup>H NMR of pentan-3-one, 7a

Acquisition Time (sec) 1.3518

Frequency (MHz)	300.13	Nucleus	1H	Number of Transients	1	Original Points Count	8124
Points Count	8192	Pulse Sequence	zg	Solvent	CHLOROFORM-D	Sweep Width (Hz)	6009.62
Temperature (degree C)	29.200						



No.	(ppm)	(Hz)	Height
1	0.95	284.5	0.5269
2	0.97	292.6	1.0000
3	1.00	299.9	0.5479
4	2.31	693.2	0.2037
5	2.33	700.5	0.5524
6	2.36	707.9	0.5283
7	2.38	715.2	0.1806

No.	Annotation	(ppm)
1	Chloroform-d	7.25

No.	(ppm)	Value	Absolute Value
1	[0.94 .. 1.01]	6.000	7.42857e+8
2	[2.30 .. 2.40]	4.015	4.97143e+8

# HRMS of 8-bromoheptadecan-9-one, 2e

## Display Report

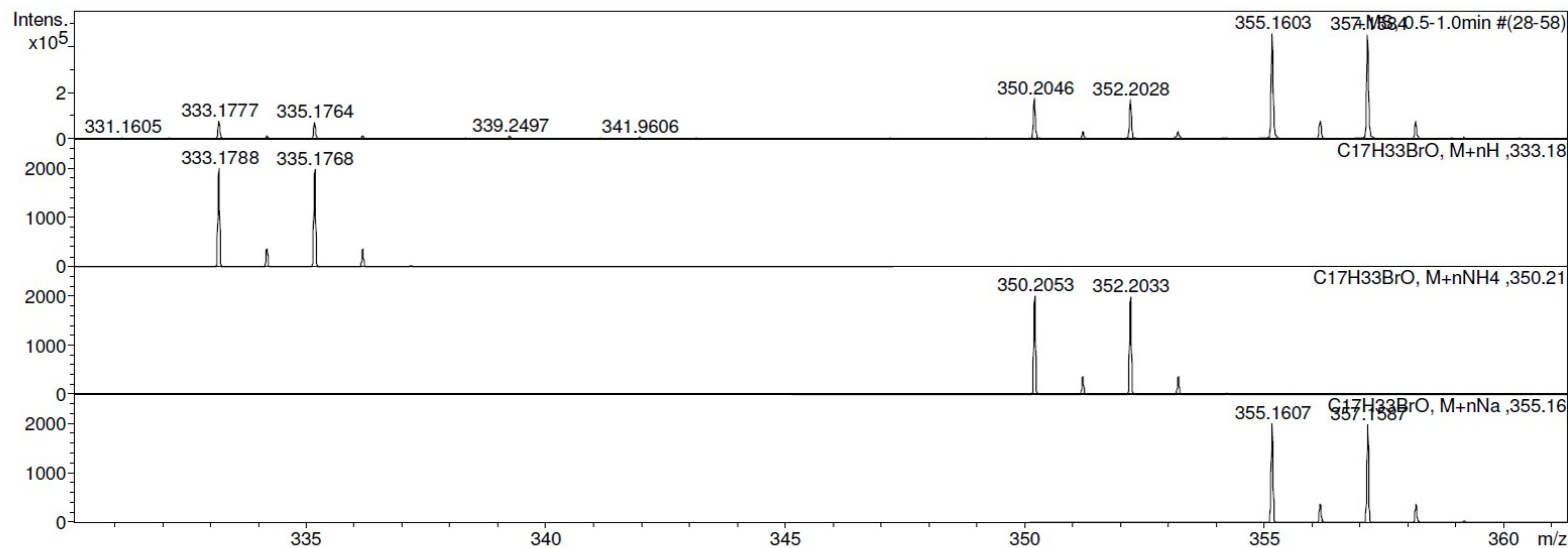
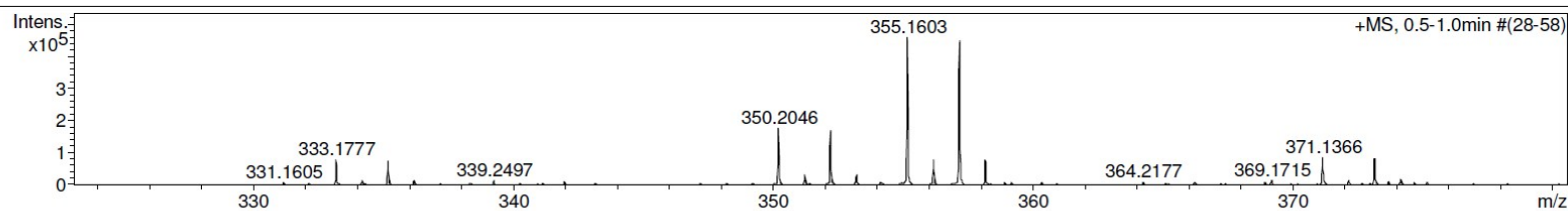
**Analysis Info**

Analysis Name D:\Data\Kolotyrykina\2018\Kapustina\0213013.d  
 Method tune\_low.m  
 Sample Name /KAPN 149  
 Comment C17H33BrO mH 333.1789 calibrant added

Acquisition Date 13.02.2018 12:12:13  
 Operator BDAL@DE  
 Instrument / Ser# micrOTOF 10248

**Acquisition Parameter**

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active			Set Dry Heater	180 °C
Scan Begin	50 m/z	Set Capillary	4500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set End Plate Offset	-500 V	Set Divert Valve	Waste



HRMS of смесь 2-bromo-2-methyloctan-3-one (**2g**) и 4-bromo-2-methyloctan-3-one (**2g'**)

Display Report

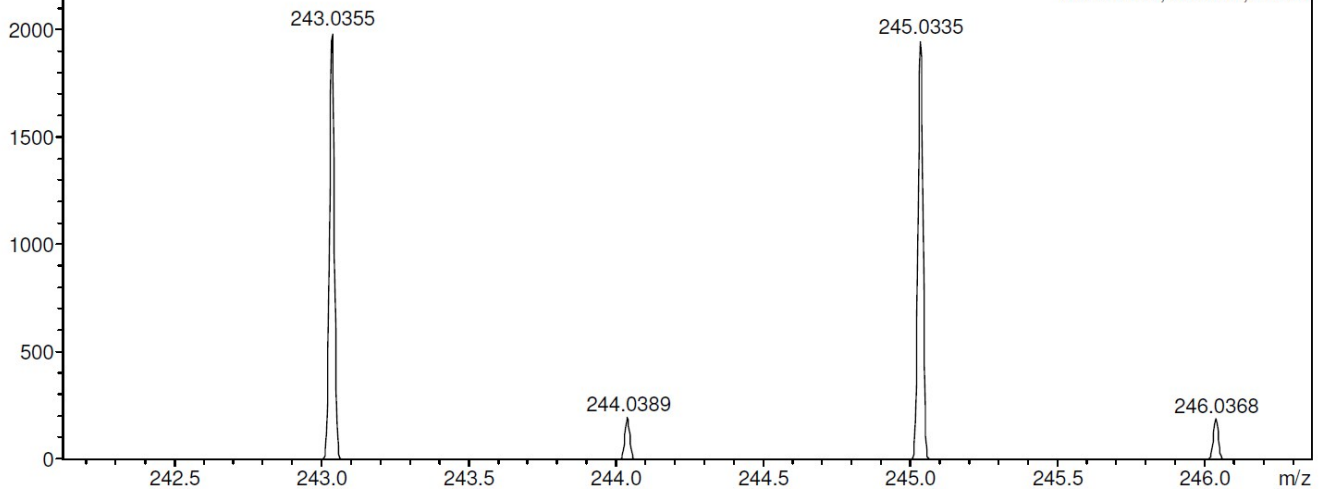
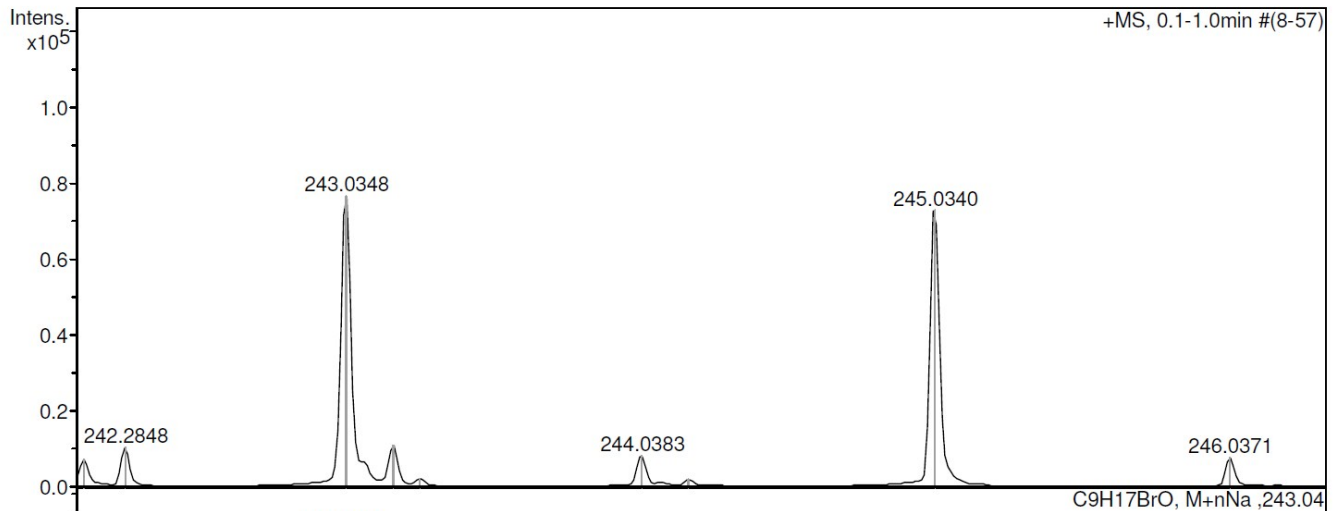
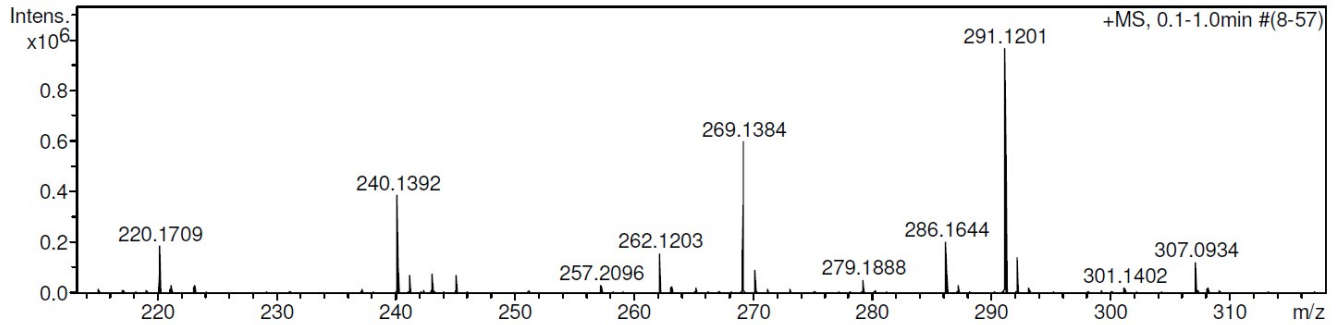
Analysis Info

Analysis Name D:\Data\Kolotyorkina\2018\Kapustina\0313046.d  
 Method tune\_low.m  
 Sample Name /KAPN 183  
 Comment C9H17BrO mH 221.0535 /clb added

Acquisition Date 13.03.2018 17:52:10  
 Operator BDAL@DE  
 Instrument / Ser# micrOTOF 10248

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active			Set Dry Heater	180 °C
Scan Begin	50 m/z	Set Capillary	4500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set End Plate Offset	-500 V	Set Divert Valve	Waste





## Display Report

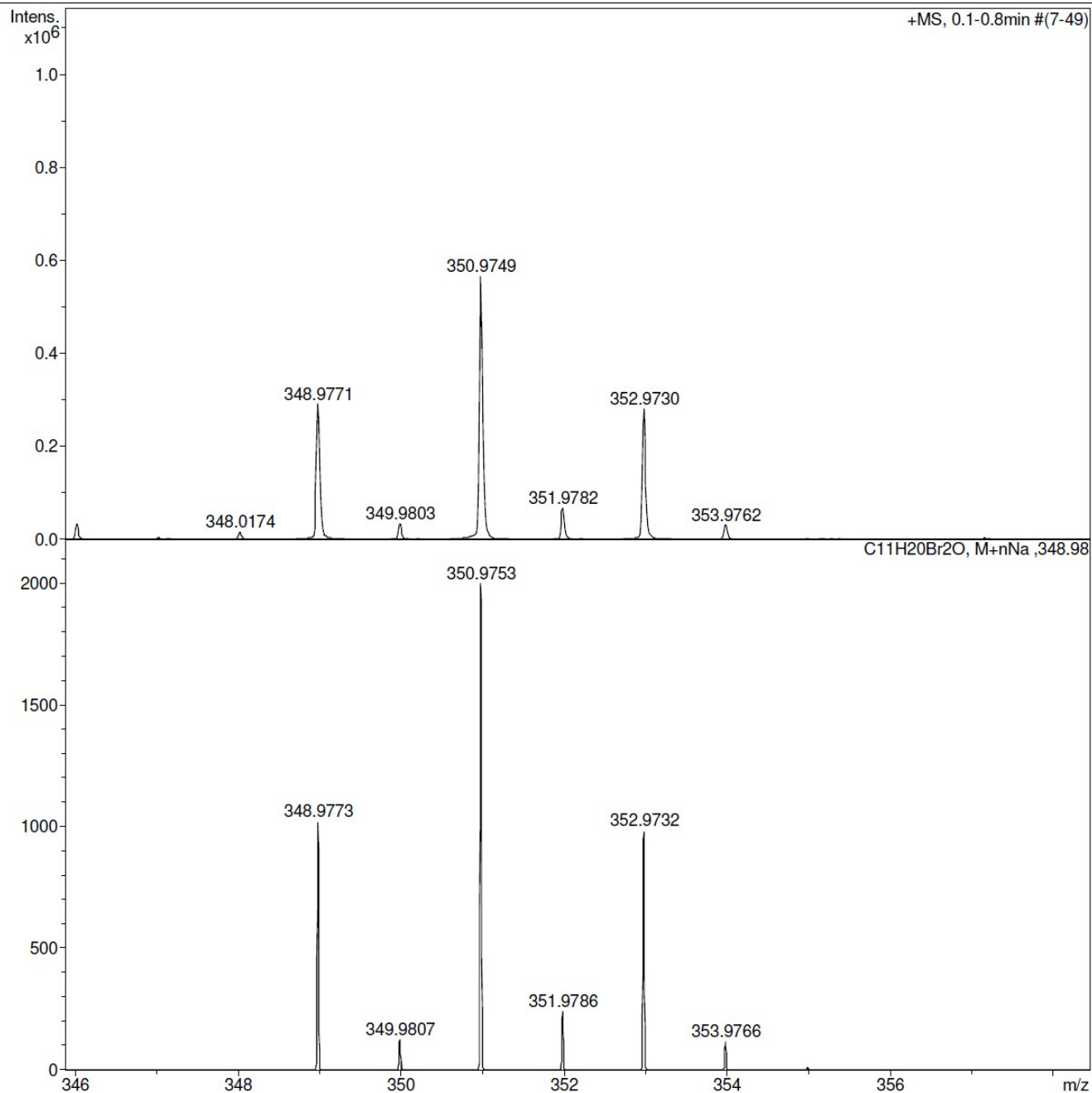
## Analysis Info

Analysis Name D:\Data\Kolotyorkina\2018\Kapustina\0228026.d  
Method tune\_low.m  
Sample Name /KAPN 141  
Comment C11H20Br2O mH 326.9953/ clb dded CH3OH

Acquisition Date 28.02.2018 21:17:31  
Operator BDAL@DE  
Instrument / Ser# micrOTOF 10248

## Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active			Set Dry Heater	180 °C
Scan Begin	50 m/z	Set Capillary	4500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set End Plate Offset	-500 V	Set Divert Valve	Waste



## Display Report

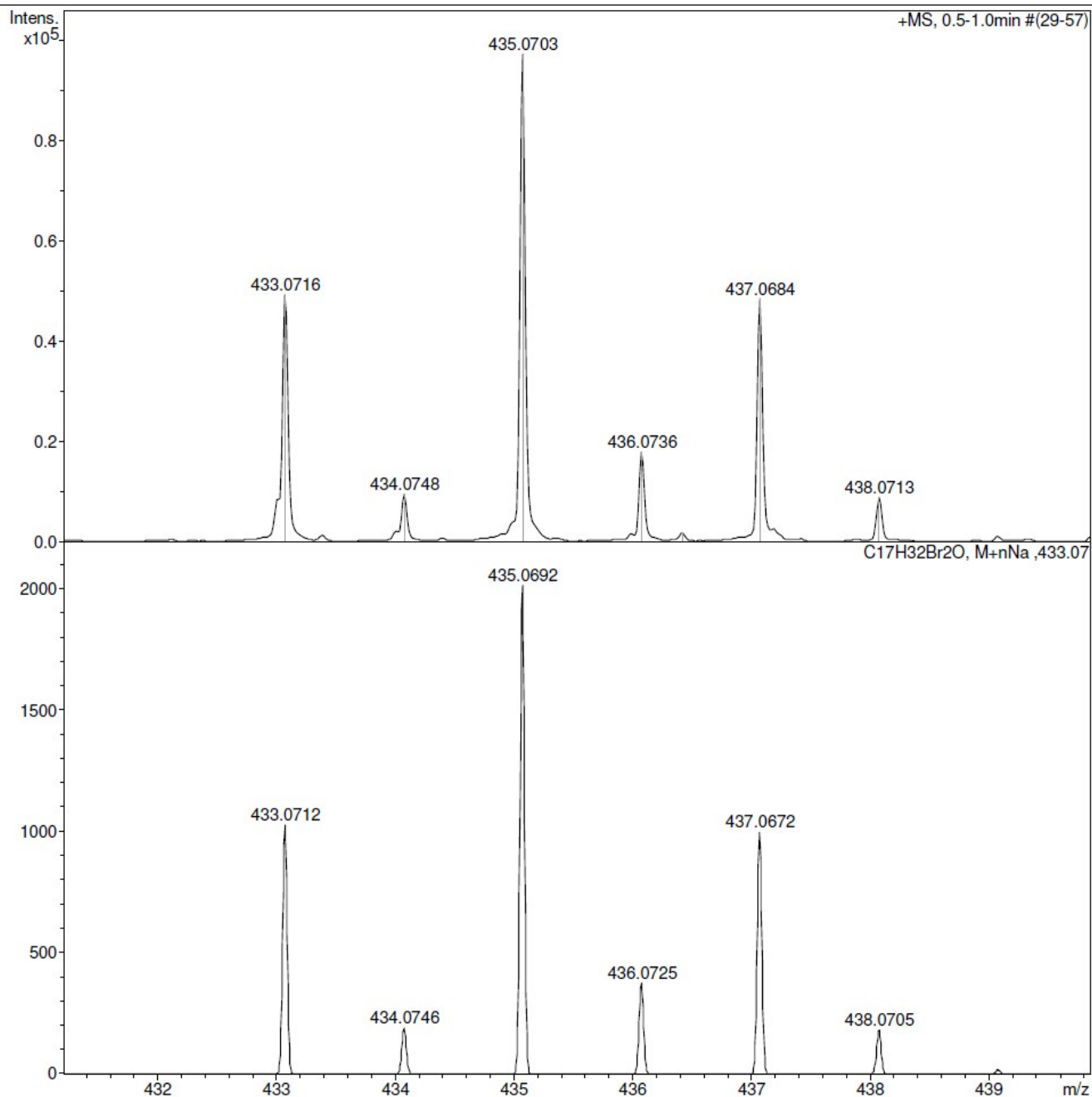
## Analysis Info

Analysis Name D:\Data\Kolotyrykina\2018\Kapustina\0213012.d  
Method tune\_low.m  
Sample Name /KAPN 149  
Comment C17H32Br2O mH 411.0892 calibrant added

Acquisition Date 13.02.2018 12:04:00  
Operator BDAL@DE  
Instrument / Ser# micrOTOF 10248

## Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active			Set Dry Heater	180 °C
Scan Begin	50 m/z	Set Capillary	4500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set End Plate Offset	-500 V	Set Divert Valve	Waste



Display Report

Analysis Info

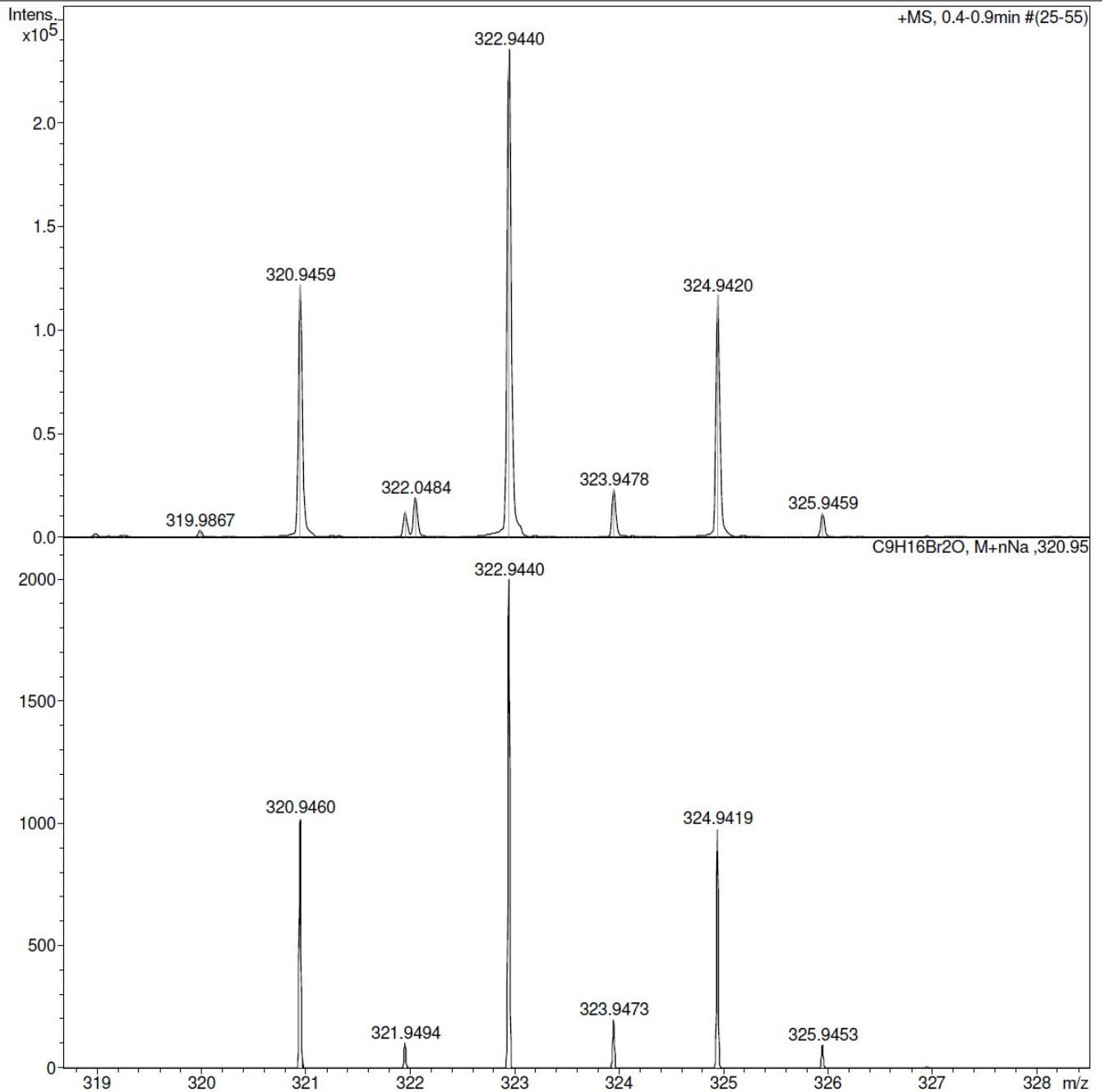
Analysis Name D:\Data\Kolotyrykina\2018\Kapustina\0314027.d  
 Method tune\_low.m  
 Sample Name /KAPN 50  
 Comment C9H16Br2O mH 298.9640/ clb added CH3OH

Acquisition Date 14.03.2018 18:36:27

Operator BDAL@DE  
 Instrument / Ser# micrOTOF 10248

Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active			Set Dry Heater	180 °C
Scan Begin	50 m/z	Set Capillary	4500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set End Plate Offset	-500 V	Set Divert Valve	Waste



## Display Report

### Analysis Info

Analysis Name D:\Data\Kolotyrykina\2018\Kapustina\0322026.d  
 Method tune\_low.m  
 Sample Name /KAPN 68\_90  
 Comment C9H16Br2O mH 298.9640/ clb added,

Acquisition Date 22.03.2018 15:24:46

Operator BDAL@DE  
 Instrument / Ser# micrOTOF 10248

### Acquisition Parameter

Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.4 Bar
Focus	Not active			Set Dry Heater	180 °C
Scan Begin	50 m/z	Set Capillary	4500 V	Set Dry Gas	4.0 l/min
Scan End	3000 m/z	Set End Plate Offset	-500 V	Set Divert Valve	Waste

