Electronic Supporting Information

Visible Light induced Cascade *N*-Alkylation/Amidation Reaction of Quinazolin-4(3*H*)-ones and Related *N*-Heterocycles

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General remarks

All reagents were obtained from commercial sources and used as received. Ethanol (anhydrous) were used as received. Technical grade petroleum ether (40-60°C bp.) and ethyl acetate were used for chromatography column.

^{1}H NMR spectra were recorded in $CDCl_3$ at ambient temperature on Bruker AVANCE I 500 spectrometers at 500.1 MHz, using the solvent as internal standard (7.26 ppm). ^{13}C NMR spectra were obtained at 125 MHz and referenced to the internal solvent signals (central peak is 77.2 ppm). Chemical shift (δ) and coupling constants (*J*) are given in ppm and in Hz, respectively. The peak patterns are indicated as follows: s, singlet; d, doublet; t, triplet; q, quartet; m, multiplet, and br. for broad.

GC analyses were performed with GC-7890A (Agilent) equipped with a 30-m capillary column (HP-5ms, fused silica capillary column, 30 M*0.25 mm*0.25 mm film thickness), was used with N_2/air as vector gas. GCMS were measured by GCMS-7890A-5975C (Agilent) with GC-7890A equipped with a 30-m capillary column (HP-5ms, fused silica capillary column, 30 M*0.25 mm*0.25 mm film thickness), was used with helium as vector gas. HRMS were measured by MAT 95XP (Termol) (LCMS-IT-TOF).

Compounds **3i** were collected at 100 K on a Rigaku Oxford Diffraction Supernova Dual Source, Cu at Zero equipped with an AtlasS2 CCD using Cu Kα radiation. Data reduction was carried out with the diffractometer's software.

General procedure for I_2/K_2CO_3 promoted oxidative *N*-alkylation/amidation of quinazolinone derivatives with alkyl bromides or chlorides

Quinazolinone derivative (0.25 mmol), alkyl bromide or chloride (0.375 mmol), I_2 (0.25 mmol), K_2CO_3 (0.375 mmol), and DMC (0.5 mL) were introduced in Schlenck tube under 36W white LEDs under air atmosphere, equipped with magnetic stirring bar and was stirred at 100 °C. After 6 h, the solvent was then evaporated under vacuum and the desired product was purified by using a silica gel chromatography column and a mixture of petrol ether/ethyl acetate as eluent.

Figure S1. A photo for the reaction set-up.

General procedure for I_2/K_2CO_3 promoted oxidative *N*-alkylation/amidation of *N*-heterocycles with benzyl bromide

N-heterocycle (0.25 mmol), benzyl bromide (0.375 mmol), I_2 (0.25 mmol), K_2CO_3 (0.375 mmol), and DMC (0.5 mL) were introduced in Schlenck tube under 36W white LEDs under air atmosphere, equipped with magnetic stirring bar and was stirred at 100 ^oC. After 6 h, the solvent was then evaporated under vacuum and the desired product was purified by using a silica gel chromatography column and a mixture of petrol ether/ethyl acetate as eluent.

Procedure for the synthesis of 1,3-dibenzyl-4-oxo-3,4-dihydroquinazolin-1-ium bromide (compound 8)

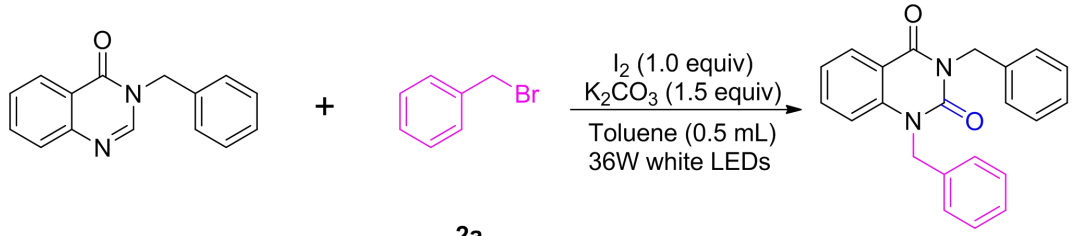
3-Benzylquinazolin-4(3H)-one (0.5 mmol), benzyl bromide (0.75 mmol), acetone (2.0 mL) were introduced in Schlenck tube, equipped with magnetic stirring bar and was stirred at 100 ^oC. After 12 h, the reaction mixture was filtered, and the residue of the product was washed with diethyl ether (20 mL × 3), and dried under vacuum.

Procedure for the synthesis of 3-benzyl-2-(benzyloxy)quinazolin-4(3H)-one (compound 9)

3-Benzyl-2-chloroquinazolin-4(3H)-one (0.5 mmol), benzyl alcohol (0.75 mmol), KO^{t}Bu (0.75 mmol), 1,4-dioxane (2.0 mL) were introduced in Schlenck tube, equipped with magnetic stirring bar and was stirred at 100 ^oC. After 18 h, the solvent was then evaporated under vacuum and the desired product was purified by using a silica gel chromatography column and a mixture of petrol ether/ethyl acetate as eluent.

The data of reaction optimization

Table S1. Screening of different temperature[a]

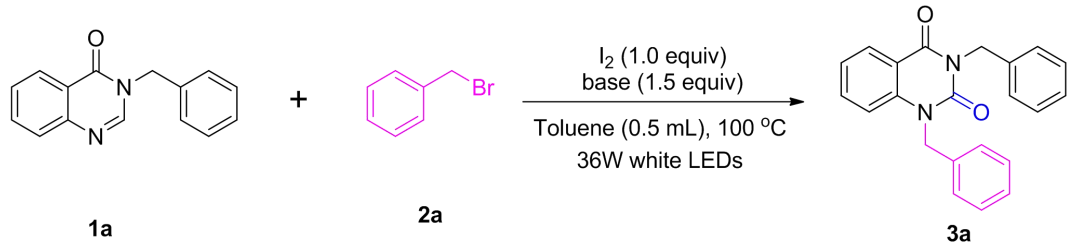


1a **2a** **3a**

Entry	Temp. (°C)	Yield (%)
1	R.T	6
2	50	47
3	90	75
4	95	83
5	100	95
6	105	94

[a]Reaction conditions: quinazolin-4(3*H*)-one (0.25 mmol), benzyl bromide (1.5 equiv), I_2 (1.0 equiv), K_2CO_3 (1.5 equiv), toluene (0.5 mL) under 36W white LEDs for 6 h, air atmosphere.

Table S2. Screening of different bases[a]

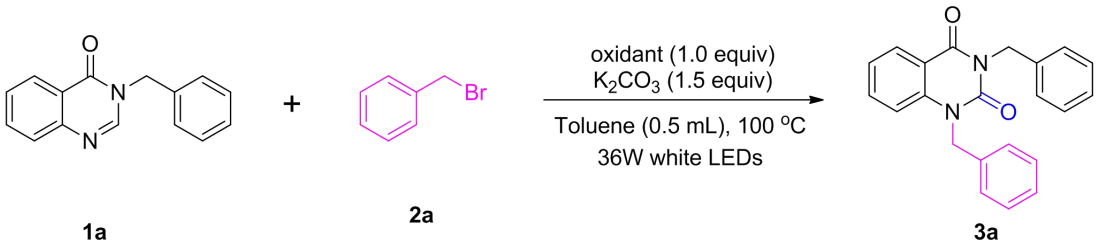


1a **2a** **3a**

Entry	Base	Yield(%)
1	K_2CO_3	95
2	KOAc	84
3	t-BuOK	43
4	C_6H_5COOK	68
5	K_3PO_4	88
6	CF_3COOK	8
7	KOTf	---
8	KOH	trace
9	Cs_2CO_3	18
10	NaOH	72
11	$CaHCO_3$	82

[a]Reaction conditions: quinazolin-4(3*H*)-one (0.25 mmol), benzyl bromide (1.5 equiv), I_2 (1.0 equiv), base (1.5 equiv), toluene (0.5 mL) at 100°C under 36W white LEDs for 6 h, air atmosphere.

Table S3. Screening of different oxidants[a]

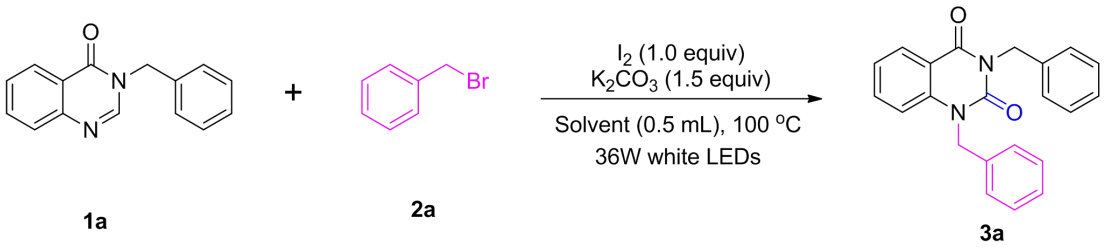


1a 2a 3a

Entry	Oxidant	Yield(%)
1	I_2	95
2	$C_6Cl_4O_2$	trace
3	$CuSO_4$	trace
4	TBHP	8
5	CuO	25

[a]Reaction conditions: quinazolin-4(3*H*)-one (0.25 mmol), benzyl bromide (1.5 equiv), oxidant (1.0 equiv), K_2CO_3 (1.5 equiv), toluene (0.5 mL) at 100 °C under 36W white LEDs for 6 h, air atmosphere.

Table S3. Screening of different solvents[a]

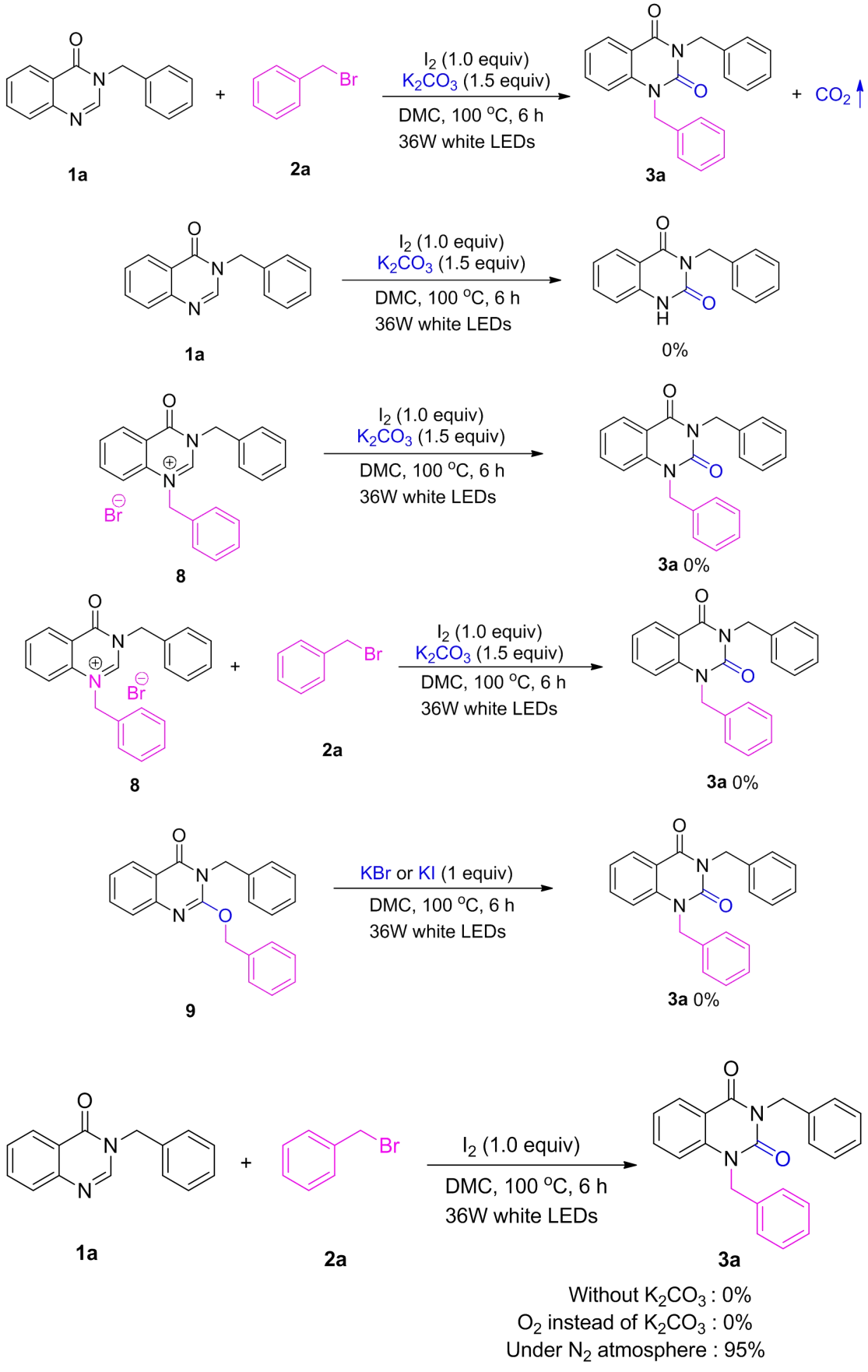


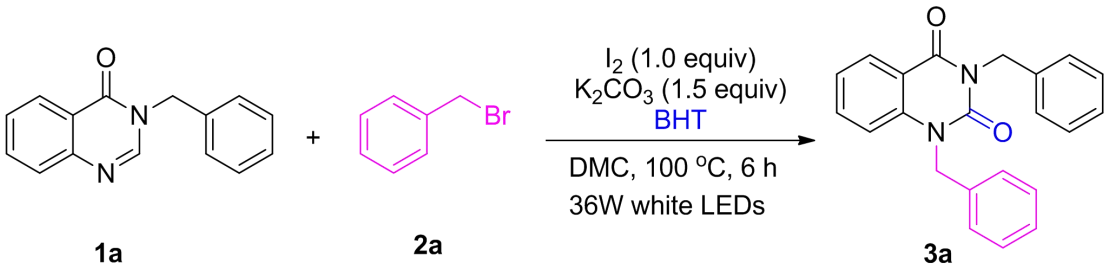
1a 2a 3a

Entry	Solvent	Yield(%)
1	1,4-dioxane	87
2	Toluene	95
3	DMF	36
4	DMC	99
5	THF	55
6	Ethanol	51
7	1,2-Dichloroethane	41

[a]Reaction conditions: quinazolin-4(3*H*)-one (0.25 mmol), benzyl bromide (1.5 equiv), I_2 (1.0 equiv), K_2CO_3 (1.5 equiv), solvent (0.5 mL) at 100 °C under 36W white LEDs for 6 h, air atmosphere.

Scheme S1 Control experiments.



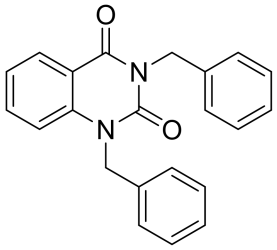


1a **2a** **3a**

Without BHT : 99%
With 1.0 equiv. of BHT : 43%
With 2.2 equiv. of BHT : 0%

Characterization data of substrates

1,3-dibenzylquinazoline-2,4(1H,3H)-dione[1]（3a）

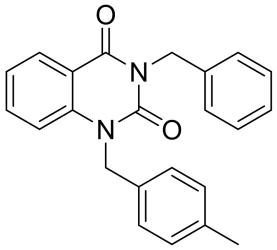


White solid, yield = 76%, 65 mg.

^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.27 (dd, 1H, *J* = 8.0,1.5 Hz), 7.60-7.54 (m, 3H), 7.37-7.34 (m, 4H), 7.31-7.29 (m, 2H), 7.28-7.22 (m, 3H), 7.13-7.12 (m, 1H), 5.40 (s, 2H), 5.37 (s, 2H).

^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.8, 151.5, 140.0, 137.0, 135.6, 135.1, 139.2, 139.03, 129.00, 128.5, 127.67, 127.66, 126.4, 123.1, 115.8, 114.4, 47.4, 45.2.

3-benzyl-1-(4-methylbenzyl)quinazoline-2,4(1H,3H)-dione（3b）

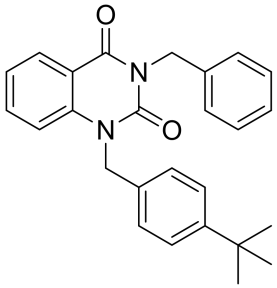


White solid, yield = 57%, 51 mg.

^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.27 (dd, 1H, *J* = 7.5,1.5 Hz), 7.59-7.53 (m, 3H), 7.37-7.34 (m, 2H), 7.31-7.28 (m, 1H), 7.24-7.21 (m, 1H), 7.18-7.14 (m, 5H), 5.37 (s, 2H), 5.36 (s, 2H), 2.24 (s, 3H).

^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.9, 151.6, 140.1, 137.5, 137.2, 135.2, 132.7, 129.8, 129.2, 129.1, 128.6, 127.8, 126.6, 123.2, 115.9, 114.6, 47.3, 45.3, 21.2.

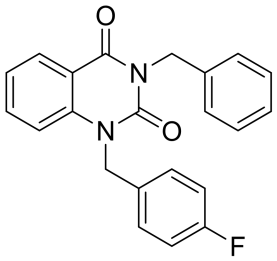
3-benzyl-1-(4-(tert-butyl)benzyl)quinazoline-2,4(1H,3H)-dione（3c）



Yellow solid, yield = 61%, 61 mg.

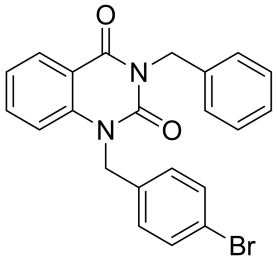
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.27 (dd, 1H, *J* = 7.5,1.5 Hz), 7.60-7.55 (m, 3H), 7.38-7.34 (m, 4H), 7.31-7.30 (m, 1H), 7.25-7.17 (m, 4H), 5.37 (s, 4H), 1.32 (s, 9H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) =162.0, 151.6, 150.7, 140.2, 137.2, 135.2, 132.7, 129.2, 129.1, 128.6, 127.8, 126.3, 126.0, 123.2, 115.8, 114.6, 47.2, 45.3, 34.6, 31.4.
HRMS (EI): *m/z* calcd for $C_{26}H_{27}N_2O_2$ $[M+H]^+$ 399.2067, found 399.2068.

3-benzyl-1-(4-fluorobenzyl)quinazoline-2,4(1H,3H)-dione（3d）



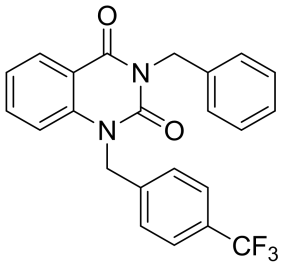
Yellow solid, yield = 70%, 63 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.28 (dd, 1H, *J* = 8.0,2.0 Hz), 7.59-7.56 (m, 3H), 7.37-7.34 (m, 2H), 7.31-7.30 (m, 1H), 7.27-7.23 (m, 3H), 7.11 (d, 1H, *J* = 8.5 Hz), 7.06-7.02 (m, 2H), 5.36 (s, 4H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 163.3 (d, J_{CF} = 244.75 Hz), 161.9, 151.6, 139.9, 137.1, 135.3, 131.5 (d, J_{CF} = 3.25 Hz), 129.4, 129.2, 128.6, 128.4 (d, J_{CF} = 8.0 Hz), 127.8, 123.4, 116.2 (d, J_{CF} = 21.5 Hz), 115.9, 114.3, 46.9, 45.3.
^{19}F NMR (470 MHz, $CDCl_3$): δ (ppm) = -114.5.
HRMS (EI): *m/z* calcd for $C_{22}H_{18}FN_2O_2$ $[M+H]^+$ 361.1346, found 361.1346.

3-benzyl-1-(4-bromobenzyl)quinazoline-2,4(1H,3H)-dione (3e)



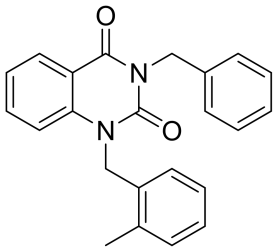
White solid, yield = 53%, 56 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.28 (dd, 1H, *J* = 8.0,1.5 Hz), 7.58-7.55 (m, 3H), 7.48-7.46 (m, 2H), 7.37-7.33 (m, 2H), 7.31-7.28 (m, 1H), 7.27-7.24 (m, 1H), 7.14 (d, 2H, *J* = 8.0 Hz), 7.06 (d, 1H, *J* = 8.0 Hz), 5.36 (s, 2H), 5.33 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.8, 151.5, 139.8, 137.0, 135.3, 134.8, 132.3, 129.4, 129.2, 128.6, 128.4, 127.9, 123.4, 121.7, 115.9, 114.3, 47.0, 45.3.
HRMS (EI): *m/z* calcd for $C_{22}H_{18}BrN_2O_2$ $[M+H]^+$ 421.0546, found 421.0547.

3-benzyl-1-(4-(trifluoromethyl)benzyl)quinazoline-2,4(1H,3H)-dione (3f)



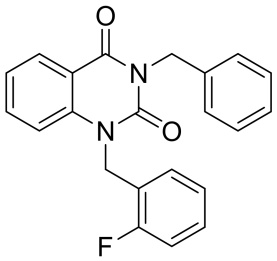
White solid, yield = 56%, 57 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.29 (dd, 1H, *J* = 8.0,1.5 Hz), 7.62-7.56 (m, 5H), 7.38-7.30 (m, 5H), 7.26 (d, 1H, *J* = 7.5 Hz), 7.03 (d, 1H, *J* = 8.5 Hz), 5.44 (s, 2H), 5.36 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.8, 151.6, 139.9, 139.8, 137.0, 135.4, 130.3 (q, J_{CF} = 32.5 Hz), 129.6, 129.2, 128.7, 127.9, 126.9, 126.2 (q, J_{CF} = 3.6 Hz), 125.1 (q, J_{CF} = 270.3 Hz), 123.6, 116.0, 114.2, 47.2, 45.4.
^{19}F NMR (470 MHz, $CDCl_3$): δ (ppm) = -62.6.
HRMS (EI): *m/z* calcd for $C_{23}H_{18}F_3N_2O_2$ $[M+H]^+$ 411.1314, found 411.1313.

3-benzyl-1-(2-methylbenzyl)quinazoline-2,4(1H,3H)-dione (3g)



White solid, yield = 73%, 65 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.30 (dd, 1H, *J* = 8.0, 2.0 Hz), 7.59-7.58 (m, 2H), 7.55-7.51 (m, 1H), 7.36-7.33 (m, 2H), 7.31-7.18 (m, 4H), 7.10-7.07 (m, 1H), 6.90 (d, 1H, J = 8.0 Hz), 6.80-6.78 (m, 1H), 5.37 (s, 2H), 5.34 (s, 2H), 2.46 (s, 3H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 151.4, 140.2, 137.2, 135.3, 134.9, 133.0, 130.8, 129.23, 129.20, 128.6, 127.8, 127.4, 126.6, 124.4, 123.3, 115.8, 114.6, 45.7, 45.3, 19.3.

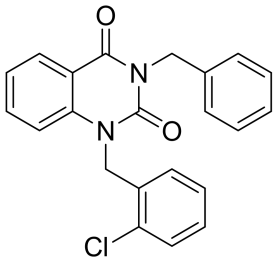
3-benzyl-1-(2-fluorobenzyl)quinazoline-2,4(1H,3H)-dione (3h)



Yellow solid, yield = 93%, 84 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.27 (dd, 1H, *J* = 8.0,2.0 Hz), 7.60-7.56 (m, 3H), 7.37-7.34 (m, 2H), 7.32-7.29 (m, 1H), 7.28-7.23 (m, 2H), 7.15-7.04 (m, 4H), 5.46 (s, 2H), 5.37 (s, 2H).

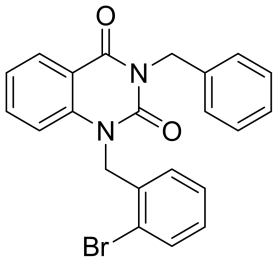
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.8, 161.4 (d, J_{CF} = 243.75 Hz), 151.6, 139.7, 137.1, 135.4, 129.6 (d, J_{CF} = 7.5 Hz), 129.3, 129.1, 128.6, 128.2 (d, J_{CF} = 3.75 Hz), 127.8, 124.9 (d, J_{CF} = 3.75 Hz), 123.4, 122.9 (d, J_{CF} = 12.5 Hz), 115.9 (d, J_{CF} = 6.25 Hz), 115.7, 114.1 (d, J_{CF} = 1.25 Hz), 45.3, 41.2 (d, J_{CF} = 5.0 Hz).
^{19}F NMR (470 MHz, $CDCl_3$): δ (ppm) = -118.5.
HRMS (EI): *m/z* calcd for $C_{22}H_{18}FN_2O_2$ $[M+H]^+$ 361.1346, found 361.1350.

3-benzyl-1-(2-chlorobenzyl)quinazoline-2,4(1H,3H)-dione (3i)



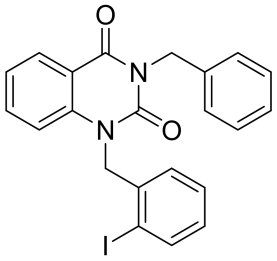
White solid, yield = 73%, 69 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.30 (dd, 1H, *J* = 8.0, 1.5 Hz), 7.60-7.54 (m, 3H), 7.46 (dd, 1H, *J* = 8.0,1.5 Hz), 7.37-7.34 (m, 2H), 7.32-7.29 (m, 1H), 7.27-7.23 (m, 2H), 7.17-7.14 (m, 1H), 6.94-6.90 (m, 2H), 5.48 (s, 2H), 5.38 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.8, 151.4, 139.7, 137.0, 135.4, 132.8, 132.6, 129.9, 129.3, 129.2, 128.9, 128.6, 127.8, 127.5, 126.7, 123.4, 115.8, 114.5, 45.33, 45.30.

3-benzyl-1-(2-bromobenzyl)quinazoline-2,4(1H,3H)-dione (3j)



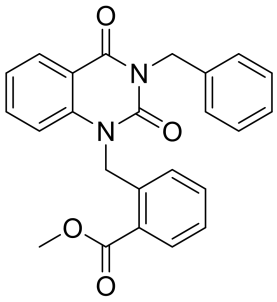
Yellow solid, yield = 83%, 87 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.29 (dd, 1H, *J* = 8.0, 1.5 Hz), 7.65 (dd, 1H, *J* = 7.5,1.5 Hz), 7.59-7.54 (m, 3H), 7.37-7.33 (m, 2H), 7.31-7.30 (m, 1H), 7.28-7.24 (m, 1H), 7.21-7.15 (m, 2H), 6.91-6.86 (m, 2H), 5.43 (s, 2H), 5.37 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) =161.9, 151.5, 139.8, 137.0, 135.5, 134.2, 133.3, 129.3, 129.24, 129.21, 128.6, 128.1, 127.8, 126.8, 123.5, 122.4, 115.9, 114.5, 48.0, 45.3.
HRMS (EI): *m/z* calcd for $C_{22}H_{18}BrN_2O_2$ $[M+H]^+$ 421.0546, found 421.0546.

3-benzyl-1-(2-iodobenzyl)quinazoline-2,4(1H,3H)-dione (3k)



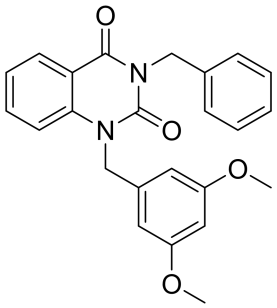
White solid, yield = 73%, 85 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.30 (dd, 1H, *J* = 8.0, 2.0 Hz), 7.93 (dd, 1H, *J* = 8.0,1.0 Hz), 7.60-7.54 (m, 3H), 7.37-7.34 (m, 2H), 7.31-7.21 (m, 3H), 7.02-6.99 (m, 1H), 6.85-6.80 (m, 2H),5.37 (s, 2H), 5.33 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) =161.8, 151.4, 139.9, 139.7, 137.0, 136.8, 135.5, 129.4, 129.3, 129.2, 128.9, 128.6, 127.8, 126.2, 123.5, 115.8, 114.6, 97.2, 53.1, 45.3.
HRMS (EI): *m/z* calcd for $C_{22}H_{18}IN_2O_2$ $[M+H]^+$ 469.0407, found 469.0408.

methyl 2-((3-benzyl-2,4-dioxo-3,4-dihydroquinazolin-1(2H)-yl)methyl)benzoate (3l)



Yellow solid, yield = 65%, 65 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.30 (dd, 1H, *J* = 8.0, 1.5 Hz), 8.13 (dd, 1H, *J* = 8.0, 1.5 Hz), 7.58-7.56 (m, 2H), 7.55-7.51 (m, 1H), 7.42-7.32 (m, 4H), 7.30-7.28 (m, 1H), 7.27-7.23 (m, 1H), 6.98-6.94 (m, 2H), 5.84 (s, 2H), 5.36 (s, 2H), 4.00 (s, 3H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 167.5, 162.0, 151.5, 140.2, 137.7, 137.2, 135.4, 133.2, 131.8, 129.3, 129.2, 128.6, 128.0, 127.8, 127.4, 125.6, 123.4, 115.9, 114.6, 52.4, 56.8, 45.3.
HRMS (EI): *m/z* calcd for $C_{24}H_{21}N_2O_4$ $[M+H]^+$ 401.1495, found 401.1496.

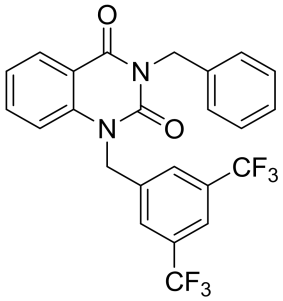
3-benzyl-1-(3,5-dimethoxybenzyl)quinazoline-2,4(1H,3H)-dione (3m)



White solid, yield = 51%, 51 mg.

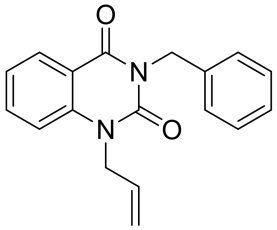
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.26 (dd, 1H, *J* = 7.5,1.5 Hz), 7.58-7.54 (m, 3H), 7.34-7.31 (m, 2H), 7.28-7.22 (m, 2H), 7.14 (d, 1H, *J* = 8.5 Hz), 6.38-6.35 (m, 3H), 5.36 (s, 2H), 5.32 (s, 2H), 3.72 (s, 6H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) =161.9, 161.4, 151.6, 140.1, 138.3, 137.2, 135.3, 129.3, 129.1, 128.6, 127.8, 123.3, 115.9, 114.6, 104.6, 99.3, 55.4, 47.6, 45.2.
HRMS (EI): *m/z* calcd for $C_{24}H_{23}N_2O_4$ $[M+H]^+$ 403.1652, found 403.1652.

3-benzyl-1-(3,5-bis(trifluoromethyl)benzyl)quinazoline-2,4(1H,3H)-dione (3n)



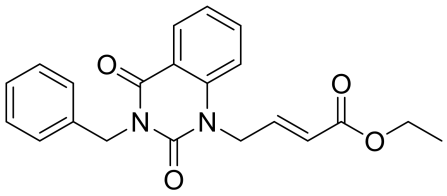
White solid, yield = 63%, 75 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.32 (dd, 1H, *J* = 8.0,2.0 Hz), 7.84 (s, 1H), 7.73 (s, 2H), 7.64-7.60 (m, 1H), 7.55 (d, 2H, *J* = 7.5 Hz), 7.36-7.28 (m, 4H), 7.03 (d, 1H, *J* = 8.5 Hz), 5.48 (s, 2H), 5.37 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.6, 151.6, 139.5, 138.8, 136.8, 135.6, 132.7 (q, J_{CF} = 33.3 Hz), 129.9, 129.0, 128.7, 128.0, 126.9, 124.2 (q, J_{CF} = 271.1 Hz), 123.9, 122.2 (q, J_{CF} = 4.0 Hz), 116.1, 113.6, 46.9, 45.4.
^{19}F NMR (470 MHz, $CDCl_3$): δ (ppm) = -62.9.
HRMS (EI): *m/z* calcd for $C_{24}H_{17}F_6N_2O_2$ $[M+H]^+$ 479.1188, found 479.1189.

1-allyl-3-benzylquinazoline-2,4(1H,3H)-dione[2] (3o)



White solid, yield = 63%, 46 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.26 (dd, 1H, *J* = 8.0, 1.5 Hz), 7.66-7.63 (m, 1H), 7.55 (d, 2H, *J* = 7.5 Hz), 7.33 (t, 2H, *J* = 7.0 Hz), 7.29-7.25 (m, 2H), 7.18 (d, 1H, *J* = 8.5 Hz), 5.98-5.90 (m, 1H), 5.32 (s, 2H), 5.30-5.20 (m, 2H), 4.79 (t, 2H, *J* = 2.5 Hz).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.9, 151.0, 140.0, 137.1, 135.2, 131.3, 129.25, 129.20, 128.6, 127.8, 123.2, 117.8, 115.8, 114.3, 46.2, 45.2.

ethyl (E)-4-(3-benzyl-2,4-dioxo-3,4-dihydroquinazolin-1(2H)-yl)but-2-enoate (3p)



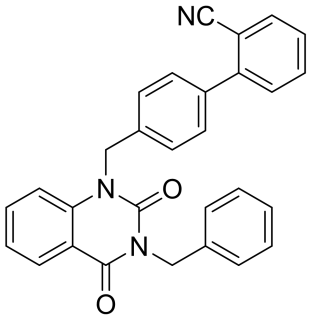
Yellow oil, yield = 86%, 78 mg.

^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.28 (dd, 1H, *J* = 7.5, 1.5 Hz), 7.67-7.64 (m, 1H), 7.55-7.53 (m, 2H), 7.35-7.32 (m, 2H), 7.31-7.29 (m, 1H), 7.285-7.280 (m, 1H), 7.06-7.01 (m, 2H), 5.87-5.84 (m, 1H), 5.30 (s, 2H), 4.95-4.94 (m, 2H), 4.19 (q, 2H, *J* = 7.0 Hz), 1.28 (t, 3H, *J* = 7.0 Hz).

^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 165.6, 161.7, 150.9, 140.9, 139.5, 136.9, 135.5, 129.5, 129.2, 128.6, 127.8, 123.6, 123.3, 115.8, 113.9, 60.9, 45.3, 44.6, 14.3.

HRMS (EI): *m/z* calcd for $C_{21}H_{21}N_2O_4$ $[M+H]^+$ 365.1495, found 365.1494.

4'-((3-benzyl-2,4-dioxo-3,4-dihydroquinazolin-1(2H)-yl)methyl)-[1,1'-biphenyl]-2-carbonitrile (3q)



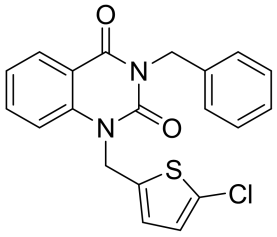
Yellow solid, yield = 86%, 95 mg.

^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.30 (dd, 1H, *J* = 7.5, 1.5 Hz), 7.78 (dd, 1H, *J* = 7.5, 1.0 Hz), 7.67-7.54 (m, 6H), 7.50-7.45 (m, 2H), 7.40-7.34 (m, 4H), 7.31-7.29 (m, 1H), 7.27-7.25 (m, 1H), 7.12 (d, 1H, *J* = 8.5 Hz), 5.46 (s, 2H), 5.38 (s, 2H).

^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.9, 151.6, 144.9, 140.0, 137.7, 137.1, 136.4, 135.5, 134.0, 133.1, 130.2, 129.5, 129.4, 129.2, 128.6, 127.9, 127.8, 127.0, 123.4, 118.8, 115.9, 114.5, 111.2, 47.3, 45.3.

HRMS (EI): *m/z* calcd for $C_{29}H_{22}N_3O_2$ $[M+H]^+$ 444.1706, found 444.1706.

3-benzyl-1-((5-chlorothiophen-2-yl)methyl)quinazoline-2,4(1H,3H)-dione (3r)

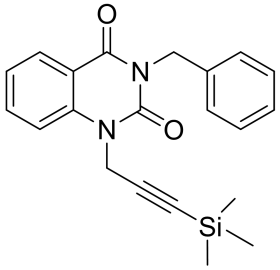


Yellow solid, yield = 76%, 73 mg.

^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.27 (dd, 1H, *J* = 8.0, 1.5 Hz), 7.70-7.66 (m, 1H), 7.55 (d, 2H, *J* = 7.0 Hz), 7.36-7.30 (m, 4H), 7.28-7.27 (m, 1H), 6.90 (d, 1H, *J* = 3.5 Hz), 6.78 (d, 1H, *J* = 4.0 Hz), 5.38 (s, 2H), 5.33 (s, 2H).

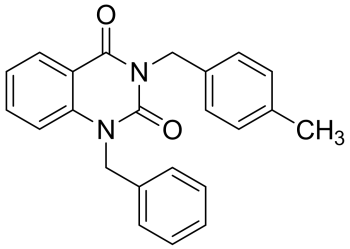
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.7, 151.1, 139.4, 136.9, 136.8, 135.4, 130.4, 129.7, 129.1, 128.6, 127.8, 126.4, 125.8, 123.5, 116.0, 113.6, 45.2, 42.8.
HRMS (EI): *m/z* calcd for $C_{20}H_{16}ClN_2O_2S$ $[M+H]^+$ 383.0615, found 383.0619.

3-benzyl-1-(3-(trimethylsilyl)prop-2-yn-1-yl)quinazoline-2,4(1H,3H)-dione (3t)



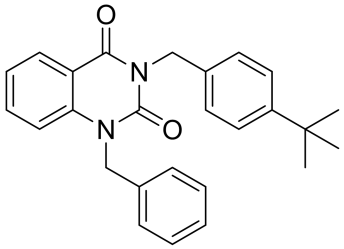
Colorless oil, yield = 51%, 46 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.28 (dd, 1H, *J* = 8.0, 1.5 Hz), 7.73-7.70 (m, 1H), 7.56 (d, 2H, *J* = 7.0 Hz), 7.41 (d, 1H, *J* = 8.5 Hz), 7.35-7.27 (m, 4H), 5.30 (s, 2H), 4.96 (s, 2H), 0.15 (s, 9H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.8, 150.6, 139.3, 137.0, 135.1, 129.3, 129.2, 128.6, 127.8, 123.5, 116.0, 114.5, 98.6, 90.8, 45.3, 34.6, 0.1.

1-benzyl-3-(4-methylbenzyl)quinazoline-2,4(1H,3H)-dione (5a)



White solid, yield = 65%, 58 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.27 (dd, 1H, *J* = 8.0, 1.5 Hz), 7.56-7.52 (m, 1H), 7.49 (d, 2H, *J* = 7.5 Hz), 7.35 (t, 2H, *J* = 7.0 Hz), 7.30-7.28 (m, 1H), 7.27-7.21 (m, 3H), 7.16 (d, 2H, *J* = 8.0 Hz), 7.11 (d, 1H, *J* = 8.5 Hz), 5.39 (s, 2H), 5.33 (s, 2H), 2.34 (s, 3H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.9, 151.6, 140.1, 137.5, 135.8, 135.2, 129.29, 129.27, 129.20, 129.1, 127.8, 126.6, 123.2, 115.9, 114.5, 47.5, 45.1, 21.3.
HRMS (EI): *m/z* calcd for $C_{23}H_{21}N_2O_2$ $[M+H]^+$ 357.1597, found 357.1598.

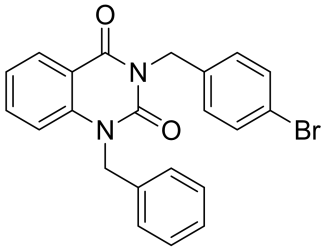
1-benzyl-3-(4-(tert-butyl)benzyl)quinazoline-2,4(1H,3H)-dione (5b)



Colorless oil, yield = 75%, 75 mg.

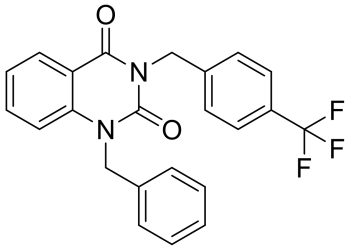
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.27 (dd, 1H, *J* = 8.0, 1.5 Hz), 7.55-7.54 (m, 3H), 7.39-7.34 (m, 4H), 7.31-7.28 (m, 2H), 7.27-7.21 (m, 2H), 7.12 (d, 1H, *J* = 8.5 Hz), 5.40 (s, 2H), 5.35 (s, 2H), 1.33 (s, 9H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 162.0, 151.6, 150.6, 140.1, 135.8, 135.2, 134.2, 129.3, 129.1, 129.0, 127.8, 126.6, 125.5, 123.2, 116.0, 114.5, 47.6, 45.0, 34.7, 31.5.
HRMS (EI): *m/z* calcd for $C_{26}H_{27}N_2O_2$ $[M+H]^+$ 399.2067, found 399.2068.

1-benzyl-3-(4-bromobenzyl)quinazoline-2,4(1H,3H)-dione (5c)



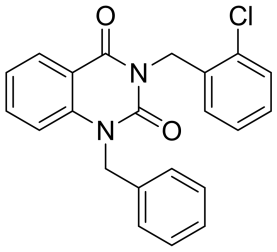
Yellow oil, yield = 83%, 87 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.27-8.25 (m, 1H), 7.58-7.54 (m, 1H), 7.47 (s, 4H), 7.37-7.34 (m, 2H), 7.31-7.28 (m, 1H), 7.26-7.23 (m, 3H), 7.13 (d, 1H, *J* = 8.5 Hz), 5.39 (s, 2H), 5.30 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.9, 151.5, 140.0, 136.1, 135.6, 131.7, 131.1, 129.3, 129.2, 127.9, 126.5, 123.4, 121.9, 115.8, 114.6, 47.6, 44.7.
HRMS (EI): *m/z* calcd for $C_{22}H_{18}BrN_2O_2$ $[M+H]^+$ 421.0546, found 421.0546.

1-benzyl-3-(4-(trifluoromethyl)benzyl)quinazoline-2,4(1H,3H)-dione (5d)



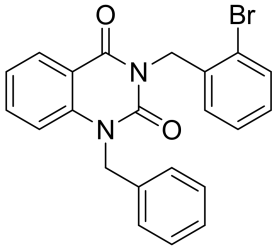
White solid, yield = 81%, 83 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.27 (dd, 1H, *J* = 8.0, 1.5 Hz), 7.68 (d, 2H, *J* = 8.0 Hz), 7.62-7.56 (m, 3H), 7.36 (t, 2H, *J* = 7.5 Hz), 7.31 (d, 1H, *J* = 7.0 Hz), 7.27-7.24 (m, 3H), 7.15 (d, 1H, *J* = 8.5 Hz), 5.41 (s, 4H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.9, 151.5, 141.0, 140.1, 135.6, 135.5, 130.1 (q, J_{CF} = 32.1 Hz), 129.4, 129.3, 129.2, 127.9, 126.5, 125.7 (q, J_{CF} = 3.9 Hz), 125.4 (q, J_{CF} = 270.4 Hz), 123.5, 115.7, 114.7, 47.6, 44.9.
^{19}F NMR (470 MHz, $CDCl_3$): δ (ppm) = -62.5.
HRMS (EI): *m/z* calcd for $C_{23}H_{18}F_3N_2O_2$ $[M+H]^+$ 411.1314, found 411.1314.

1-benzyl-3-(2-chlorobenzyl)quinazoline-2,4(1H,3H)-dione (5e)



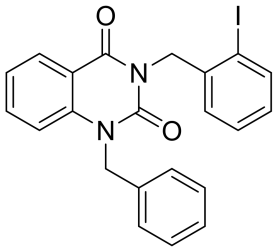
White solid, yield = 66%, 62 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.29 (dd, 1H, *J* = 8.0, 2.0 Hz), 7.62-7.58 (m, 1H), 7.43-7.41 (m, 1H), 7.36 (t, 2H, *J* = 7.5 Hz), 7.31-7.28 (m, 2H), 7.27-7.26 (m, 2H), 7.24-7.18 (m, 3H), 7.12-7.10 (m, 1H), 5.51 (s, 2H), 5.43 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 162.0, 151.5, 140.2, 135.7, 135.5, 134.2, 133.2, 129.8, 129.4, 129.2, 128.5, 127.9, 127.09, 127.03, 126.6, 123.4, 115.7, 114.7, 47.6, 43.2.
HRMS (EI): *m/z* calcd for $C_{22}H_{18}ClN_2O_2$ $[M+H]^+$ 377.1051, found 377.1052.

1-benzyl-3-(2-bromobenzyl)quinazoline-2,4(1H,3H)-dione (5f)



Yellow solid, yield = 61%, 64 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.29 (dd, 1H, *J* = 8.0, 1.5 Hz), 7.62-7.59 (m, 2H), 7.36 (t, 2H, *J* = 7.5 Hz), 7.31-7.28 (m, 3H), 7.27 (s, 1H), 7.24 (t, 1H, *J* = 7.0 Hz), 7.20 (d, 1H, *J* = 8.5 Hz), 7.15-7.12 (m, 1H), 7.05 (dd, 1H, *J* = 8.0, 1.5 Hz), 5.48 (s, 2H), 5.43 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.9, 151.4, 140.2, 135.67, 135.66, 135.5, 133.1, 129.4, 129.1, 128.7, 127.9, 127.6, 126.7, 126.6, 123.4, 123.0, 115.7, 114.7, 47.6, 45.6.
HRMS (EI): *m/z* calcd for $C_{22}H_{18}BrN_2O_2$ $[M+H]^+$ 421.0546, found 421.0545.

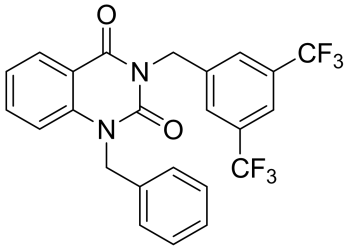
1-benzyl-3-(2-iodobenzyl)quinazoline-2,4(1H,3H)-dione (5g)



Yellow solid, yield = 39%, 46 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.29 (dd, 1H, *J* = 8.0, 2.0 Hz), 7.91-7.89 (m, 1H), 7.63-7.59 (m, 1H), 7.38-7.35 (m, 2H), 7.32-7.29 (m, 2H), 7.28-7.26 (m, 3H), 7.20 (d, 1H, *J* = 8.5 Hz), 6.99-6.95 (m, 2H), 5.43 (s, 2H), 5.39 (s, 2H).

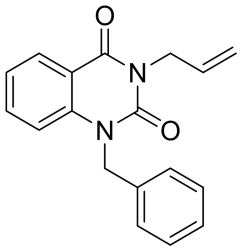
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.8, 151.4, 140.2, 139.8, 138.5, 135.7, 135.6, 129.5, 129.2, 128.9, 128.5, 127.9, 126.6, 125.9, 123.5, 115.7, 114.7, 98.1, 50.6, 47.6.
HRMS (EI): *m/z* calcd for $C_{22}H_{18}IN_2O_2$ $[M+H]^+$ 469.0407, found 469.0410.

1-benzyl-3-(3,5-bis(trifluoromethyl)benzyl)quinazoline-2,4(1H,3H)-dione (5h)



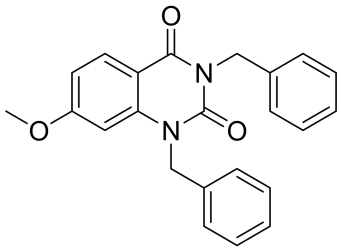
White solid, yield = 70%, 84 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.27 (dd, 1H, *J* = 8.0,2.0 Hz), 8.05 (s, 2H), 7.83 (s, 1H), 7.62-7.58 (s, 1H), 7.38-7.34 (m, 2H), 7.32-7.29 (m, 1H), 7.28-7.26 (m, 3H), 7.18 (d, 1H, *J* = 8.5 Hz), 5.46 (s, 2H), 5.42 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.8, 151.5, 140.1, 139.5, 135.7, 135.5, 132.0 (q, J_{CF} = 33.0 Hz), 129.5 (q, J_{CF} = 3.9 Hz), 129.4, 129.2, 128.0, 126.6, 124.5 (q, J_{CF} = 271.0 Hz), 123.6, 122.0 (q, J_{CF} = 3.9 Hz), 115.6, 114.7, 47.6, 44.4.
^{19}F NMR (470 MHz, $CDCl_3$): δ (ppm) = -62.7.
HRMS (EI): *m/z* calcd for $C_{24}H_{17}F_6N_2O_2$ $[M+H]^+$ 479.1188, found 479.1187.

3-allyl-1-benzylquinazoline-2,4(1H,3H)-dione (5i)



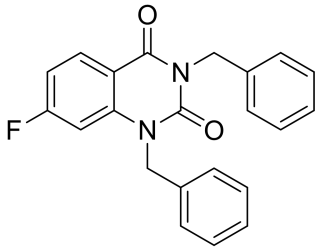
Yellow solid, yield = 90%, 66 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.26 (dd, 1H, *J* = 8.0, 1.5 Hz), 7.58-7.54 (m, 1H), 7.37-7.34 (m, 2H), 7.31-7.22 (m, 4H), 7.14 (d, 1H, *J* = 8.5 Hz), 6.06-5.98 (m, 1H), 5.41 (s, 2H), 5.38-5.34 (m, 1H), 5.27-5.25 (m, 1H), 4.80-4.79 (m, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.6, 151.3, 140.1, 135.8, 135.2, 132.0, 129.2, 129.1, 127.8, 126.6, 123.2, 118.0, 115.8, 114.6, 47.4, 44.2.
HRMS (EI): *m/z* calcd for $C_{18}H_{17}N_2O_2$ $[M+H]^+$ 293.1284, found 293.1284.

1,3-dibenzyl-7-methoxyquinazoline-2,4(1H,3H)-dione (5j)



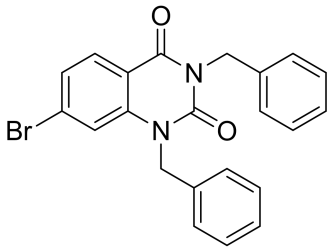
Yellow solid, yield = 80%, 74 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.18 (d, 1H, *J* = 9.0 Hz), 7.58-7.56 (m, 2H), 7.37-7.33 (m, 4H), 7.30-7.28 (s, 2H), 7.28-7.27 (m, 2H), 6.77 (dd, 1H, *J* = 9.0,2.0 Hz), 6.55 (d, 1H, *J* = 2.0 Hz), 5.36 (s, 2H), 5.34 (s, 2H), 3.77 (s, 3H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 165.2, 161.6, 152.0, 141.8, 137.3, 135.9, 131.2, 129.2, 129.1, 128.6, 127.8, 127.7, 126.6, 109.9, 109.3, 99.5, 55.7, 47.7, 45.1.
HRMS (EI): *m/z* calcd for $C_{23}H_{21}N_2O_3$ $[M+H]^+$ 373.1546, found 373.1549.

1,3-dibenzyl-7-fluoroquinazoline-2,4(1H,3H)-dione (5k)



White, solid = 97%, 87 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 7.94 (dd, 1H, *J* = 8.0,3.0 Hz), 7.59-7.57 (m, 2H), 7.38-7.34 (m, 4H), 7.32-7.28 (m, 2H), 7.28-7.24 (m, 3H), 7.10 (dd, 1H, *J* = 9.0,4.0 Hz), 5.39 (s, 2H), 5.36 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.1, 161.0, 159.4, 157.5, 151.3, 136.9, 136.5 (d, J_{CF} = 2.1 Hz), 135.5, 129.2, 128.6, 127.9 (d, J_{CF} = 5.1 Hz), 126.5, 123.0 (d, J_{CF} = 23.8 Hz), 117.2 (d, J_{CF} = 7.6 Hz), 116.6 (d, J_{CF} = 7.6 Hz), 114.8 (d, J_{CF} = 23.9 Hz), 47.9, 45.5.
^{19}F NMR (470 MHz, $CDCl_3$): δ (ppm) = -118.8.
HRMS (EI): *m/z* calcd for $C_{22}H_{18}FN_2O_2$ $[M+H]^+$ 361.1346, found 361.1346.

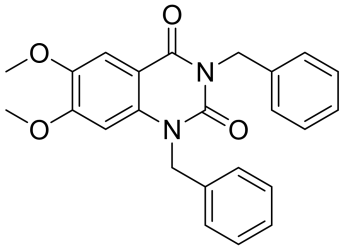
1,3-dibenzyl-7-bromoquinazoline-2,4(1H,3H)-dione (5l)



White solid, yield = 73%, 77 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.11 (d, 1H, *J* = 8.5 Hz), 7.57-7.55 (m, 2H), 7.39-7.30 (m, 8H), 7.28-7.26 (m, 2H), 5.34 (s, 4H).

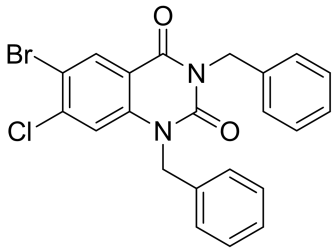
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.3, 151.4, 140.9, 136.8, 135.2, 130.7, 130.2, 129.3, 129.2, 128.7, 128.1, 127.9, 126.68, 126.64, 117.6, 114.7, 47.7, 45.4.
HRMS (EI): *m/z* calcd for $C_{22}H_{18}BrN_2O_2$ $[M+H]^+$ 421.0546, found 421.0547.

1,3-dibenzyl-6,7-dimethoxyquinazoline-2,4(1H,3H)-dione (5m)



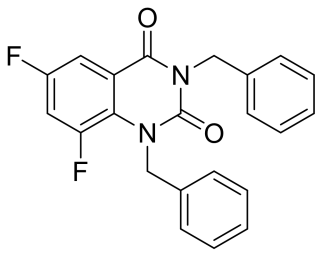
Transluent oil, yield = 73%, 73 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 7.62 (s, 1H), 7.58-7.56 (m, 2H), 7.36-7.33 (m, 4H), 7.30-7.26 (m, 4H), 6.54 (s, 1H), 5.38 (s, 2H), 5.36 (s, 2H), 3.92 (s, 3H), 3.76 (s, 3H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.5, 155.0, 151.8, 145.7, 137.3, 136.1, 135.7, 129.1, 129.0, 128.5, 127.9, 127.6, 126.6, 109.0, 108.2, 97.7, 56.3, 56.2, 47.9, 45.2.
HRMS (EI): *m/z* calcd for $C_{24}H_{23}N_2O_4$ $[M+H]^+$ 403.1652, found 403.1653.

1,3-dibenzyl-6-bromo-7-chloroquinazoline-2,4(1H,3H)-dione (5n)



White, solid = 59%, 67 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.29 (s, 1H), 7.56-7.54 (m, 2H), 7.43 (s, 1H), 7.39-7.31 (m, 6H), 7.26-7.24 (m, 2H), 5.33 (s, 4H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 160.4, 151.1, 138.9, 136.6, 134.9, 130.3, 130.1, 129.7, 129.4, 129.2, 128.7, 128.2, 128.0, 126.6, 119.9, 116.2, 47.9, 45.6.
HRMS (EI): *m/z* calcd for $C_{22}H_{17}BrClN_2O_2$ $[M+H]^+$ 455.0156, found 455.0140.

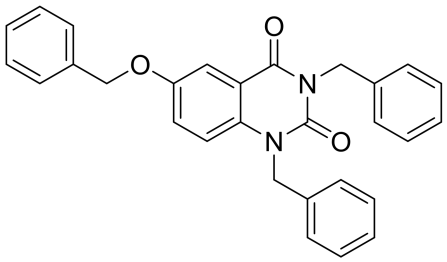
1,3-dibenzyl-6,8-difluoroquinazoline-2,4(1H,3H)-dione (5o)



Transluent oil, yield = 74%, 70 mg.

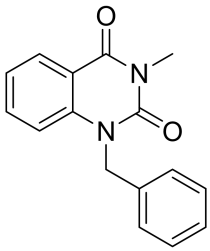
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 7.60-7.59 (m, 2H), 7.39-7.31 (m, 6H), 7.25-7.23 (m, 2H), 6.68-6.62 (m, 2H), 5.33 (s, 2H), 5.32 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 167.4 (d, J_{CF} = 15.1 Hz), 165.4 (dd, J_{CF} = 4.6 Hz, J_{CF} = 4.6 Hz), 163.2 (d, J_{CF} = 15.4 Hz), 158.1 (d, J_{CF} = 4.5 Hz), 151.1, 143.1 (dd, J_{CF} = 4.3 Hz, J_{CF} = 4.3 Hz), 136.7, 134.8, 129.5, 129.3, 128.6, 128.2 (d, J_{CF} = 23.1 Hz), 126.5, 102.7 (dd, J_{CF} = 2.9 Hz, J_{CF} = 2.9 Hz), 100.1 (t, J_{CF} = 25.4 Hz), 98.3 (dd, J_{CF} = 4.0 Hz, J_{CF} = 4.0 Hz), 48.4, 45.1.
^{19}F NMR (470 MHz, $CDCl_3$): δ (ppm) = -97.1, -103.4.
HRMS (EI): *m/z* calcd for $C_{22}H_{17}F_2N_2O_2$ $[M+H]^+$ 379.1252, found 379.1252.

1,3-dibenzyl-6-(benzyloxy)quinazoline-2,4(1H,3H)-dione (5p)



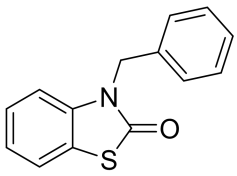
Colorless oil, yield = 31%, 36 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 7.80 (d, 1H, *J* = 3.0 Hz), 7.59-7.57 (m, 2H), 7.45-7.33 (m, 9H), 7.30-7.28 (m, 2H), 7.26-7.24 (m, 2H), 7.23-7.20 (m, 1H), 7.06 (d, 1H, *J* = 9.0 Hz), 5.37 (s, 4H), 5.11 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 161.8, 154.7, 151.4, 137.2, 136.4, 135.9, 134.4, 129.2, 129.1, 128.8, 128.6, 128.4, 127.81, 127.79, 127.75, 126.6, 124.8, 116.6, 116.2, 111.3, 70.7, 47.7, 45.4.
HRMS (EI): *m/z* calcd for $C_{29}H_{25}N_2O_3$ $[M+H]^+$ 449.1859, found 449.1861.

1-benzyl-3-methylquinazoline-2,4(1H,3H)-dione（5q）



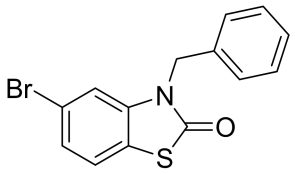
White solid, yield = 95%, 63 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.26 (dd, 1H, *J* = 8.0,1.5 Hz), 7.57-7.54 (m, 1H), 7.36-7.33 (m, 2H), 7.29-7.21 (m, 4H), 7.14 (d, 1H, *J* = 8.5 Hz), 5.40 (s, 2H), 3.57 (s, 3H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 162.1, 151.7, 139.9, 135.8, 135.1, 129.1, 129.0, 127.8, 126.6, 123.2, 115.7, 114.5, 47.5, 28.8.

3-benzylbenzo[d]thiazol-2(3H)-one[3] (7a)



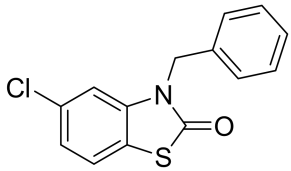
White, solid = 91%, 55 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 7.46 (dd, 1H, *J* = 1.5 Hz, *J* = 1.5 Hz), 7.37-7.30 (m, 5H), 7.26-7.22 (m, 1H), 7.18-7.14 (m, 1H), 6.99 (dd, 1H, *J* = 9.0,1.0 Hz), 5.18 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 170.5, 137.1, 135.3, 129.1, 128.1, 127.3, 126.5, 123.4, 122.8, 111.4, 46.4.

3-benzyl-6-bromobenzo[d]thiazol-2(3H)-one (7b)



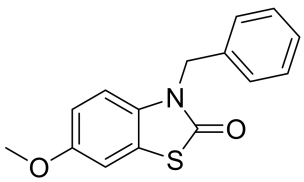
White, solid = 80%, 64 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 7.40-7.36 (m, 2H), 7.34-7.27 (m, 5H), 7.13 (d, 1H, *J* = 2.0 Hz), 5.14 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 170.2, 138.2, 134.7, 129.2, 128.3, 127.3, 126.4, 123.9, 121.7, 120.0, 114.4, 46.5.
HRMS (EI): *m/z* calcd for $C_{14}H_{11}BrNOS$ $[M+H]^+$ 319.9739, found 319.9739.

3-benzyl-6-chlorobenzo[d]thiazol-2(3H)-one (7c)



Yellow, solid = 82%, 56 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 7.39-7.30 (m, 6H), 7.14 (dd, 1H, *J* = 2.0 Hz, *J* = 2.0 Hz), 6.99 (d, 1H, *J* = 2.0 Hz), 5.14 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 170.4, 138.0, 134.7, 132.5, 129.2, 128.3, 127.2, 123.6, 121.0, 111.7, 46.5.
HRMS (EI): *m/z* calcd for $C_{14}H_{11}ClNOS$ $[M+H]^+$ 276.0244, found 276.0247.

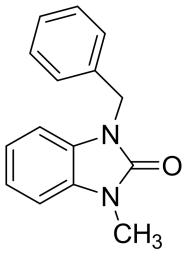
3-benzyl-6-methoxybenzo[d]thiazol-2(3H)-one[4] (7d)



Yellow, solid = 68%, 46 mg.

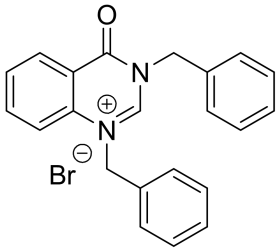
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 7.36-7.29 (m, 5H), 7.02 (d, 1H, *J* = 2.5 Hz), 6.87 (d, 1H, *J* = 9.0 Hz), 6.79 (dd, 1H, *J* = 9.0,2.5 Hz), 5.14 (s, 2H), 3.80 (s, 3H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 170.1, 156.3, 135.4, 130.9, 129.0, 128.0, 127.2, 123.8, 113.0, 112.0, 108.1, 56.0, 46.4.

1-benzyl-3-methyl-1,3-dihydro-2H-benzo[d]imidazol-2-one[5] (7e)



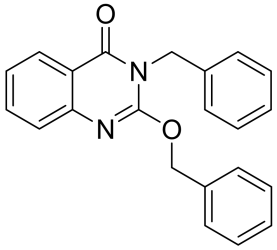
Yellow oil, yield = 60%, 36 mg.
^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 7.37-7.32 (m, 4H), 7.30-7.27 (m, 1H), 7.12-7.09 (m, 1H), 7.05-7.00 (m, 2H), 6.91-6.89 (m, 1H), 5.10 (s, 2H), 3.49 (s, 3H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 154.7, 136.53, 136.52, 130.2, 129.3, 128.9, 127.8, 127.6, 121.4, 108.4, 107.6, 45.0, 27.4.

1,3-dibenzyl-4-oxo-3,4-dihydroquinazolin-1-ium bromide (8)



White solid, yield = 73%, 149 mg.
^{1}H NMR (500 MHz, CD_3OD): δ = 10.08 (s, 1H), 8.48 (dd, 1H, *J* = 8.0,1.5 Hz), 8.04-8.00 (m, 1H), 7.93 (d, 1H, *J* = 9.0 Hz), 7.84 (t, 1H, *J* = 7.5 Hz), 7.60-7.58 (m, 2H), 7.50-7.40 (m, 8H), 5.87 (s, 2H), 5.48 (s, 2H).
^{13}C NMR (125 MHz, CD_3OD): δ = 158.9, 155.1, 138.0, 134.9, 133.6, 131.5, 130.6, 130.4, 130.26, 130.20, 130.1, 130.0, 128.5, 122.0, 120.1, 58.0, 53.7.
HRMS (EI): *m/z* calcd for $C_{22}H_{19}NO$ $[M-Br]^+$ 327.1491, found 327.1491.

3-benzyl-2-(benzyloxy)quinazolin-4(3H)-one（9）



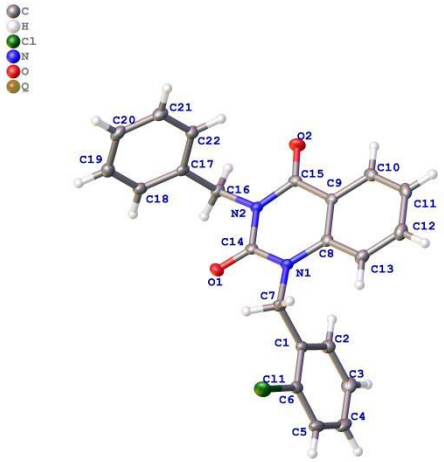
White solid, yield = 70%, 120 mg.

^{1}H NMR (500 MHz, $CDCl_3$): δ (ppm) = 8.30-8.28 (m, 1H), 7.72-7.68 (m, 1H), 7.56-7.54 (m, 1H), 7.41-7.34 (m, 8H), 7.30-7.28 (m, 3H), 5.52 (s, 2H), 5.34 (s, 2H).
^{13}C NMR (125 MHz, $CDCl_3$): δ (ppm) = 163.0, 152.3, 147.1, 136.8, 135.3, 134.6, 128.7, 128.66, 128.62, 128.55, 128.49, 127.7, 127.5, 125.7, 124.7, 119.0, 70.3, 44.9.

References

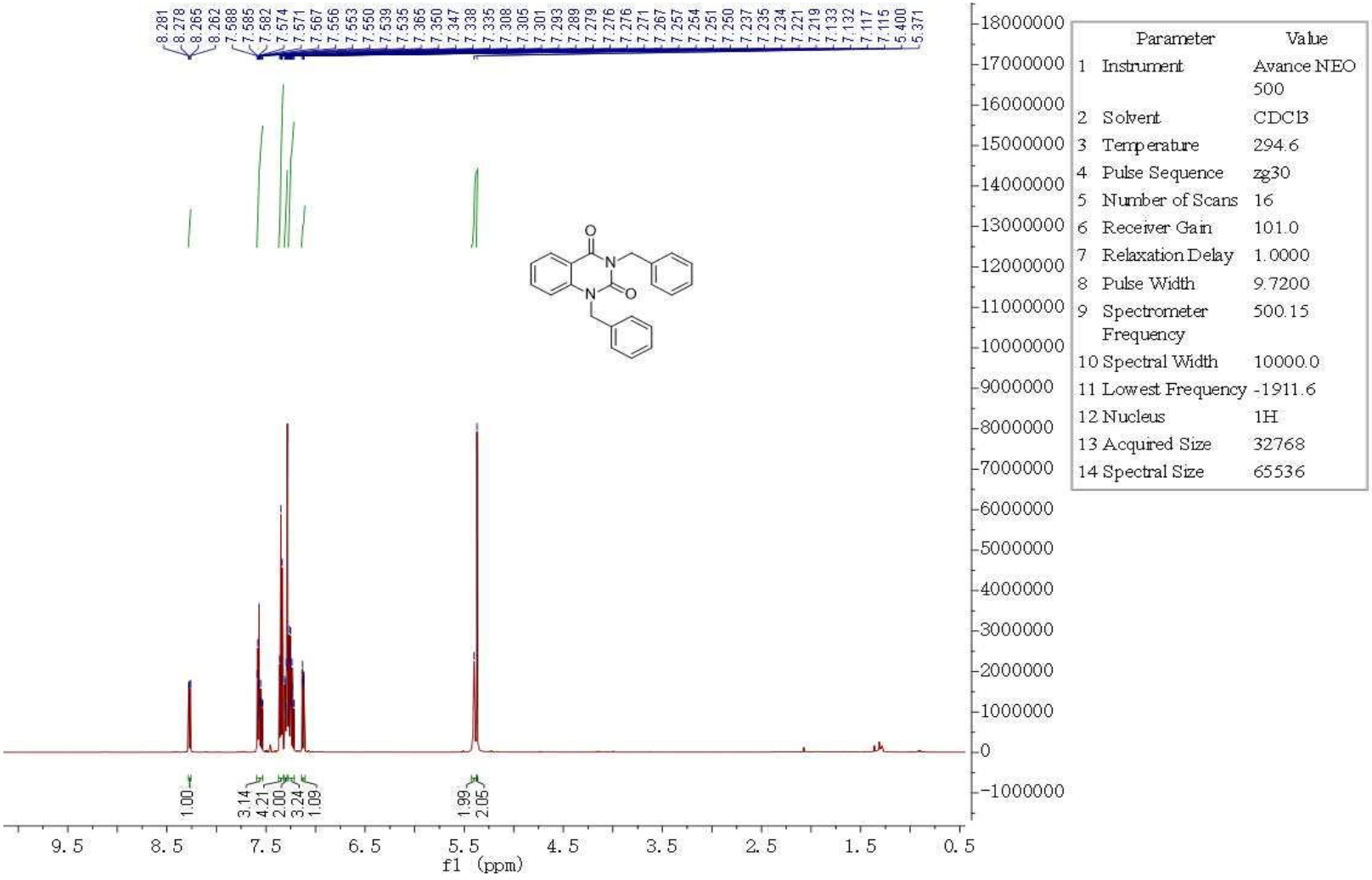
[1] Shantharjun, B.; Rajeswari, R.; Vani, D.; Unnava, R.; Sridhar, B.; Reddy, K. R. *Asian J. Org. Chem.*, **2019**, *8*, 2162.
[2] Piotrowska, D. G.; Andrei, G.; Schols, D.; Snoeck, R.; Łysakowska, M. *Eur. J. Med. Chem.*, **2017**, *126*, 84.
[3] Yang, Y.; Zhang, X.; Zeng, W.; Huang, H.; Liang, Y. *RSC Adv.*, **2014**, *4*, 6090.
[4] Roy, G.; Das, R.; Banerjee, M.; Rai, R. K.; Karri, R. *Org. Biomol. Chem.*, **2018**, *16*, 4243.
[5] Zhuge, J.; Jiang, Z.; Jiang, W.; Histand, G.; Lin, D. *Org. Biomol. Chem.*, **2021**, *19*, 5121.

Table of crystallographic data for 3i (CCDC 2189508)



Complex	**3i**
Empirical formula	$C_{22}H_{17}ClN_2O_2$
Formula weight	376.82
Temperature/K	150.00(10)
Crystal system	monoclinic
Space group	$P2_1/c$
a/Å	12.3628(8)
b/Å	8.7568(5)
c/Å	17.4770(12)
α/°	90
β/°	109.330(7)
γ/°	90
Volume/Å^3	1785.4(2)
Z	4
ρ_{calc}g/cm^3	1.402
μ/mm^{-1}	0.234
F(000)	784.0
Crystal size/mm^3	0.15 × 0.13 × 0.12
Radiation	Mo Kα (λ = 0.71073)
2Θ range for data collection/°	4.94 to 49.984
Index ranges	$-13 \le h \le 14$, $-8 \le k \le 10$, $-20 \le l \le 17$
Reflections collected	7149
Independent reflections	3149 [R_{int} = 0.0227, R_{sigma} = 0.0318]
Data/restraints/parameters	3149/0/244
Goodness-of-fit on F^2	1.101
Final R indexes [I>=2σ (I)]	R_1 = 0.0387, wR_2 = 0.0875
Final R indexes [all data]	R_1 = 0.0474, wR_2 = 0.0930

1,3-dibenzylquinazoline-2,4(1H,3H)-dione（3a）



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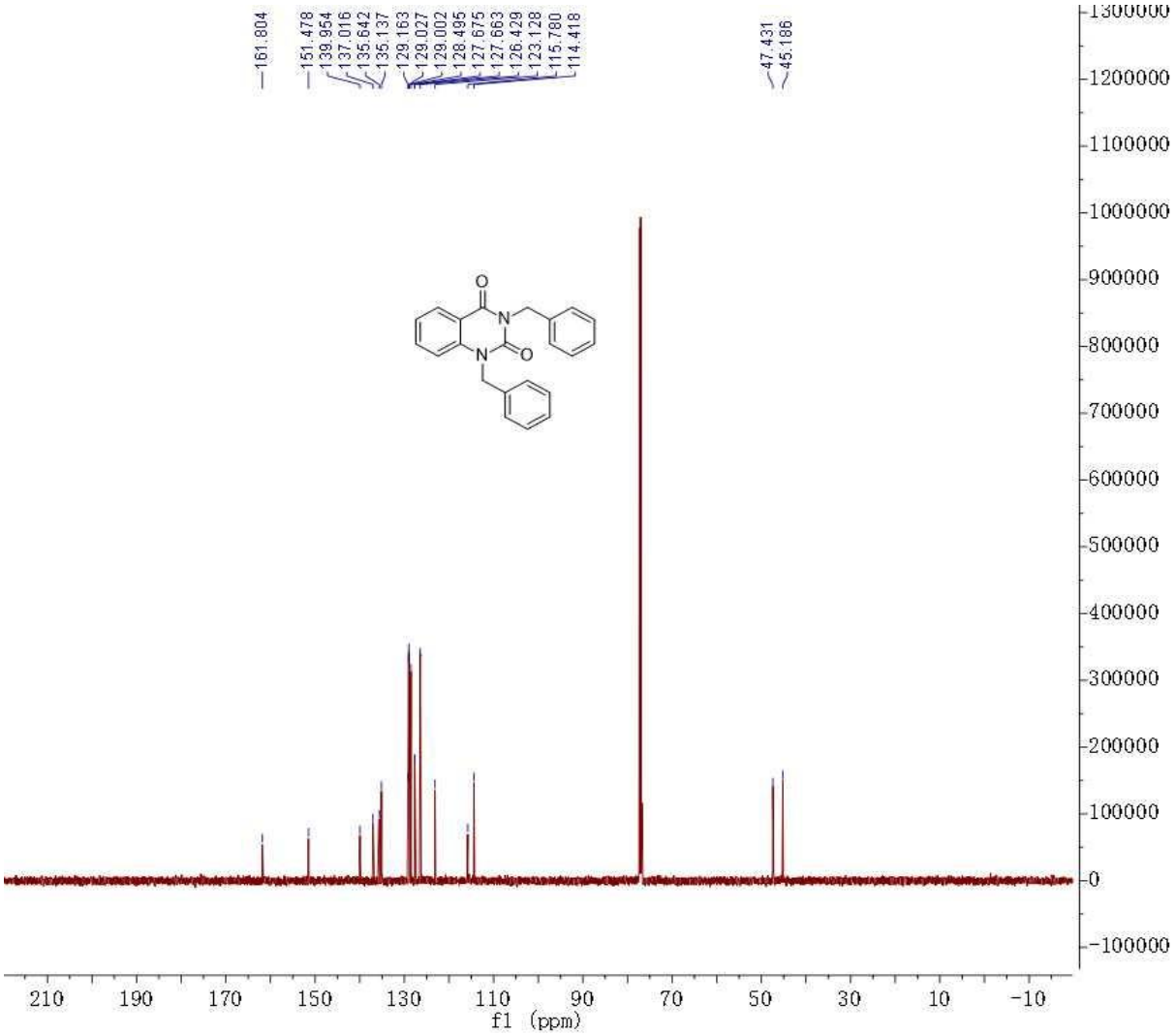
14	Spectral Size	65536



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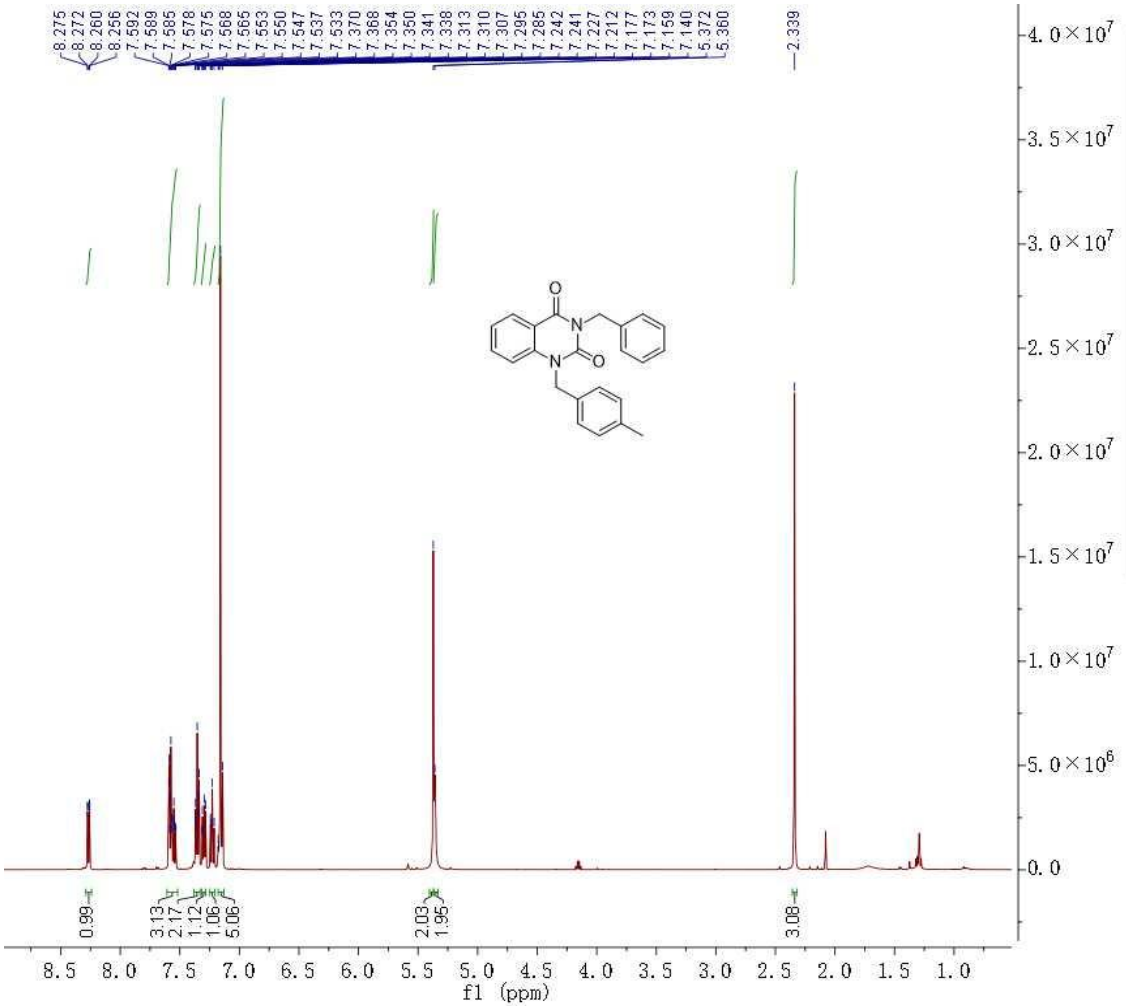
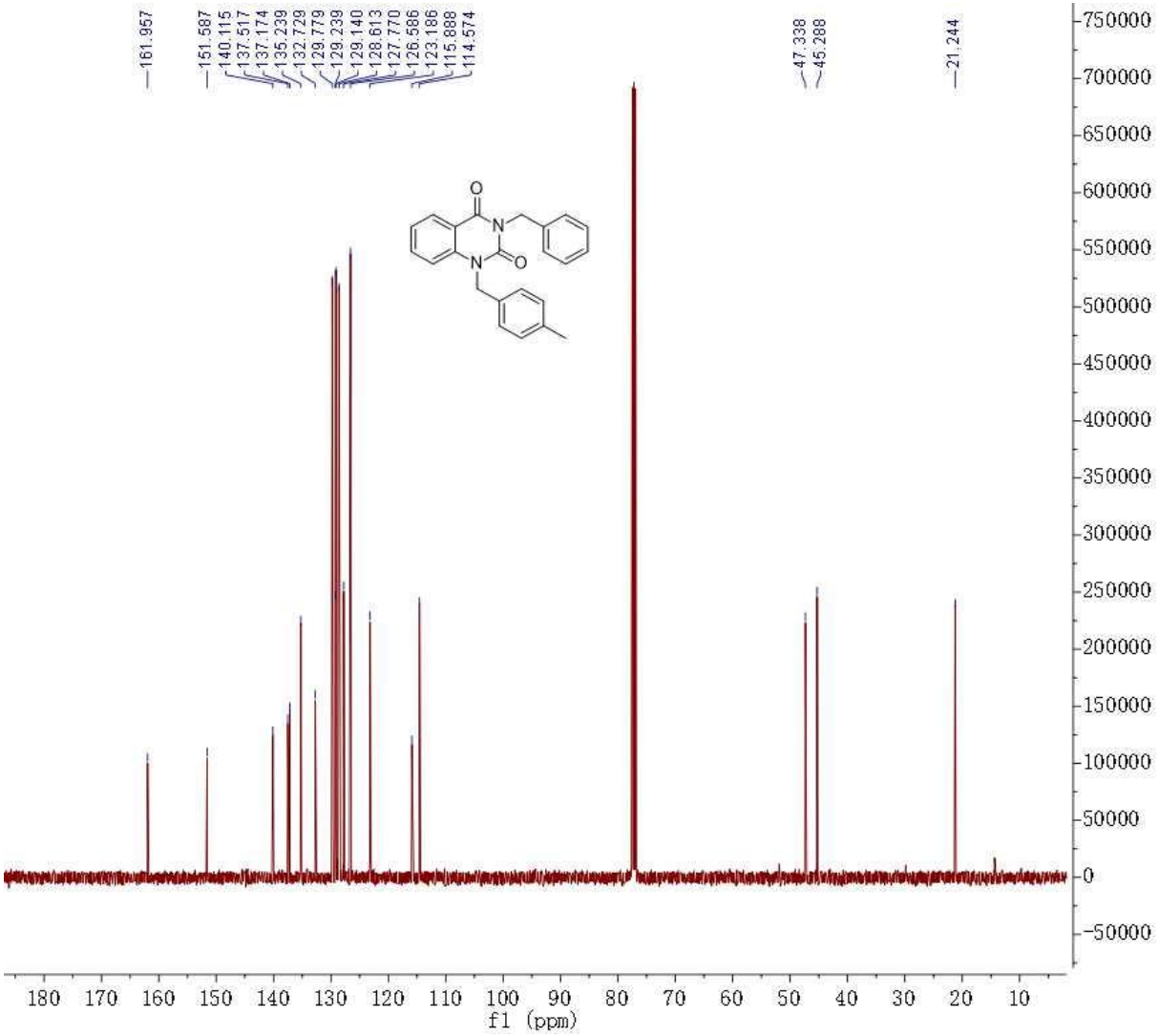
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2484.0
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-benzyl-1-(4-methylbenzyl)quinazoline-2,4(1H,3H)-dione（3b）

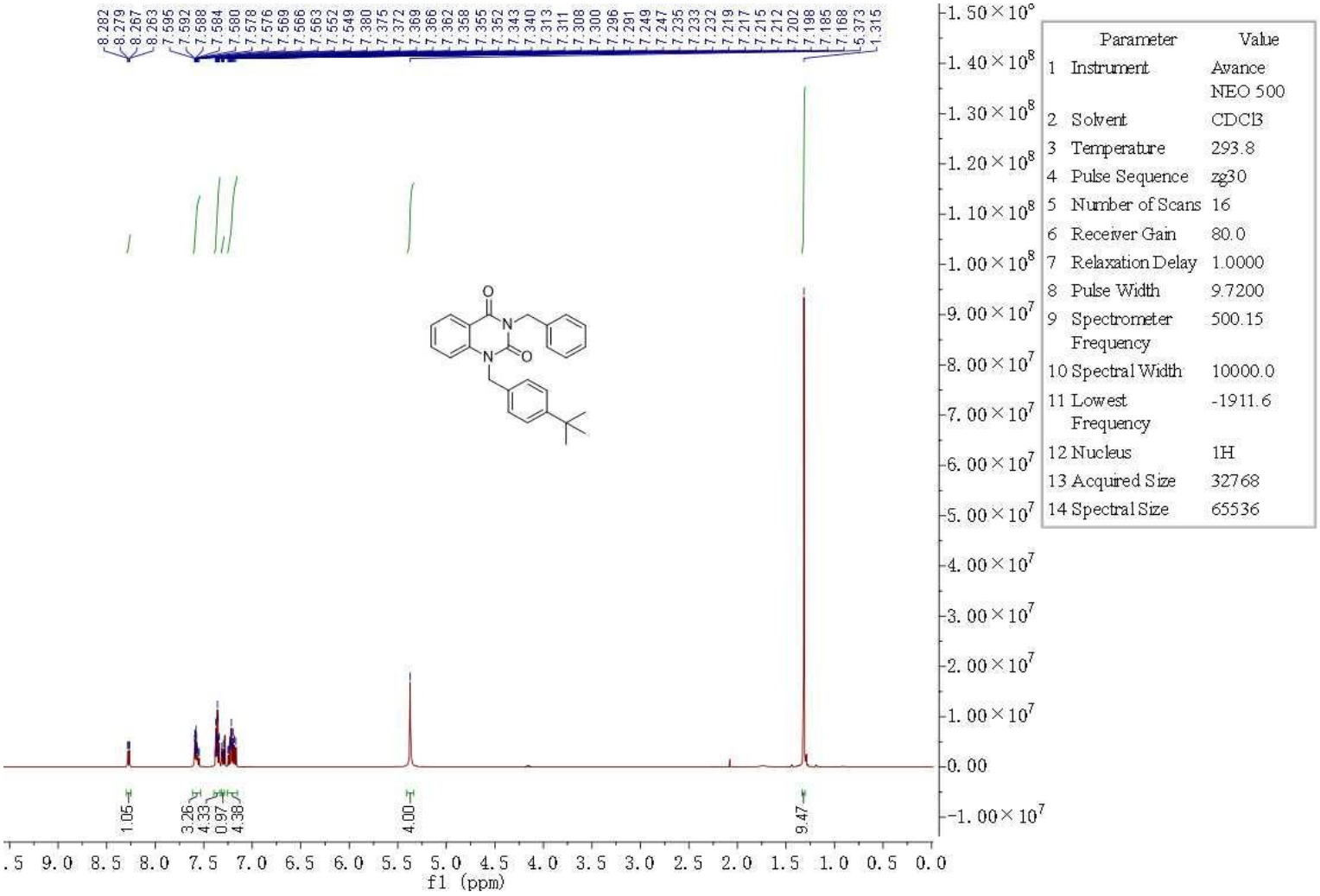


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.0
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

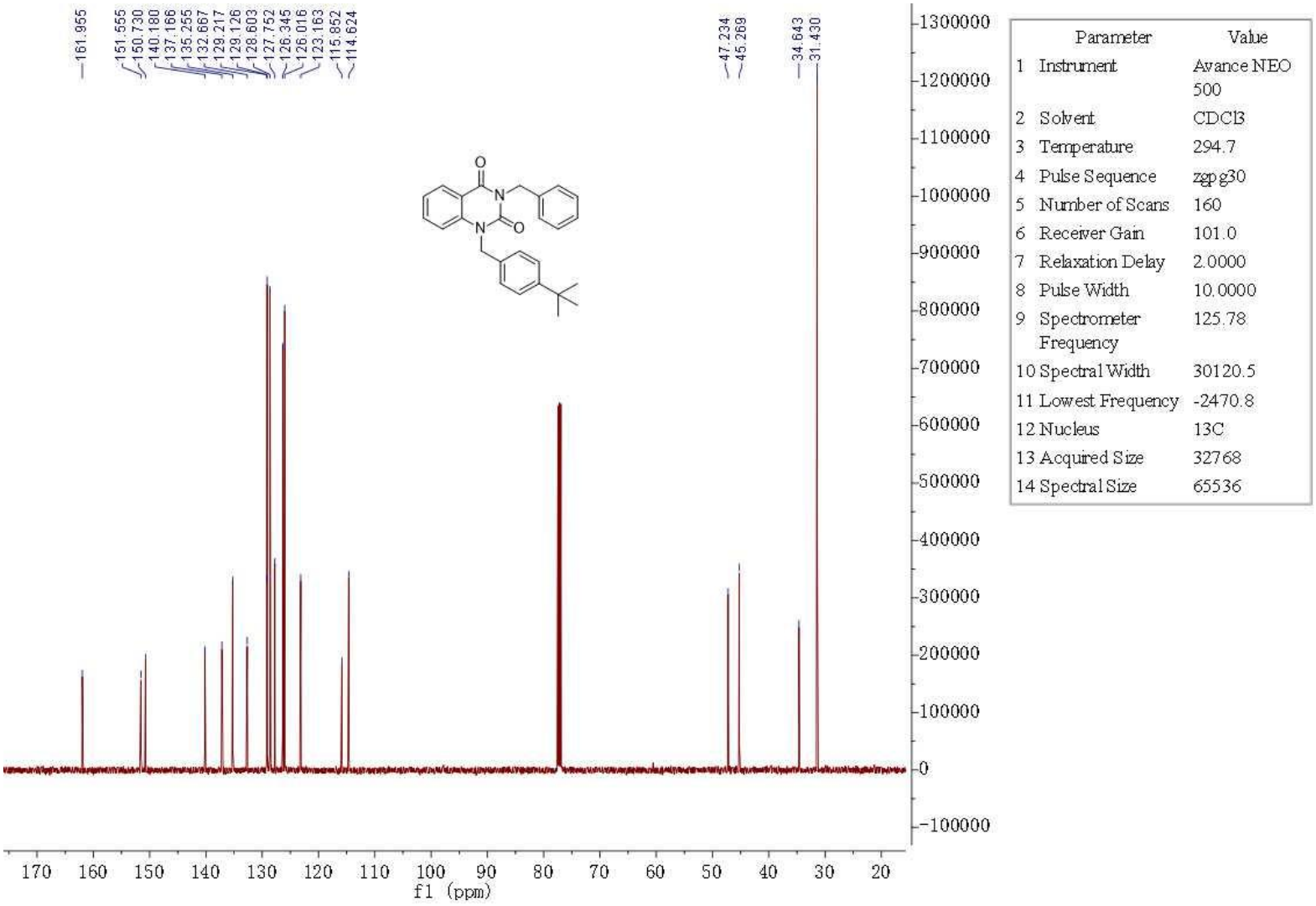


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.8
4	Pulse Sequence	zgpg30
5	Number of Scans	160
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2468.9
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-benzyl-1-(4-(tert-butyl)benzyl)quinazoline-2,4(1H,3H)-dione (3c)

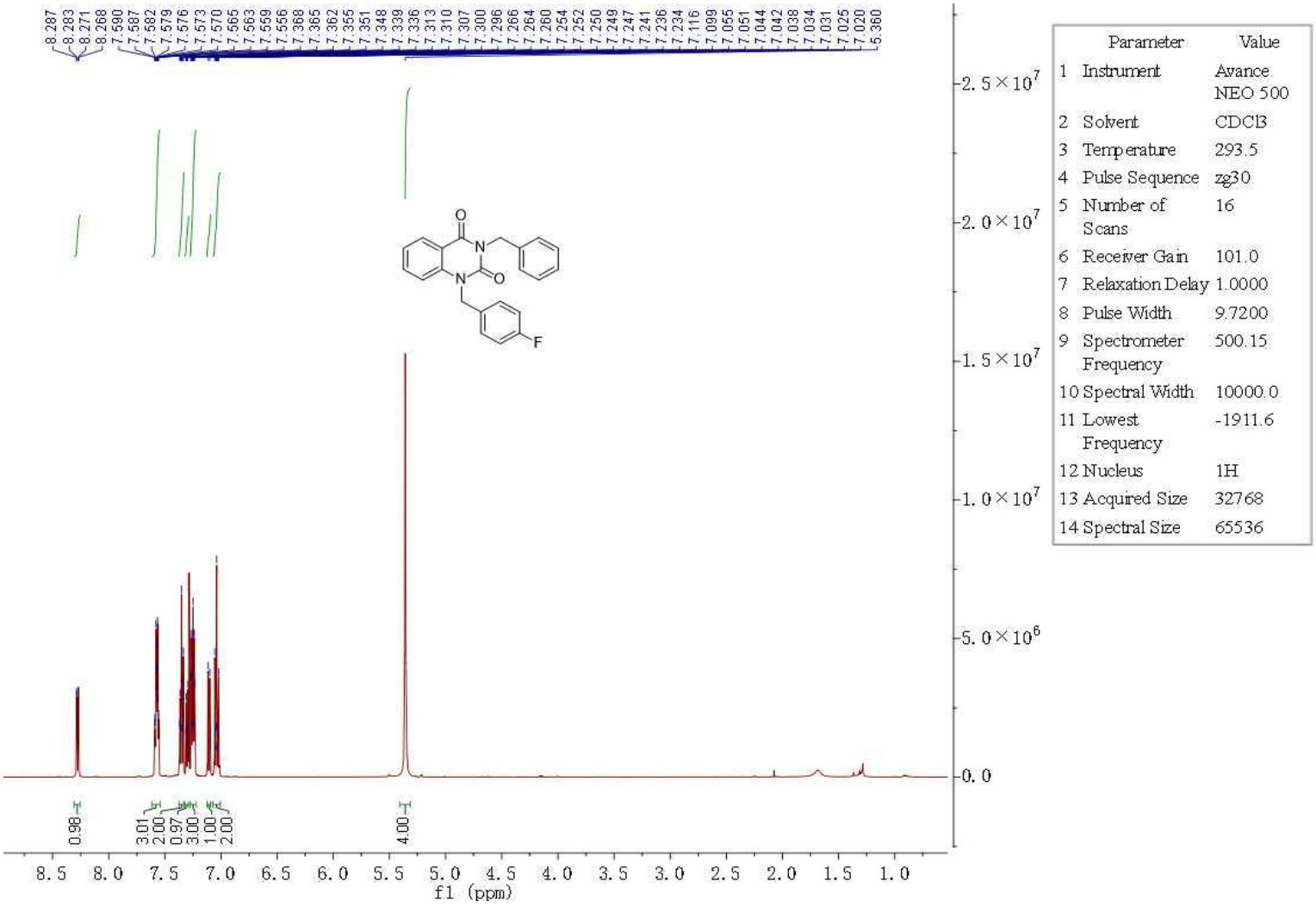


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.8
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	80.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

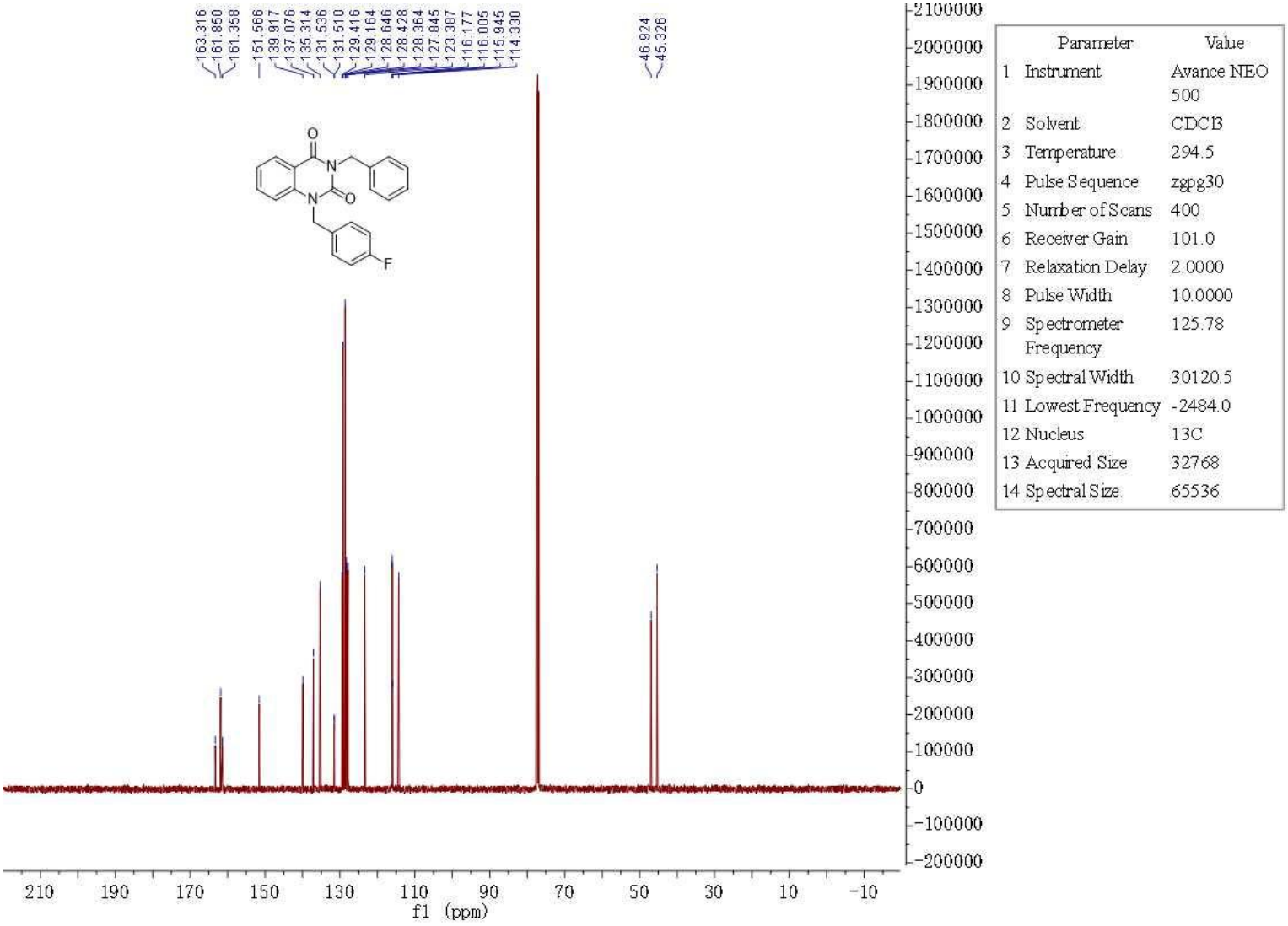


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.7
4	Pulse Sequence	zgpg30
5	Number of Scans	160
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2470.8
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

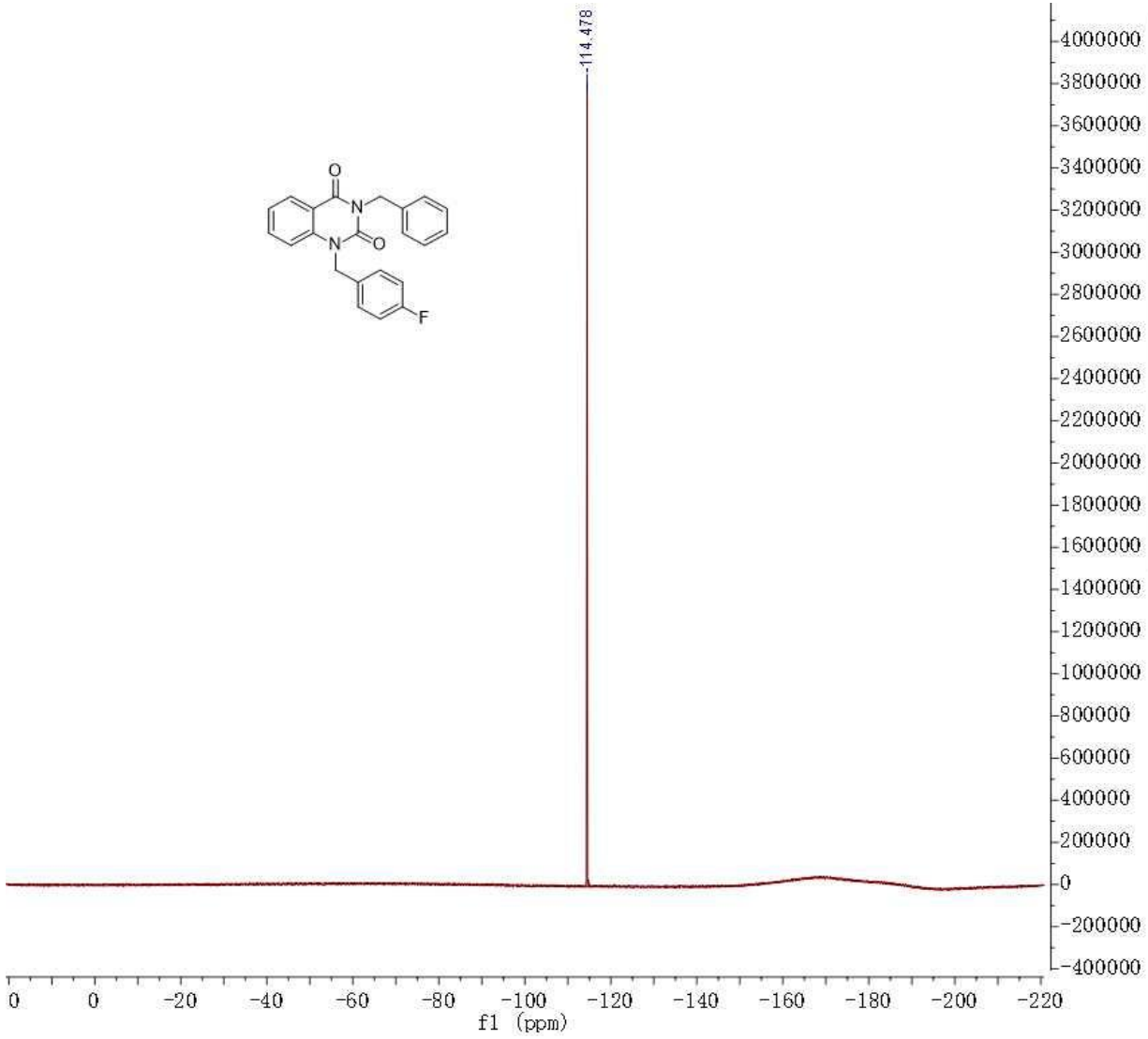
3-benzyl-1-(4-fluorobenzyl)quinazoline-2,4(1H,3H)-dione (3d)



	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.5
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

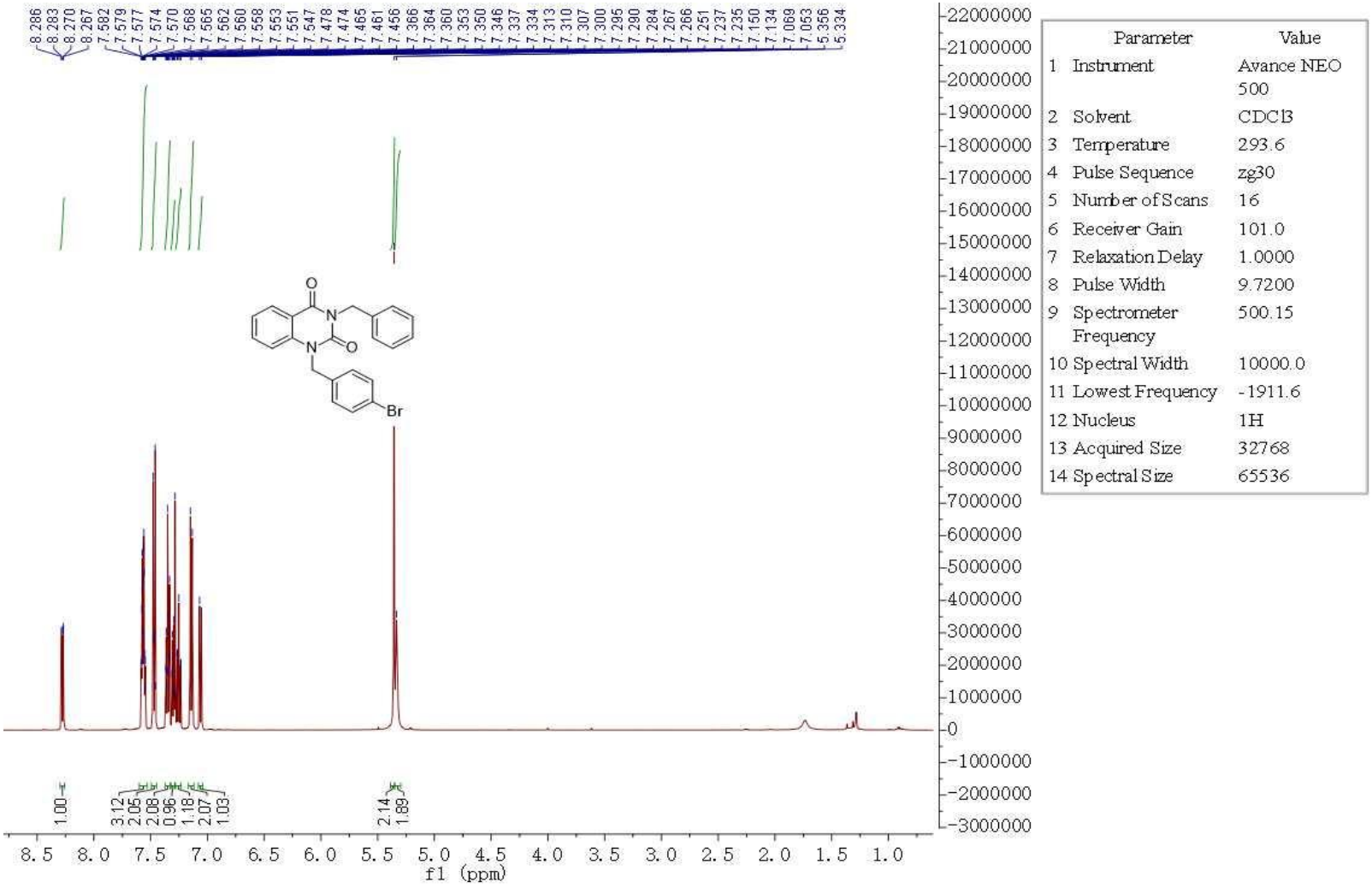


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.5
4	Pulse Sequence	zgpg30
5	Number of Scans	400
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2484.0
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

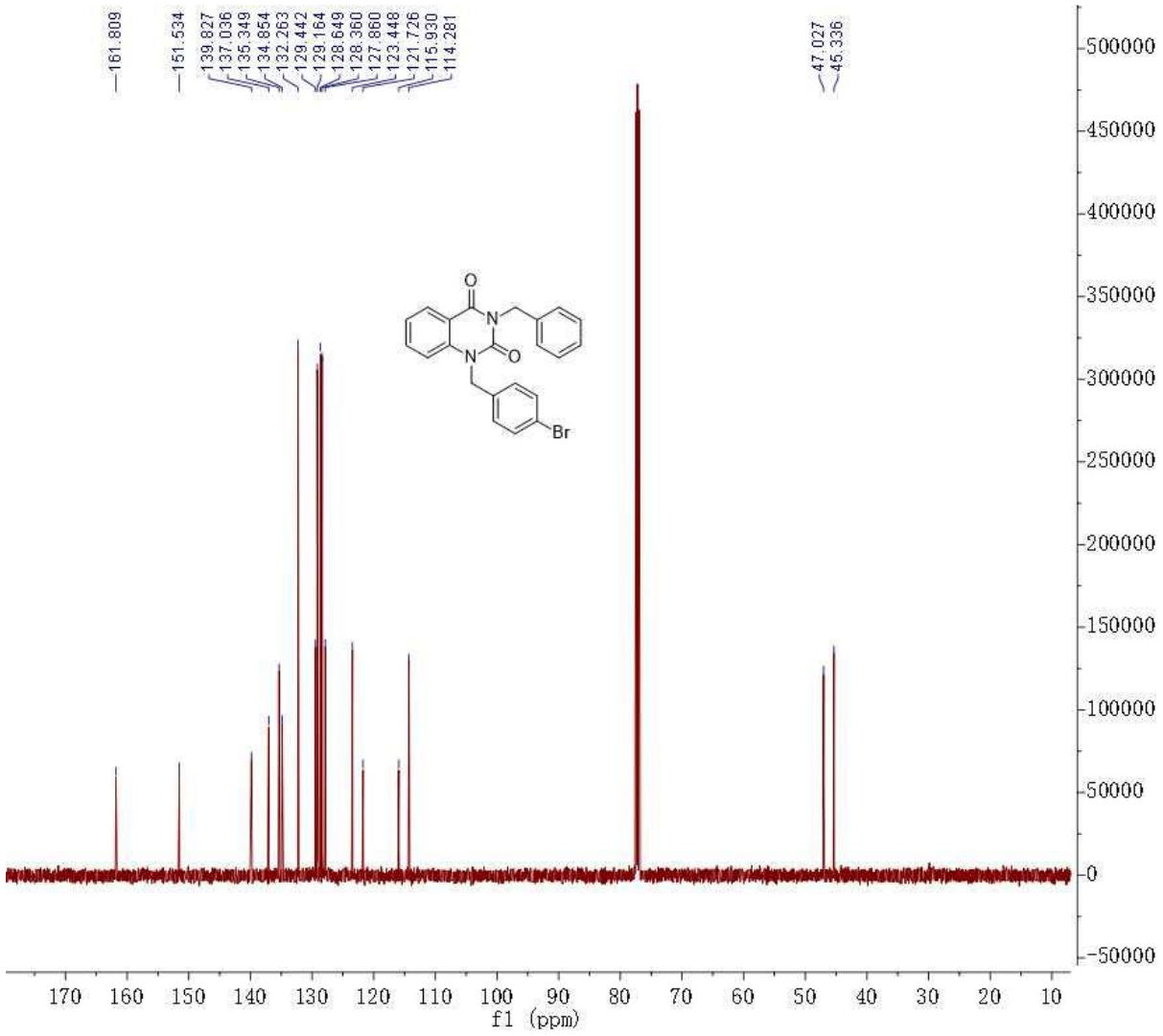


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.2
4	Pulse Sequence	zg
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	15.0000
9	Spectrometer Frequency	470.56
10	Spectral Width	113636.4
11	Lowest Frequency	-103879.3
12	Nucleus	19F
13	Acquired Size	65536
14	Spectral Size	131072

3-benzyl-1-(4-bromobenzyl)quinazoline-2,4(1H,3H)-dione (3e)

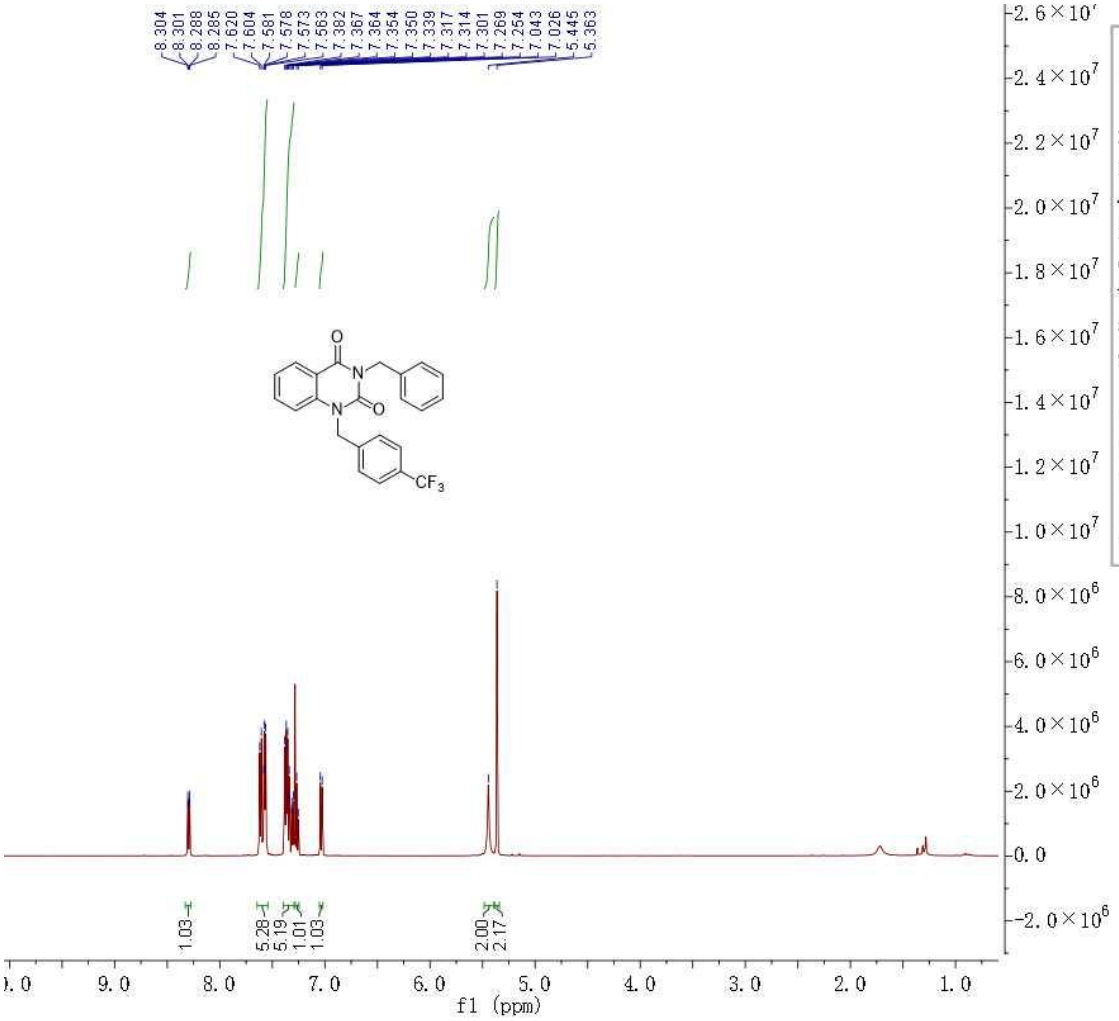


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.6
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

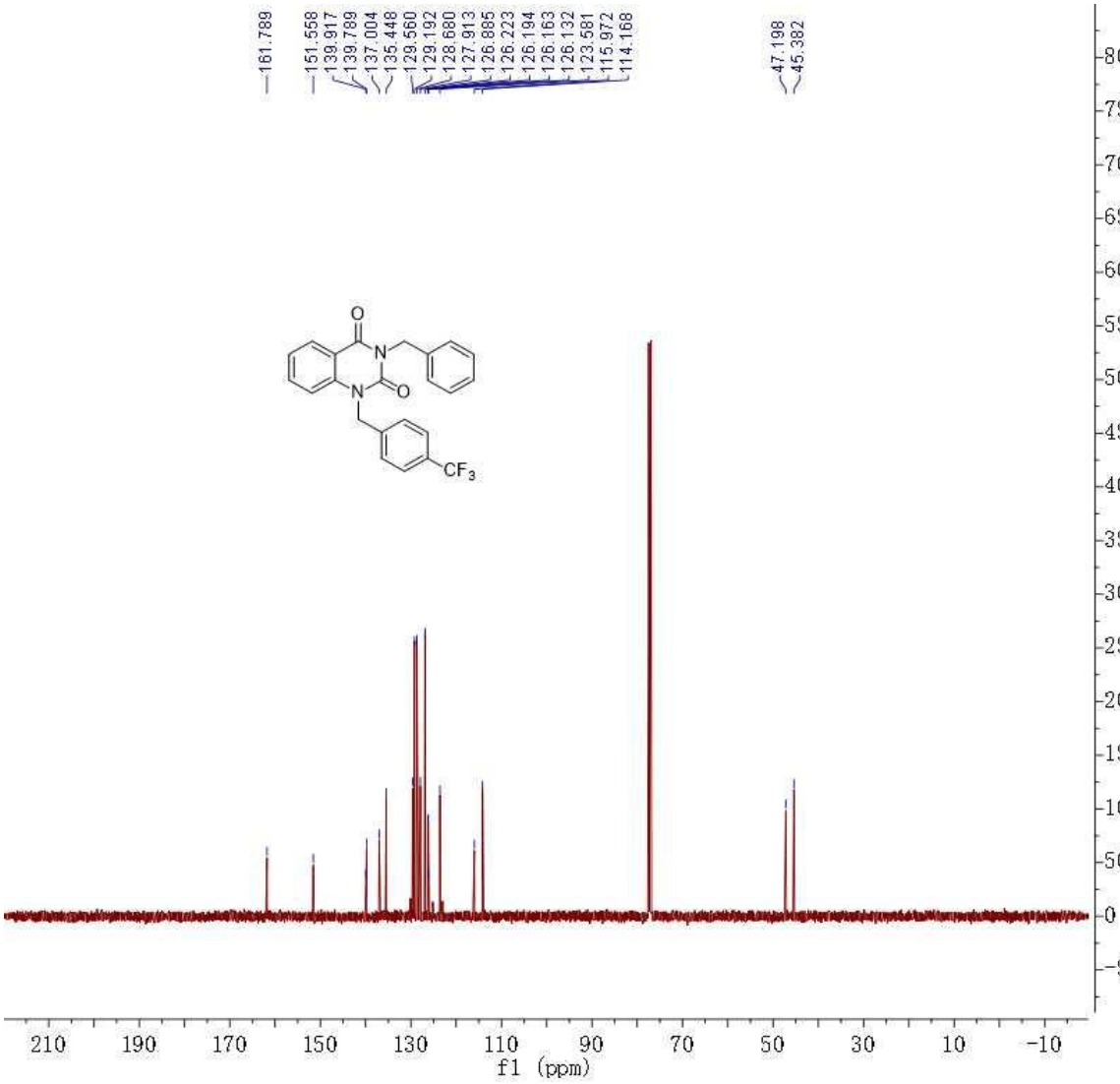


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	DMSO
3	Temperature	294.3
4	Pulse Sequence	zgpg30
5	Number of Scans	100
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-1870.8
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

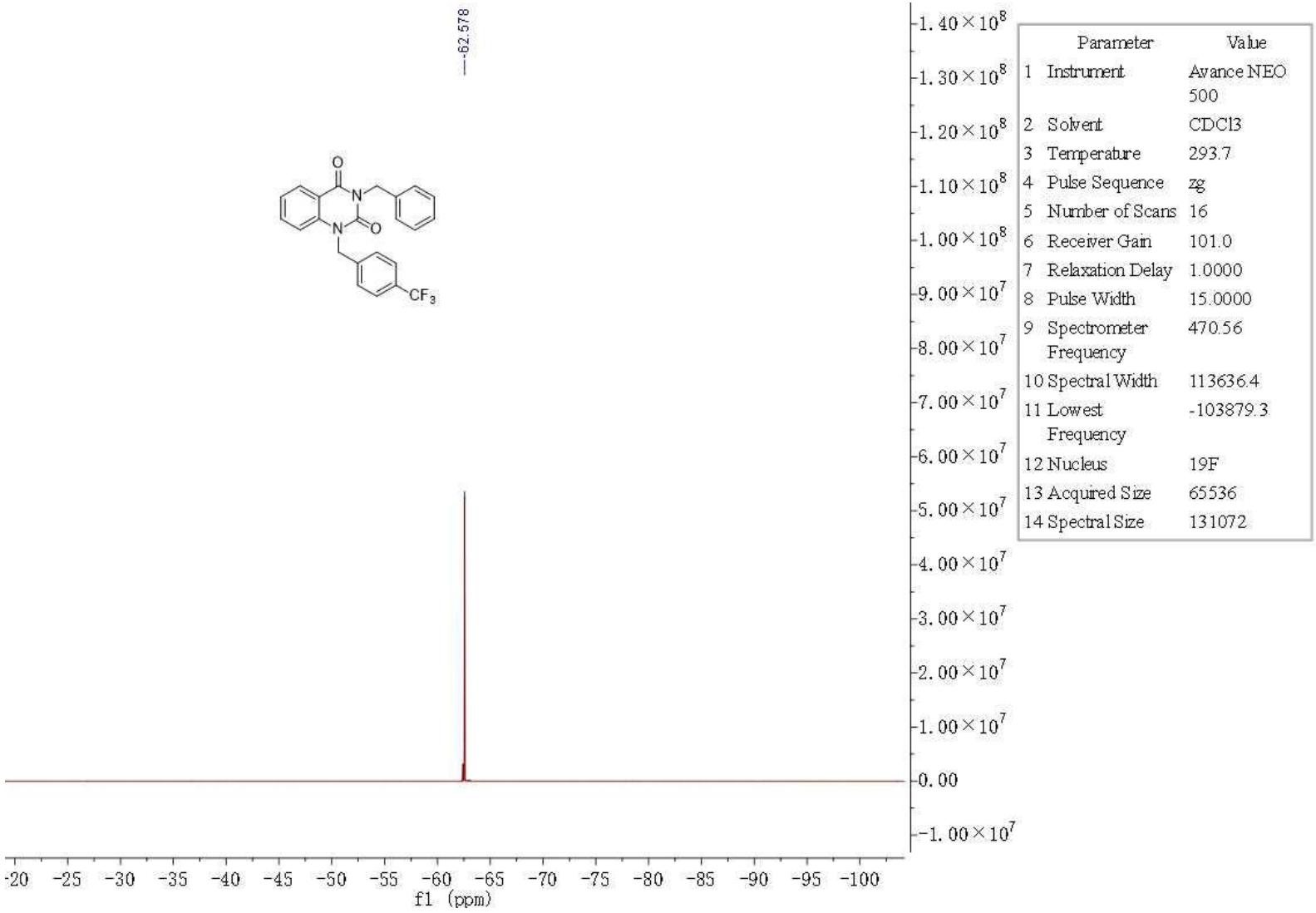
3-benzyl-1-(4-(trifluoromethyl)benzyl)quinazoline-2,4(1H,3H)-dione (3f)



	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.0
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

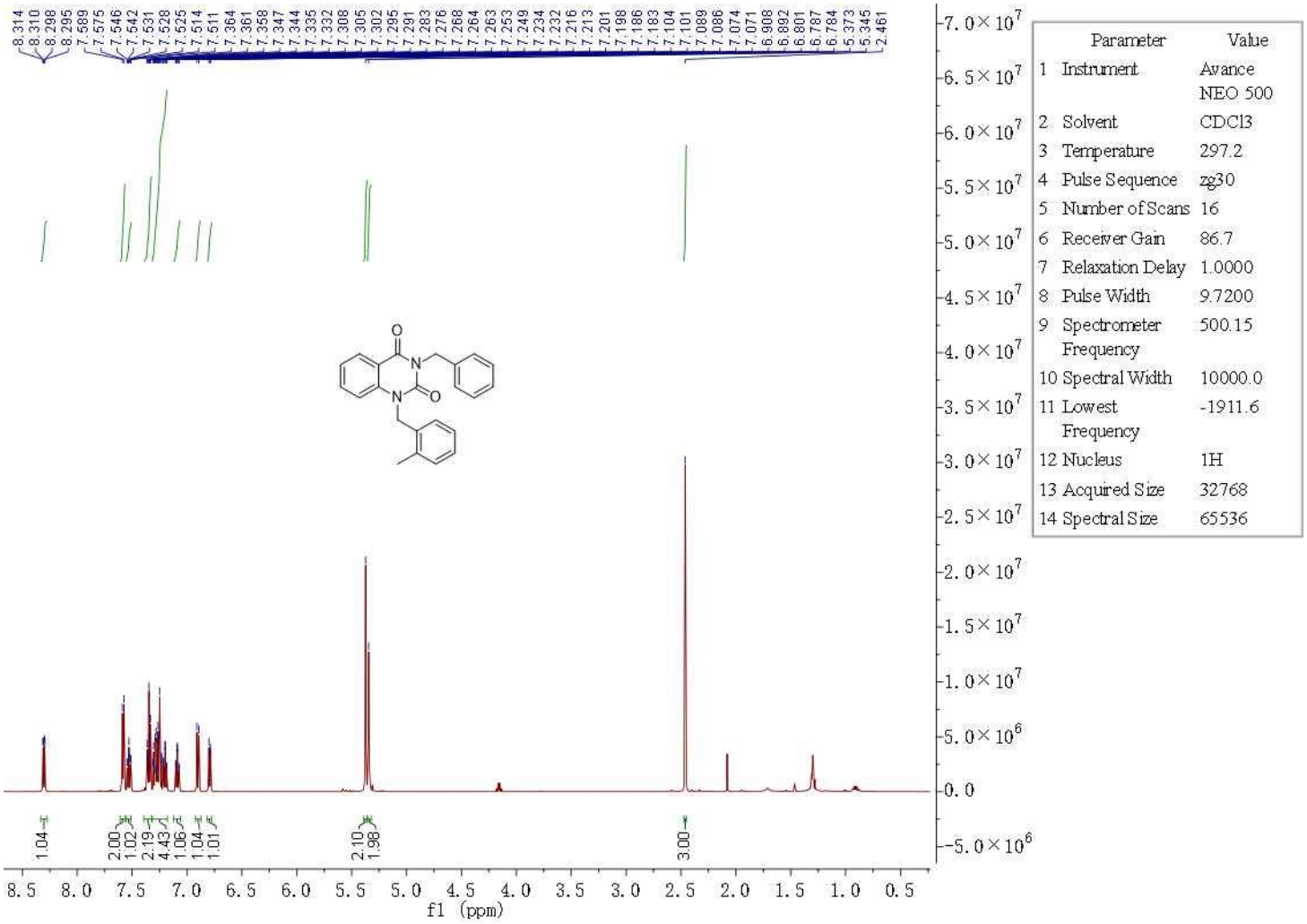


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.5
4	Pulse Sequence	zgpg30
5	Number of Scans	120
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2465.7
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

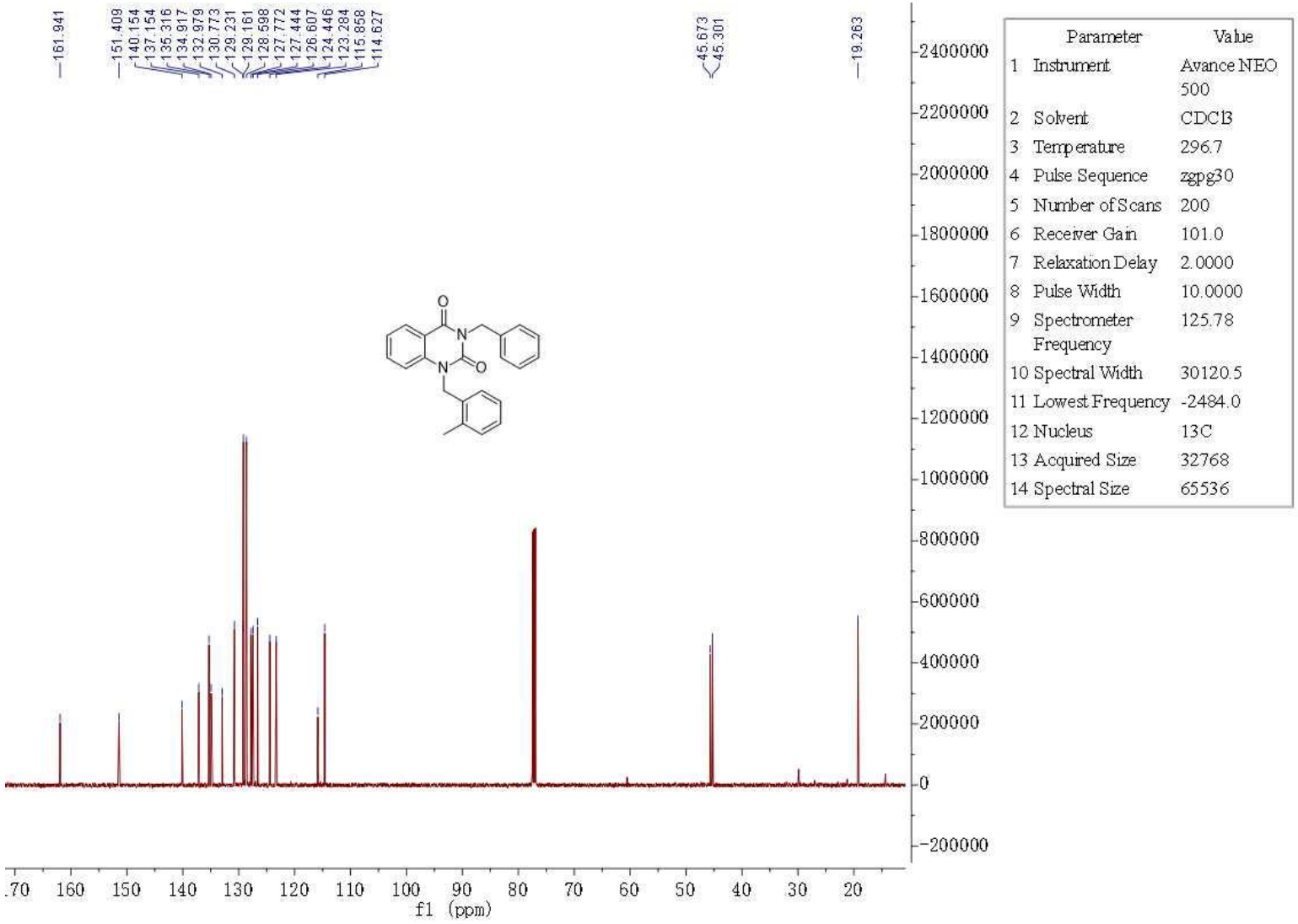


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.7
4	Pulse Sequence	zg
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	15.0000
9	Spectrometer Frequency	470.56
10	Spectral Width	113636.4
11	Lowest Frequency	-103879.3
12	Nucleus	19F
13	Acquired Size	65536
14	Spectral Size	131072

3-benzyl-1-(2-methylbenzyl)quinazoline-2,4(1H,3H)-dione (3g)

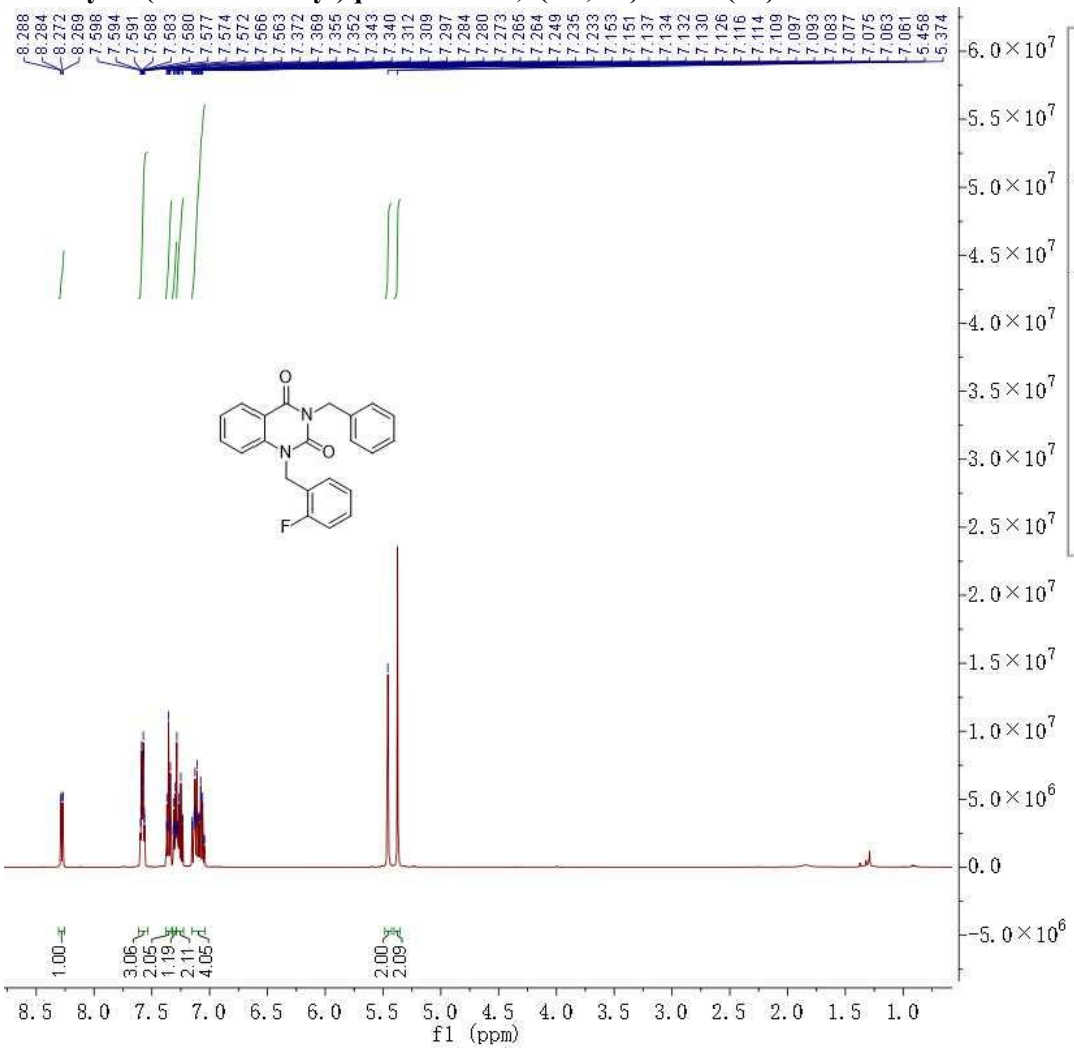


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	297.2
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	86.7
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

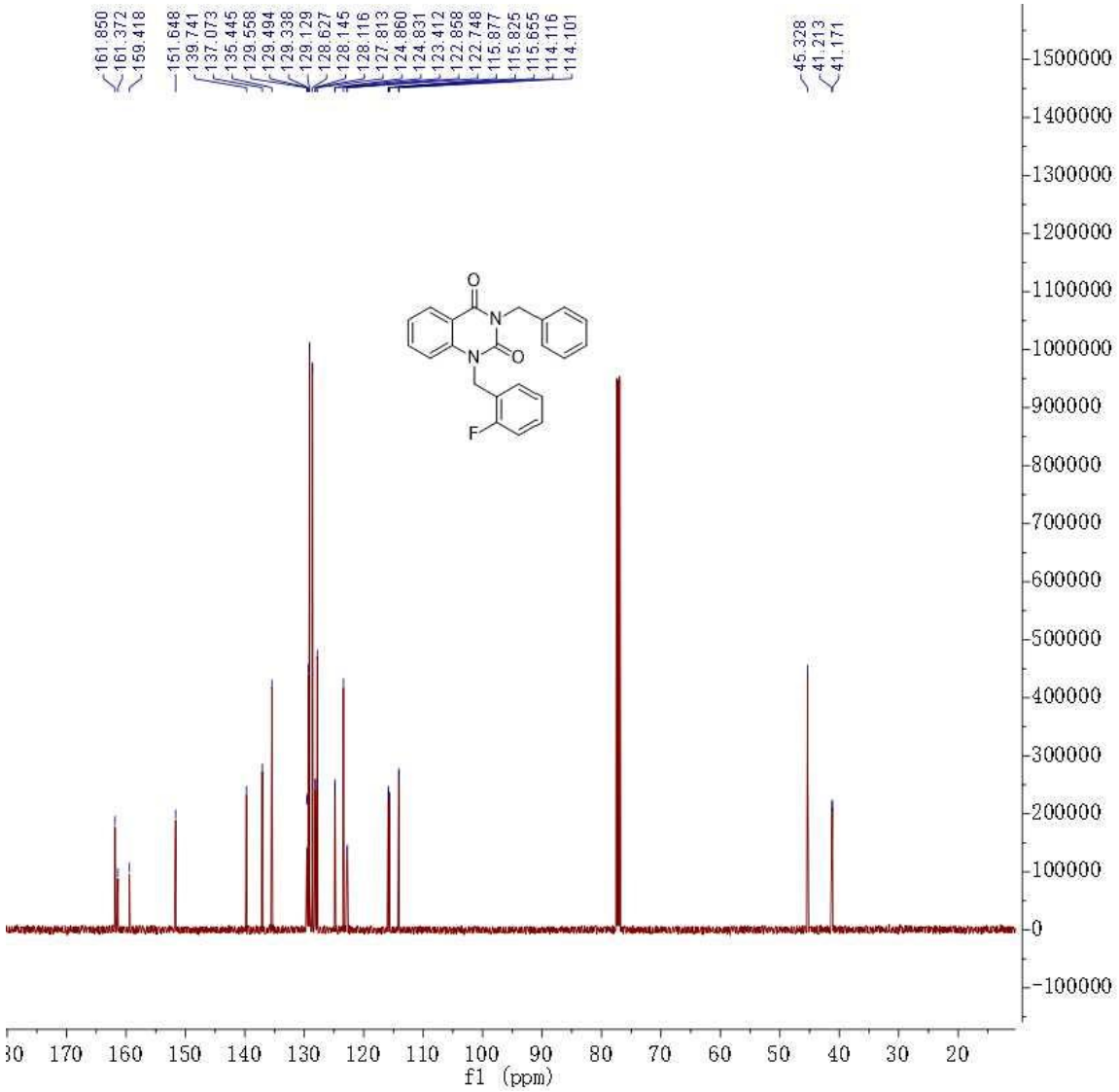


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	296.7
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2484.0
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

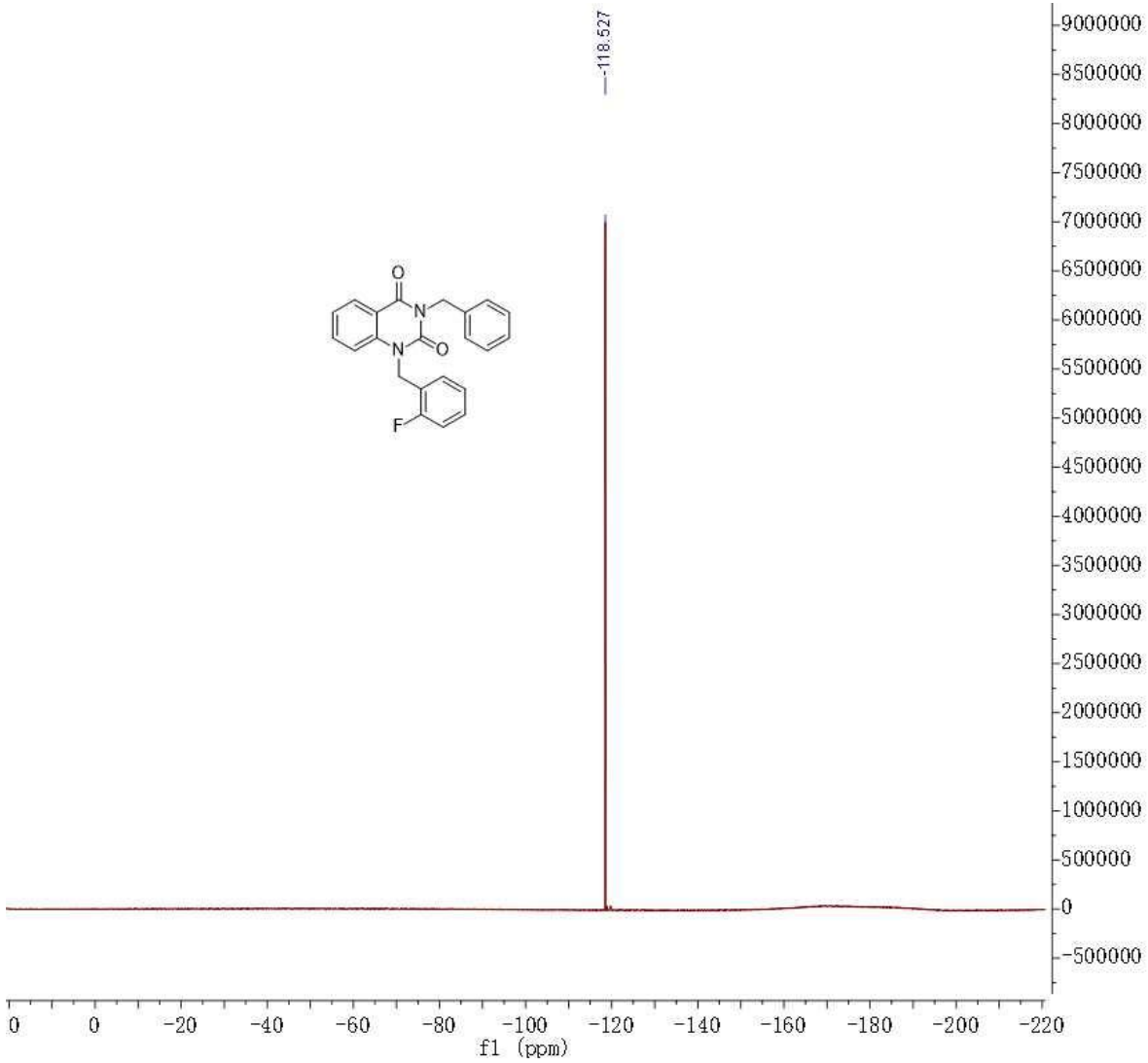
3-benzyl-1-(2-fluorobenzyl)quinazoline-2,4(1H,3H)-dione (3h)



	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.0
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

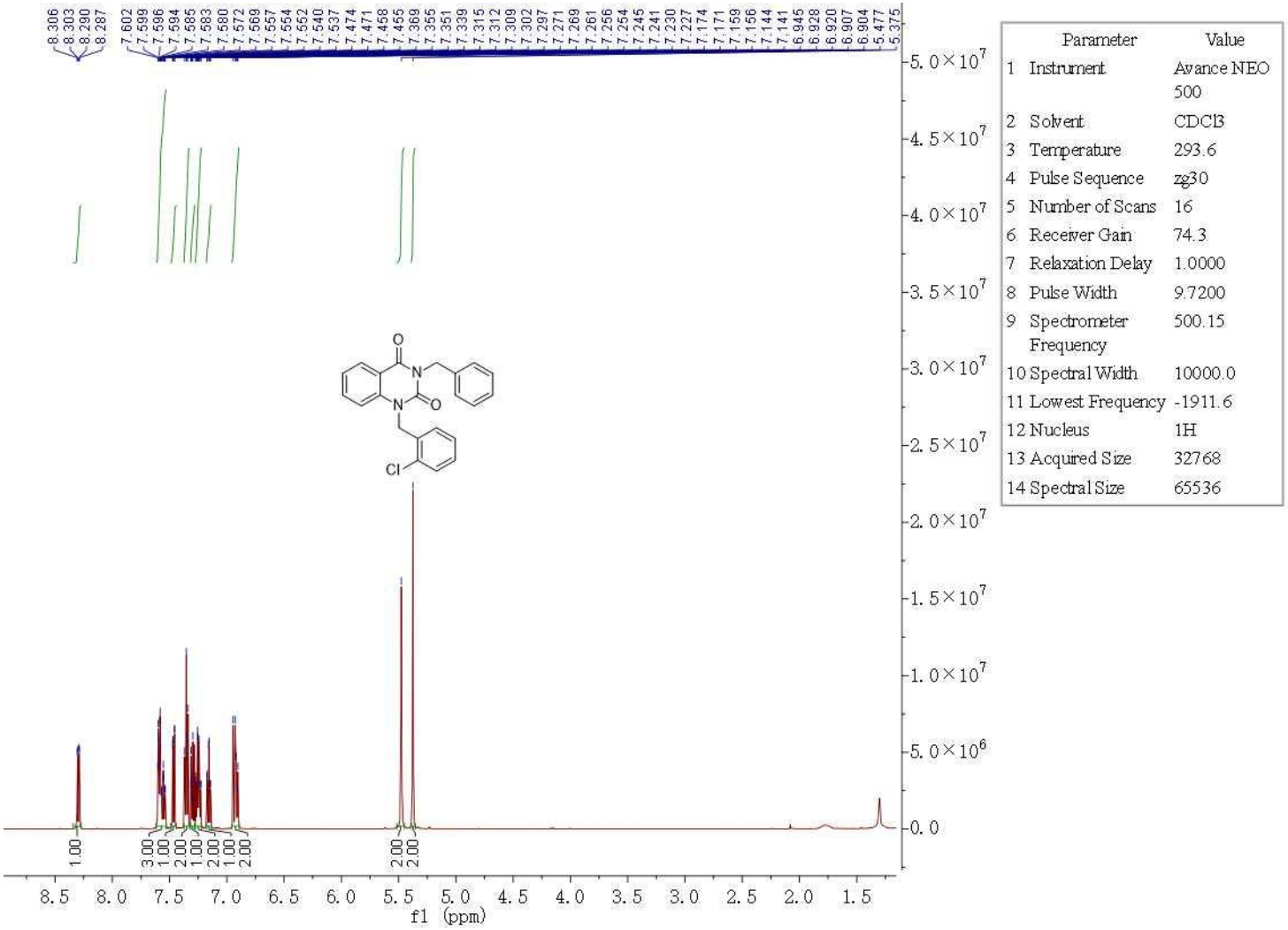


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.7
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2469.9
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

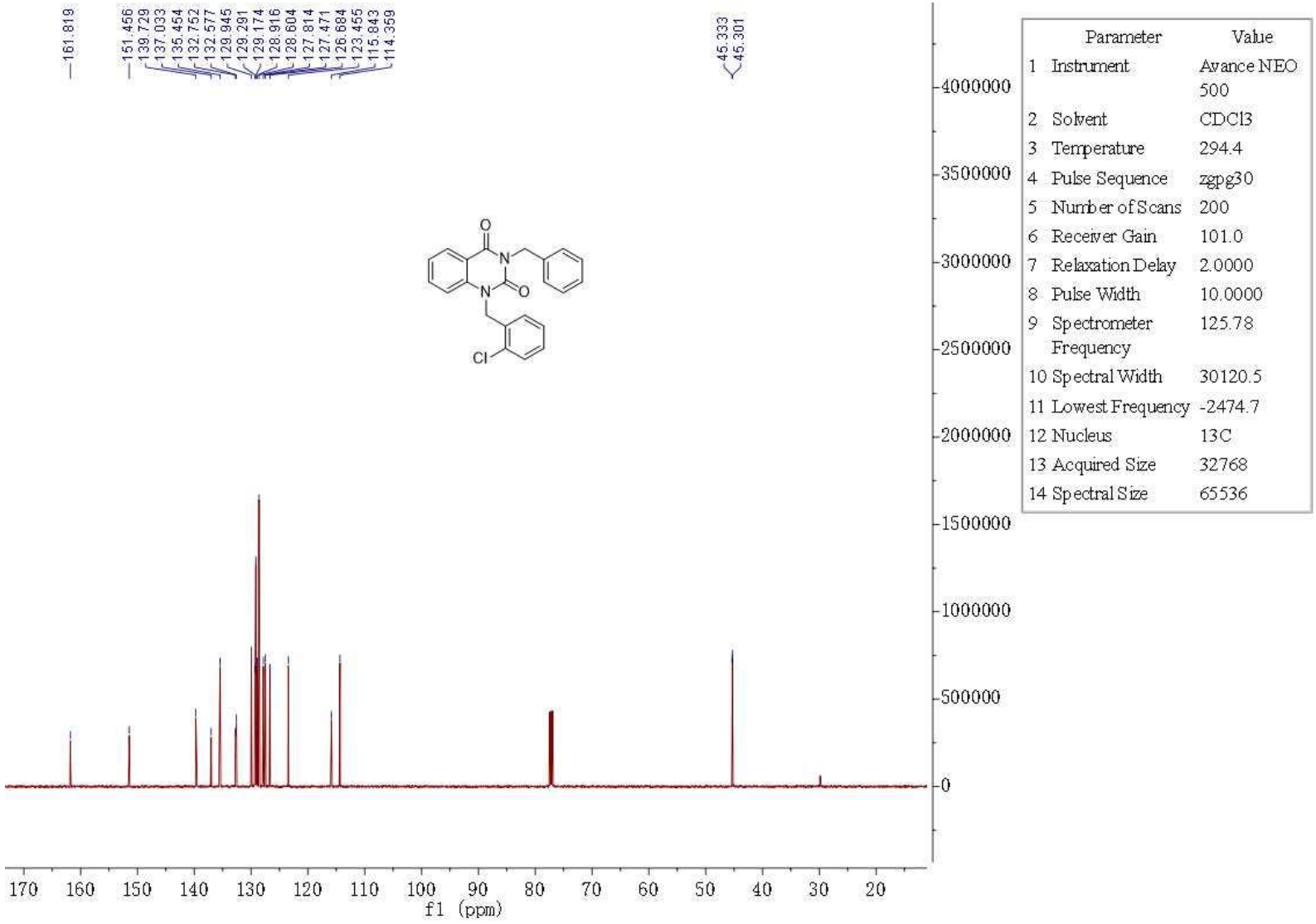


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.0
4	Pulse Sequence	zg
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	15.0000
9	Spectrometer Frequency	470.56
10	Spectral Width	113636.4
11	Lowest Frequency	-103879.3
12	Nucleus	19F
13	Acquired Size	65536
14	Spectral Size	131072

3-benzyl-1-(2-chlorobenzyl)quinazoline-2,4(1H,3H)-dione (3i)

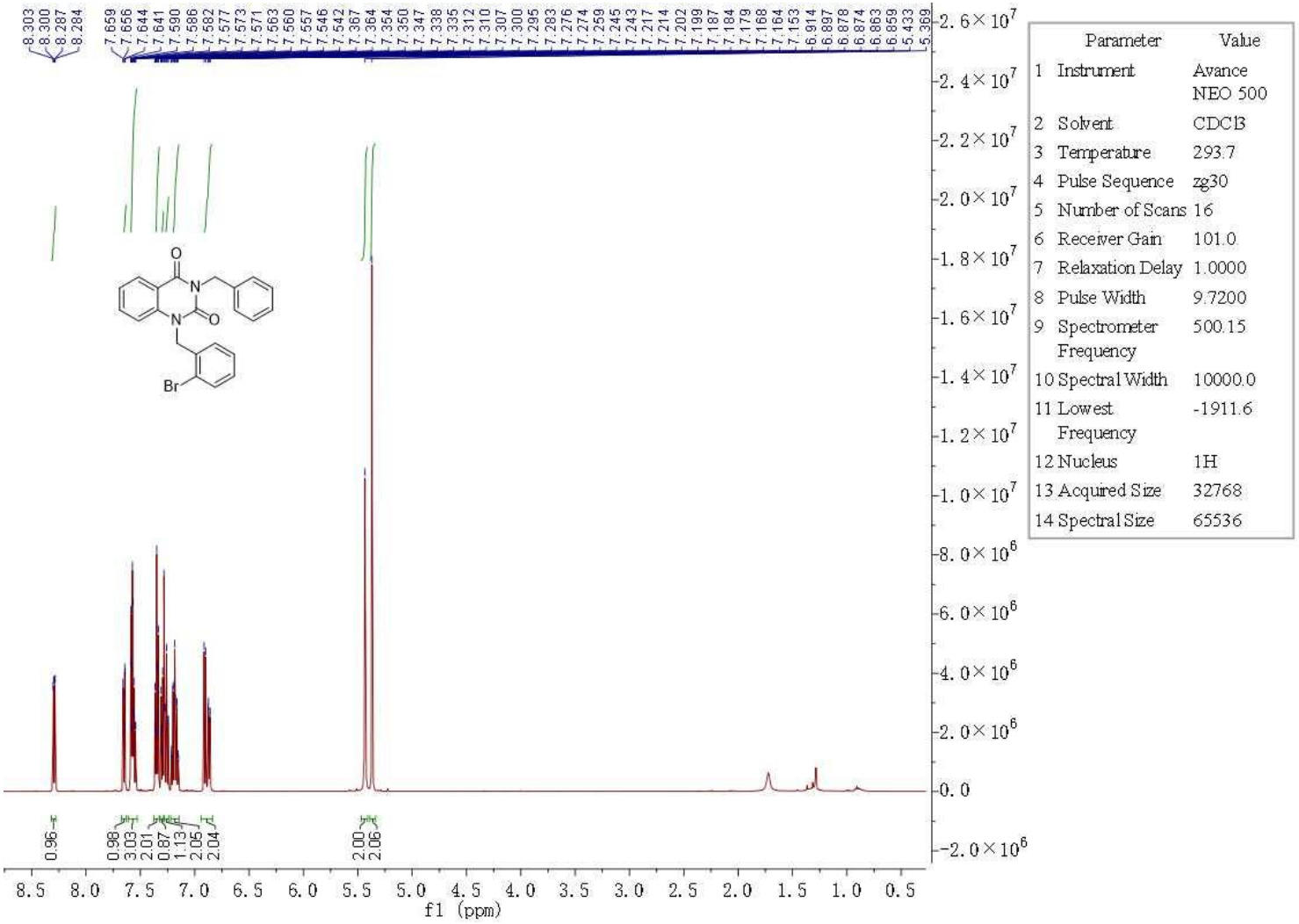


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.6
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	74.3
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

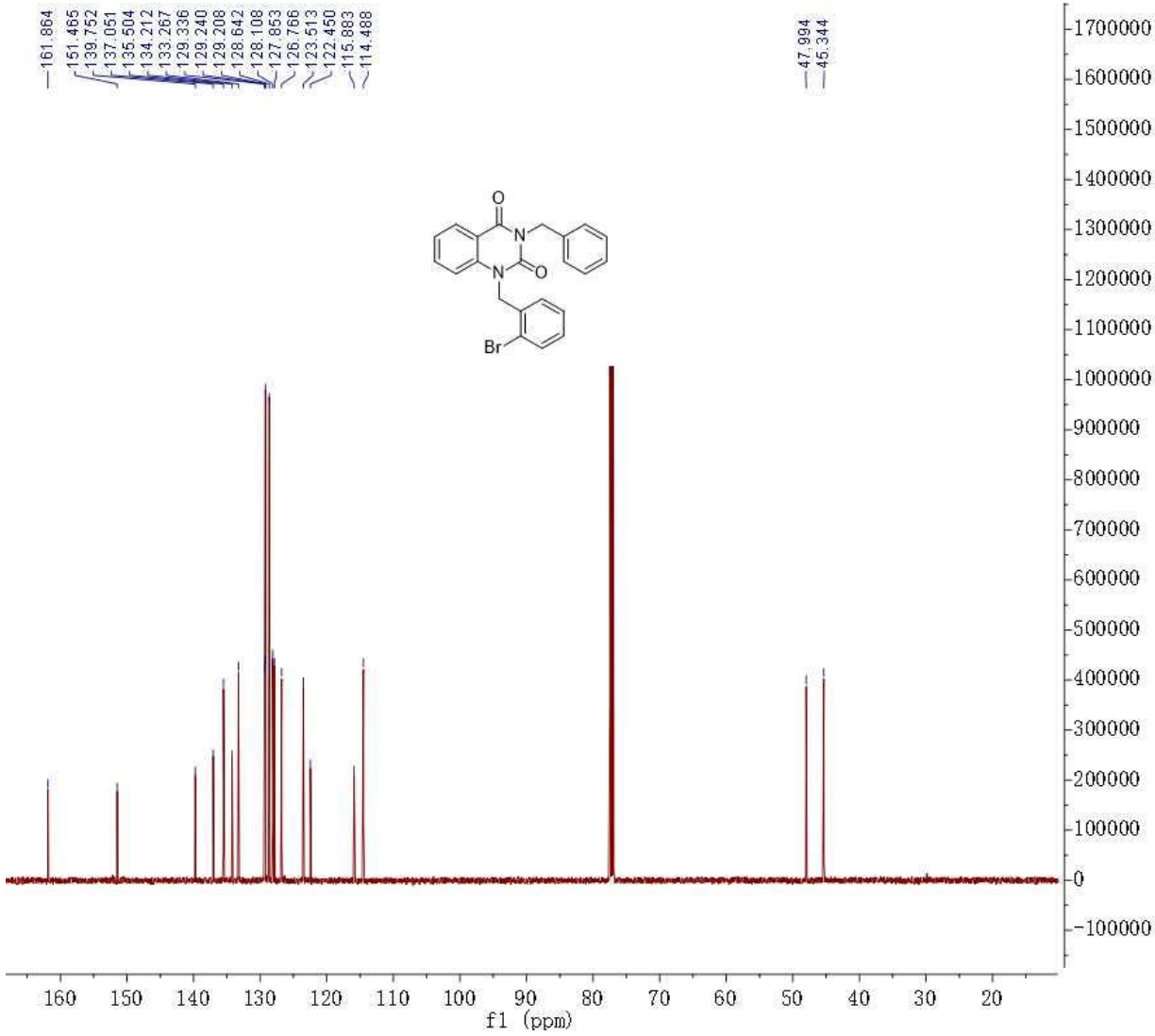


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.4
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2474.7
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-benzyl-1-(2-bromobenzyl)quinazoline-2,4(1H,3H)-dione (3j)

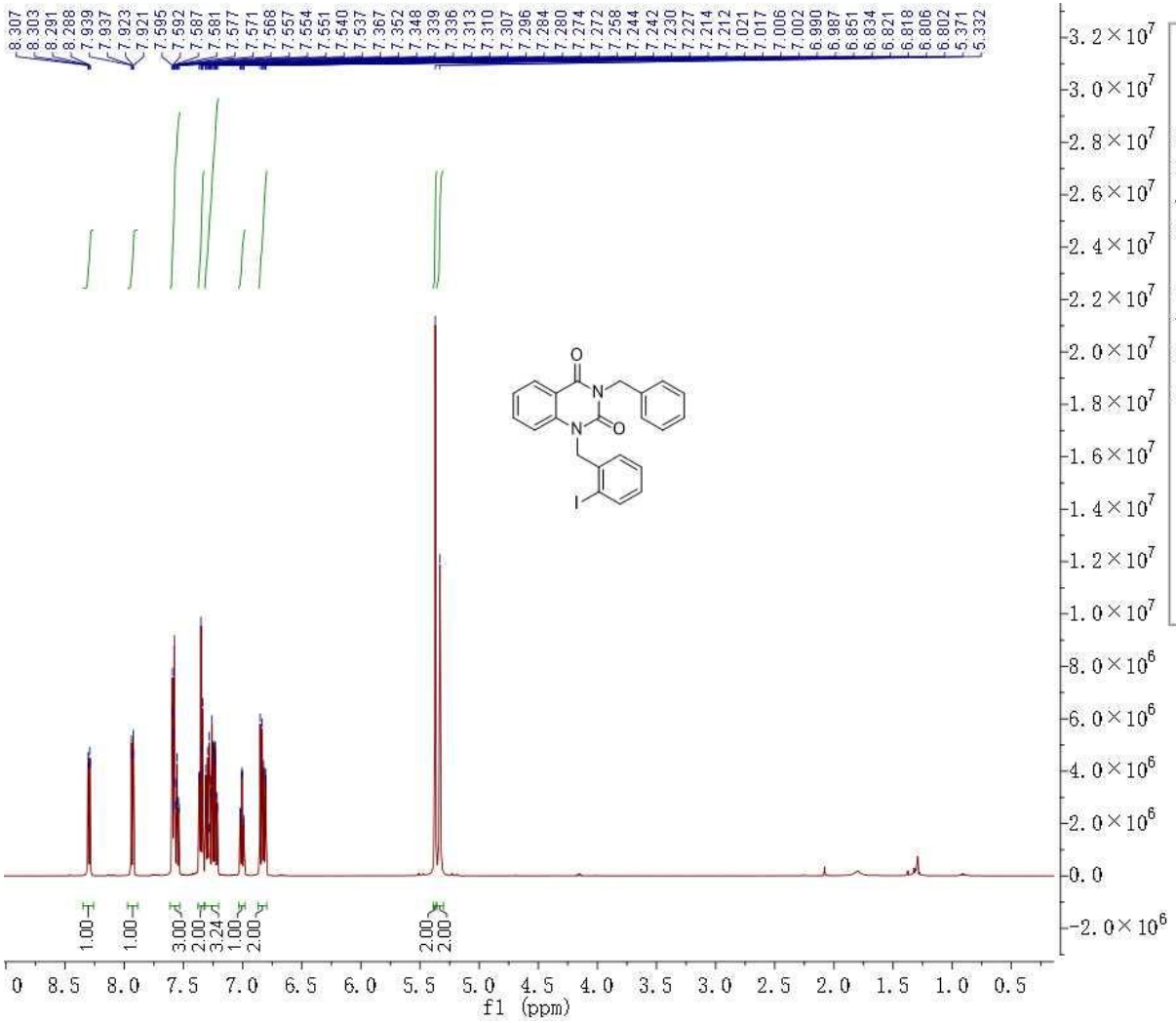


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.7
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

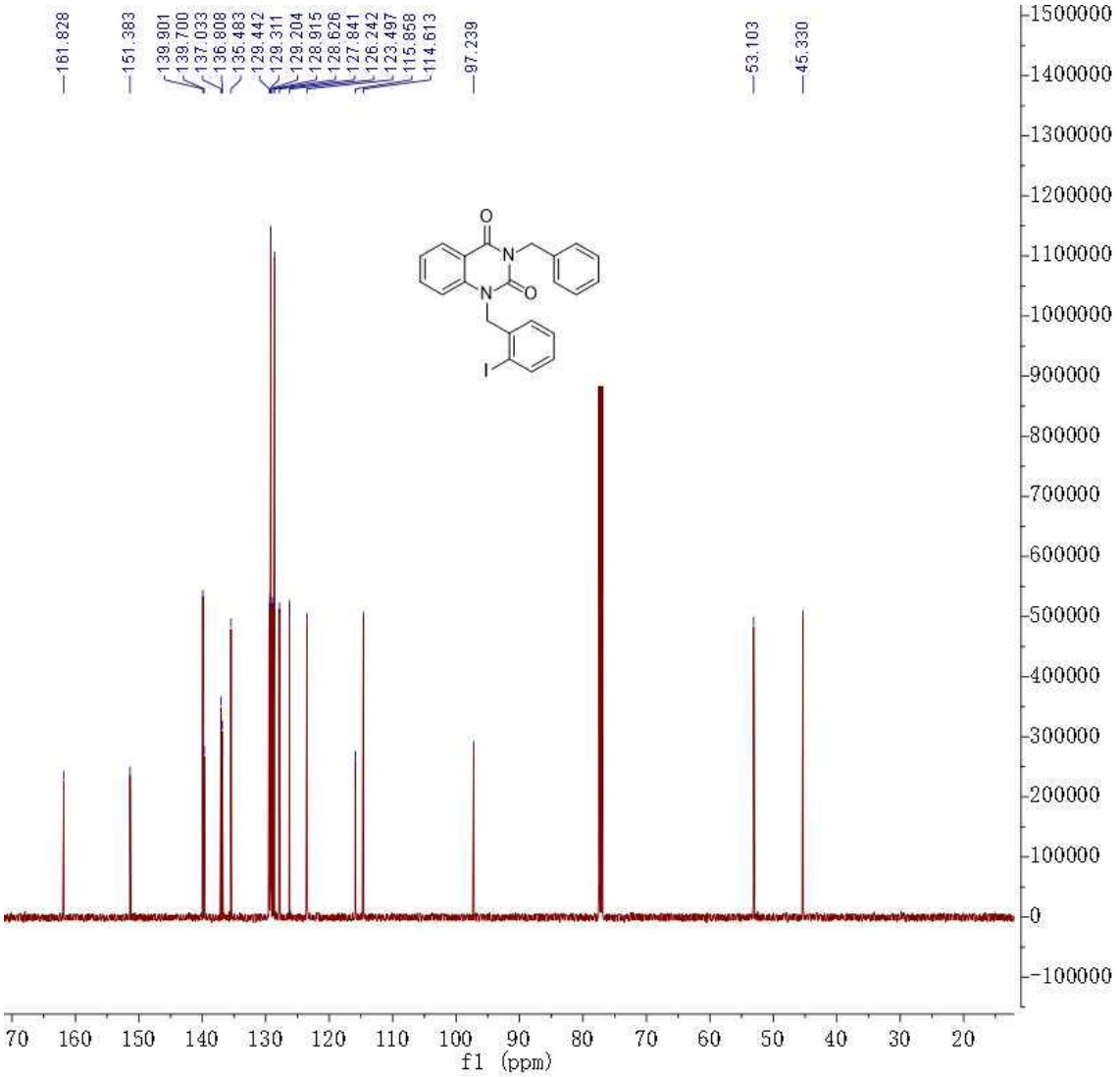


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.7
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2469.1
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-benzyl-1-(2-iodobenzyl)quinazoline-2,4(1H,3H)-dione (3k)

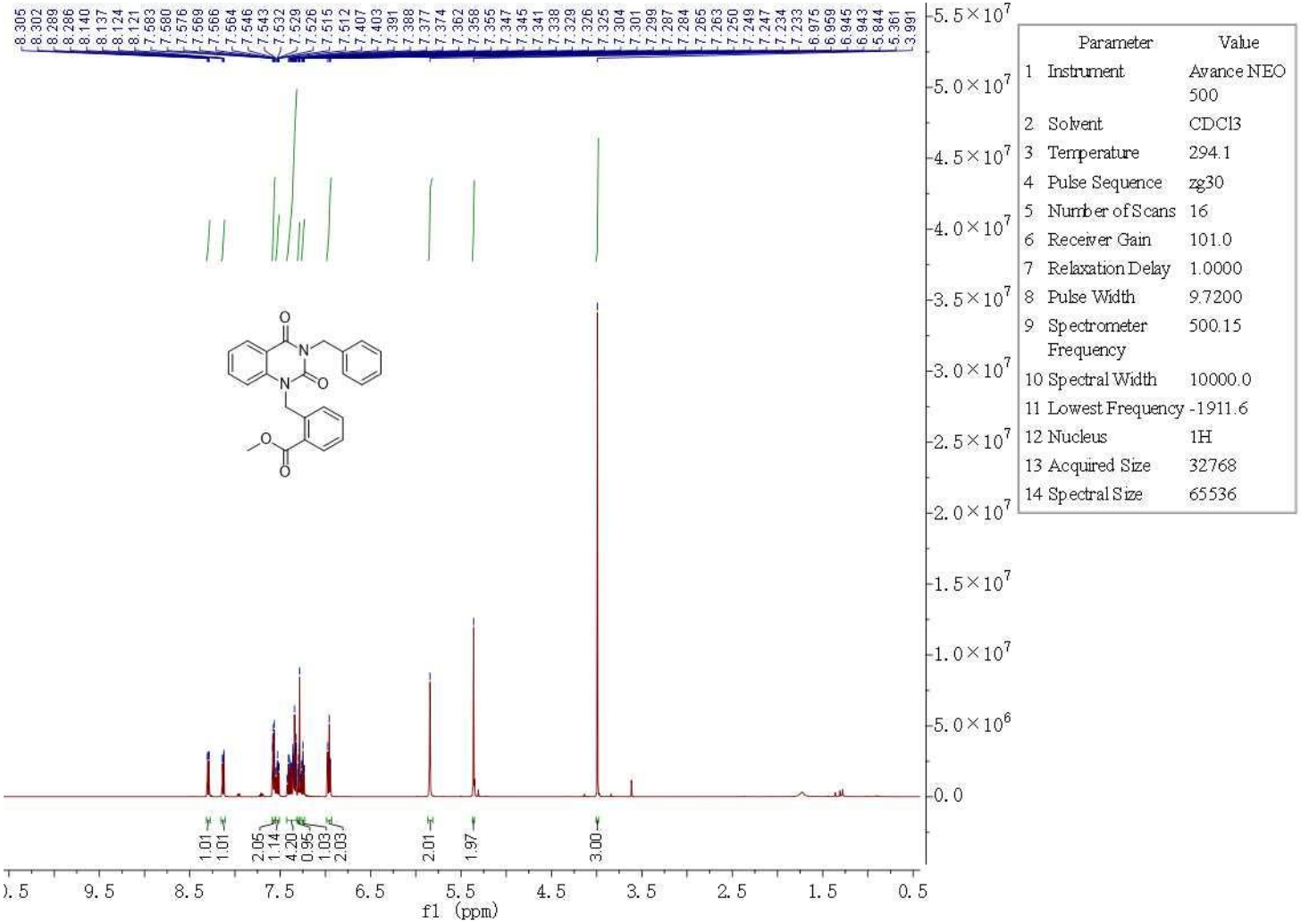


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.0
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	94.5
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

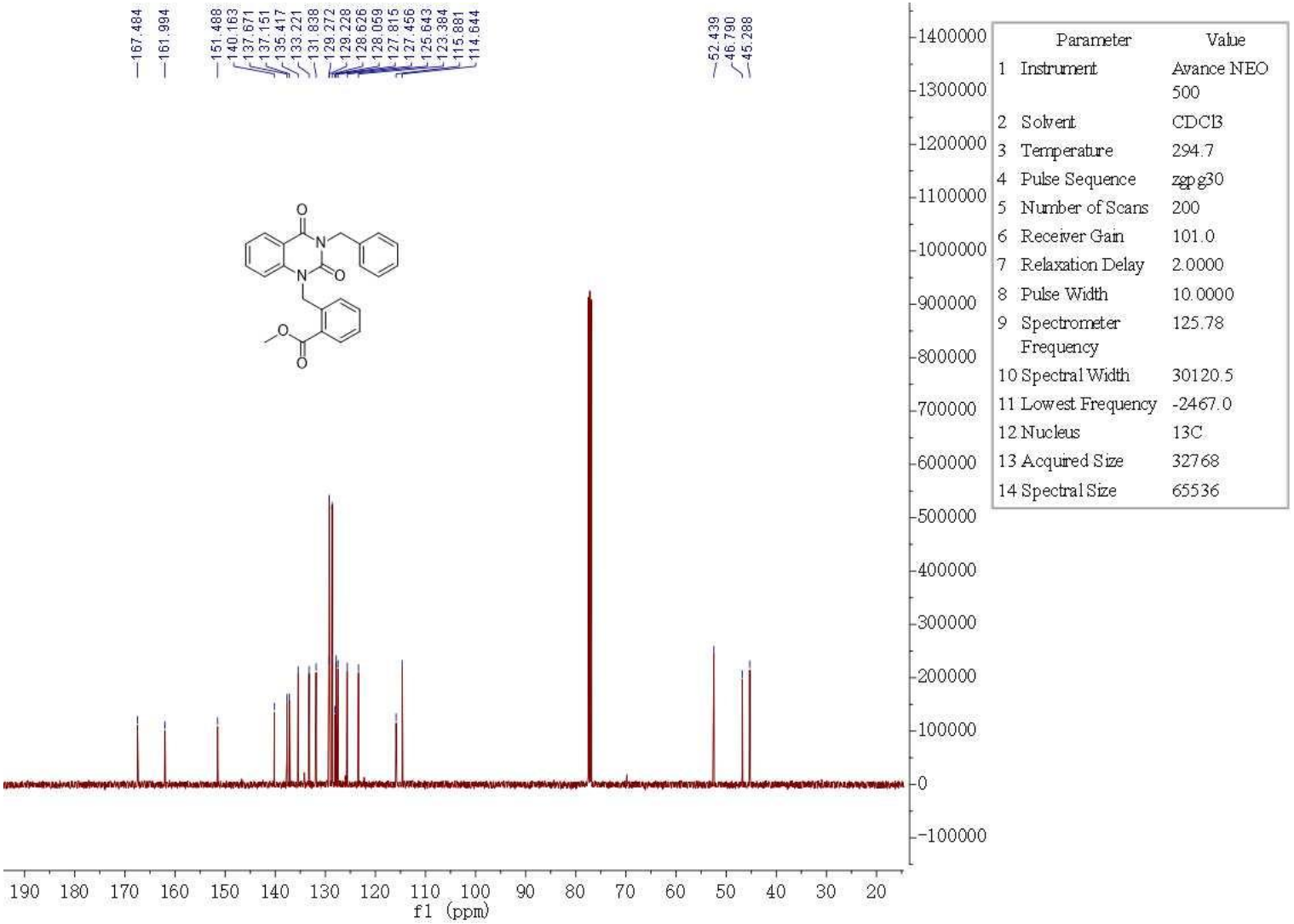


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.6
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2472.3
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

methyl 2-((3-benzyl-2,4-dioxo-3,4-dihydroquinazolin-1(2H)-yl)methyl)benzoate (3l)

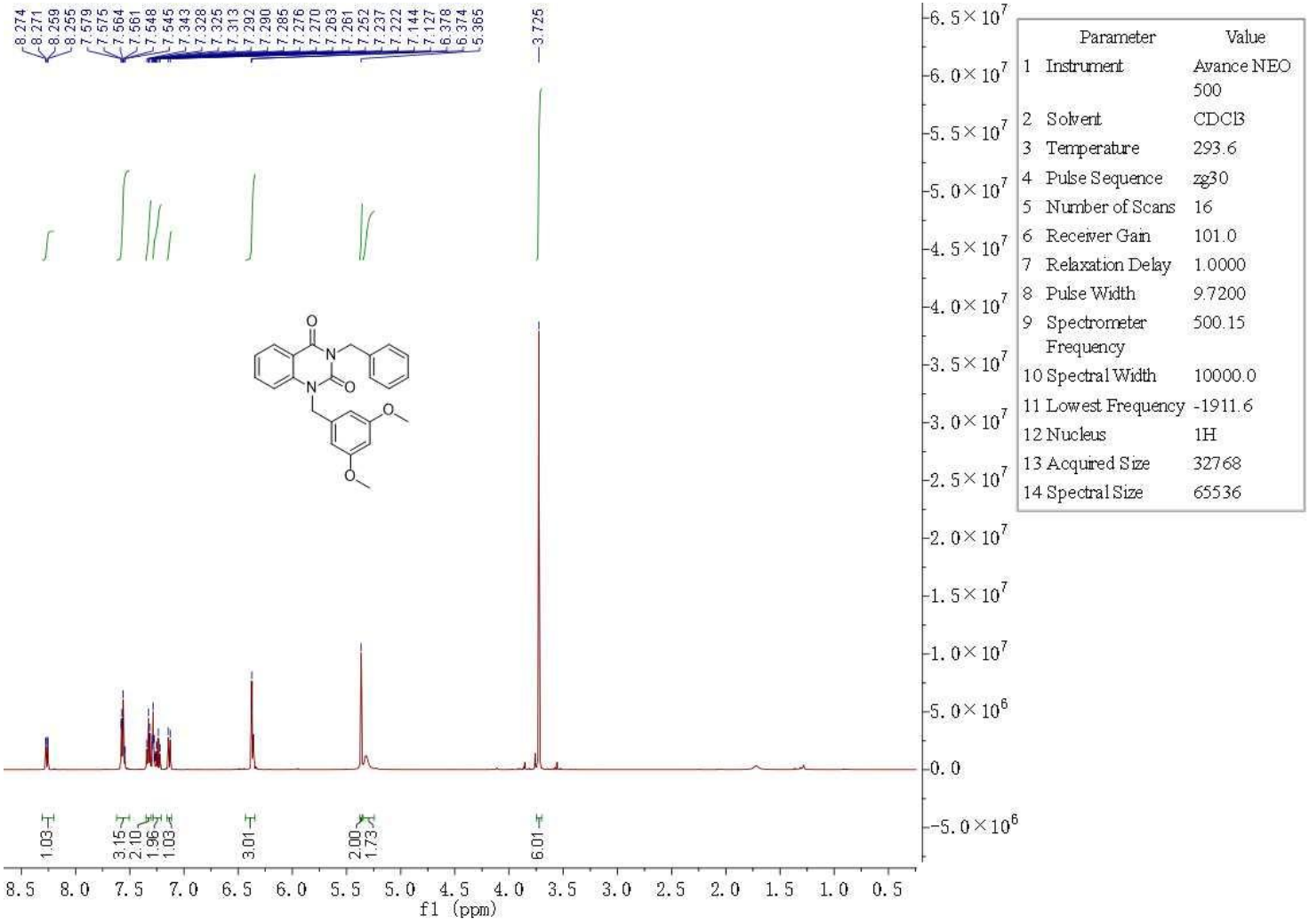


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.1
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

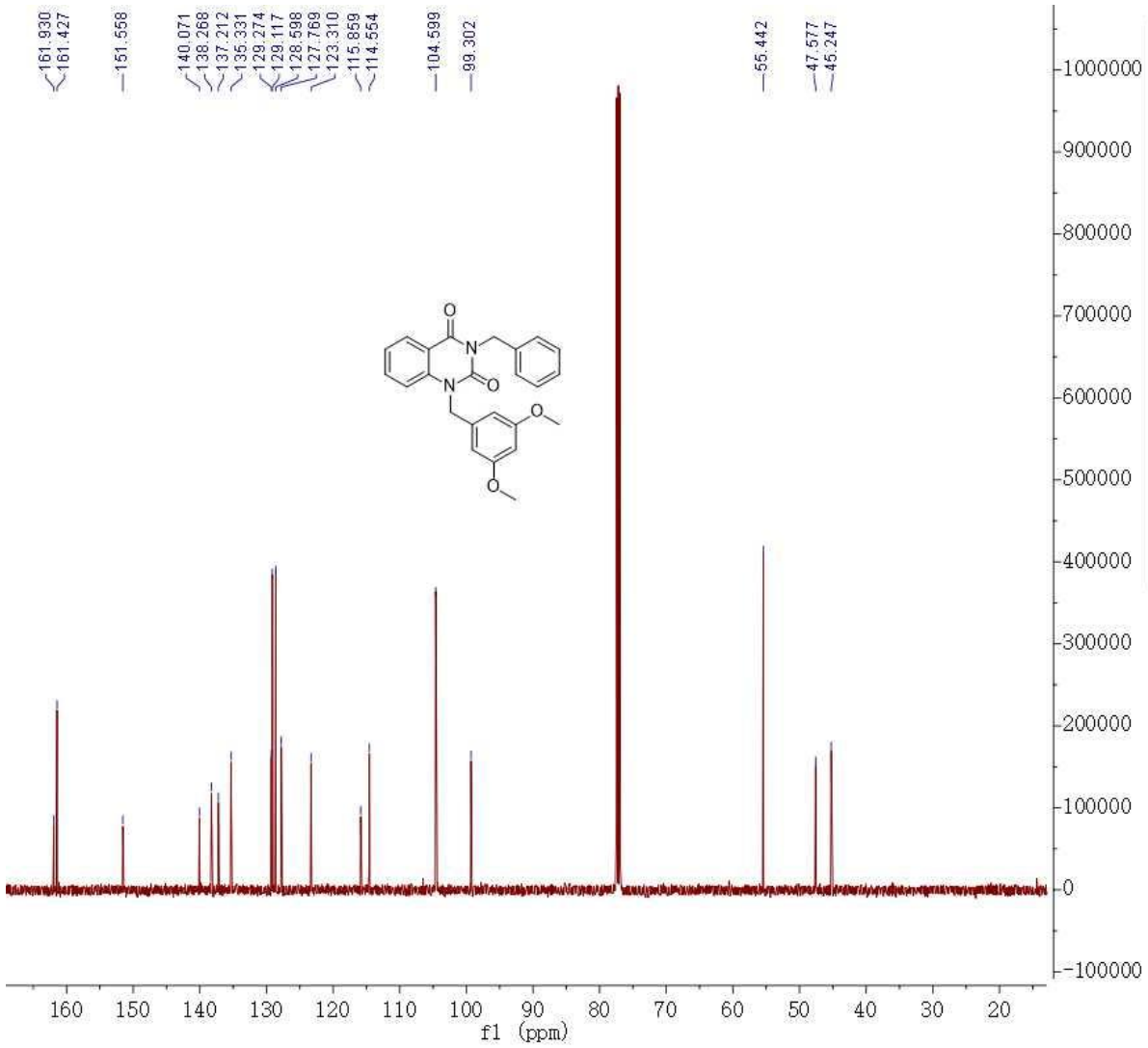


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.7
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2467.0
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-benzyl-1-(3,5-dimethoxybenzyl)quinazoline-2,4(1H,3H)-dione (3m)

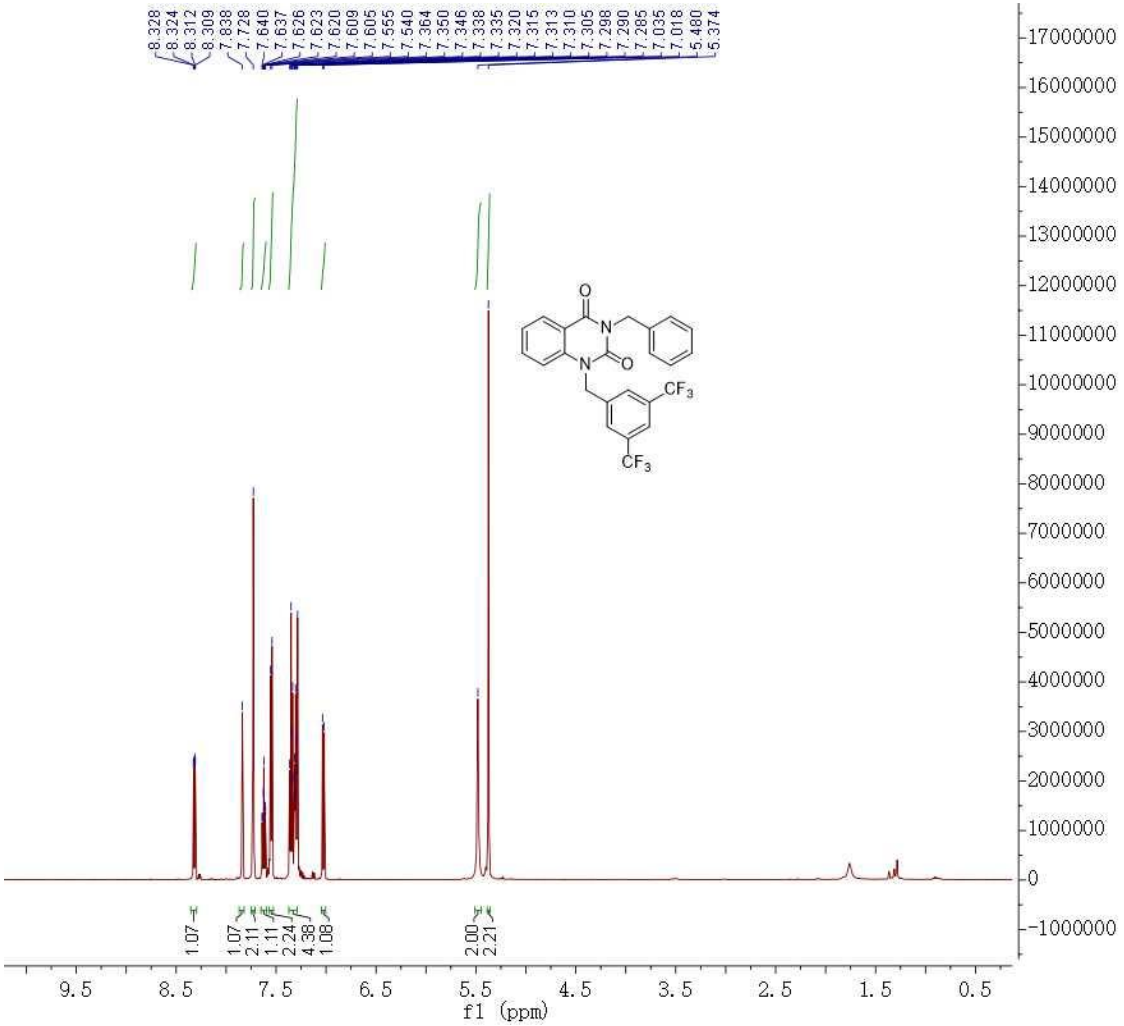


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.6
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

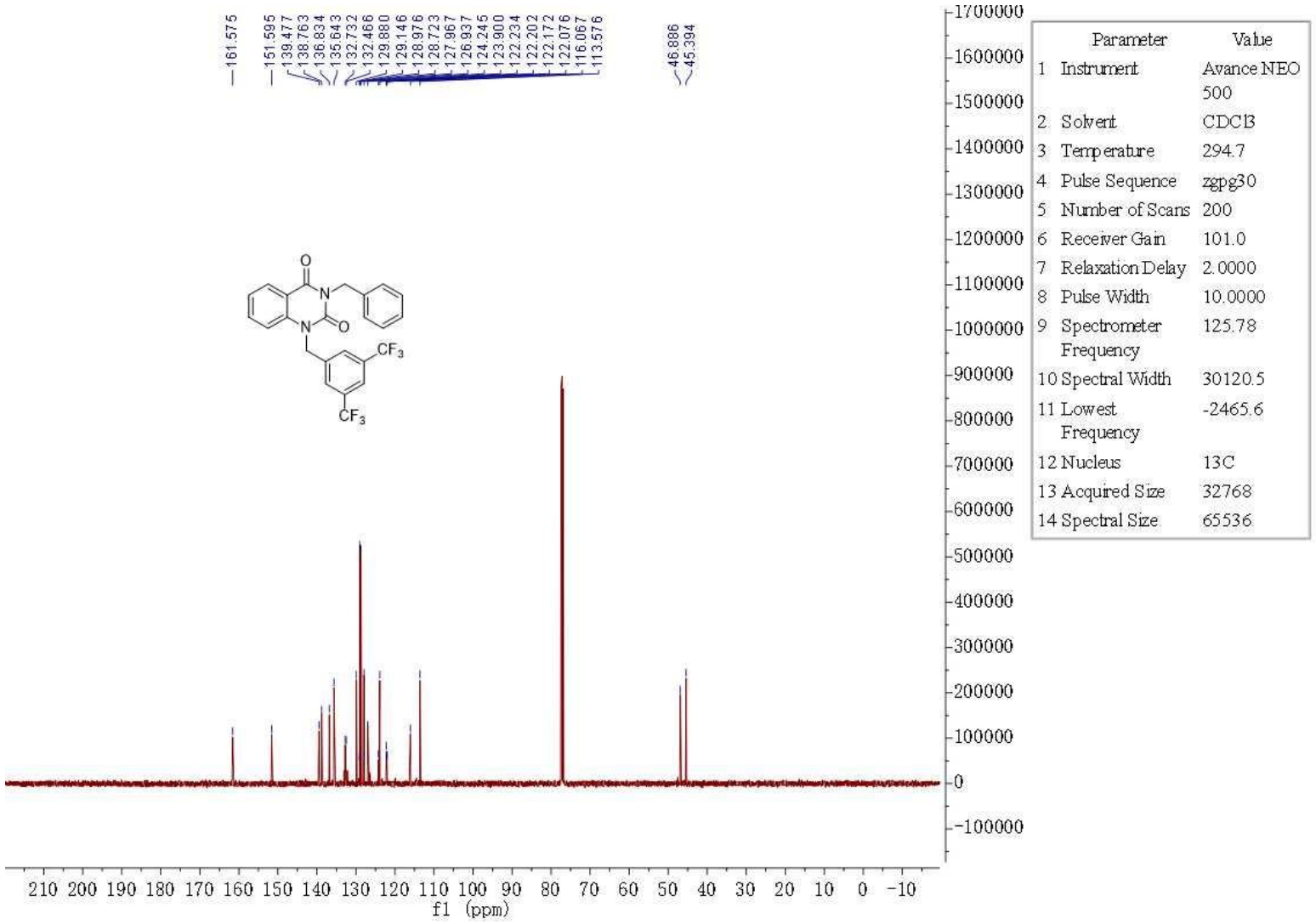


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.1
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2466.7
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-benzyl-1-(3,5-bis(trifluoromethyl)benzyl)quinazoline-2,4(1H,3H)-dione (3n)

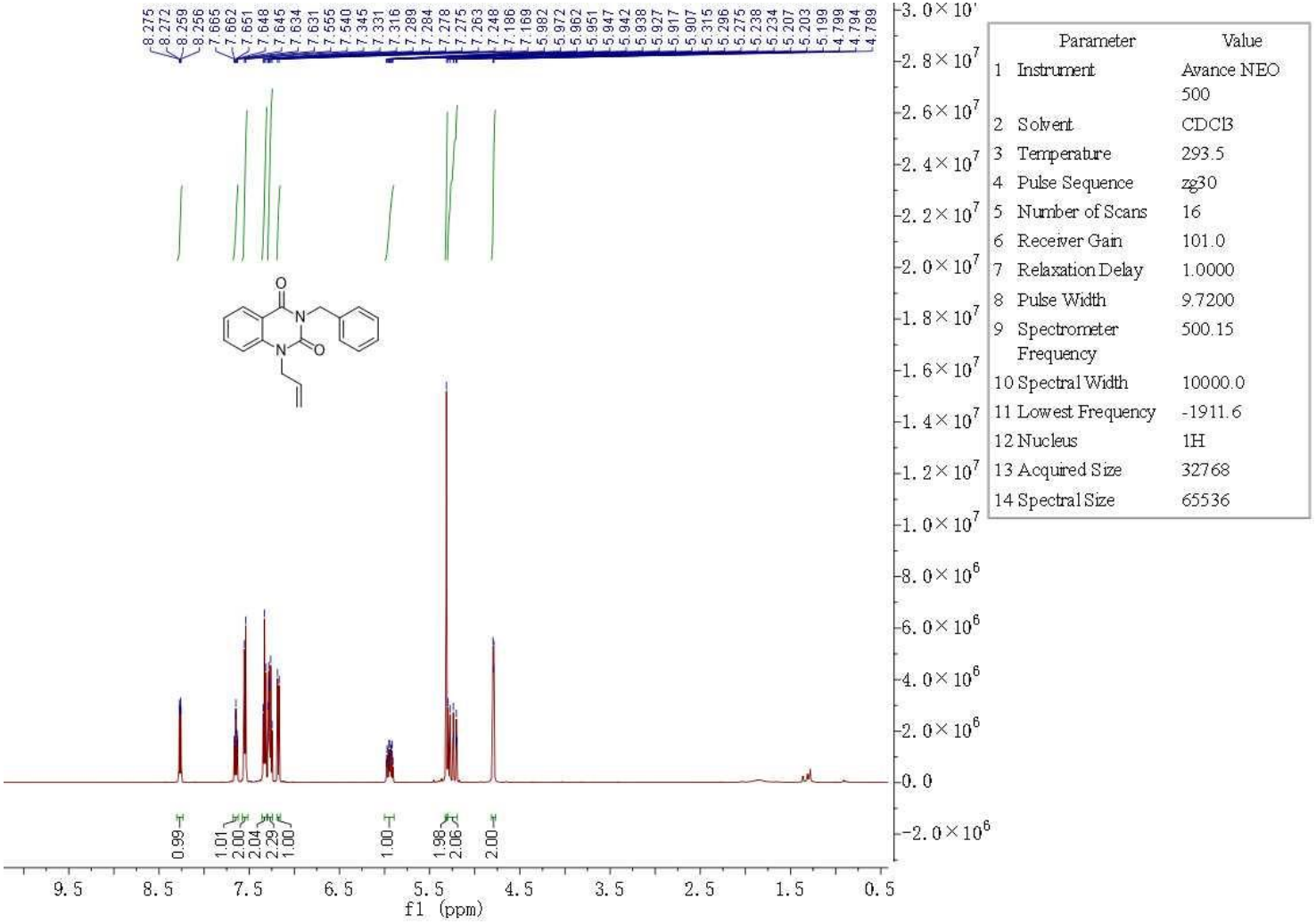


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.6
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

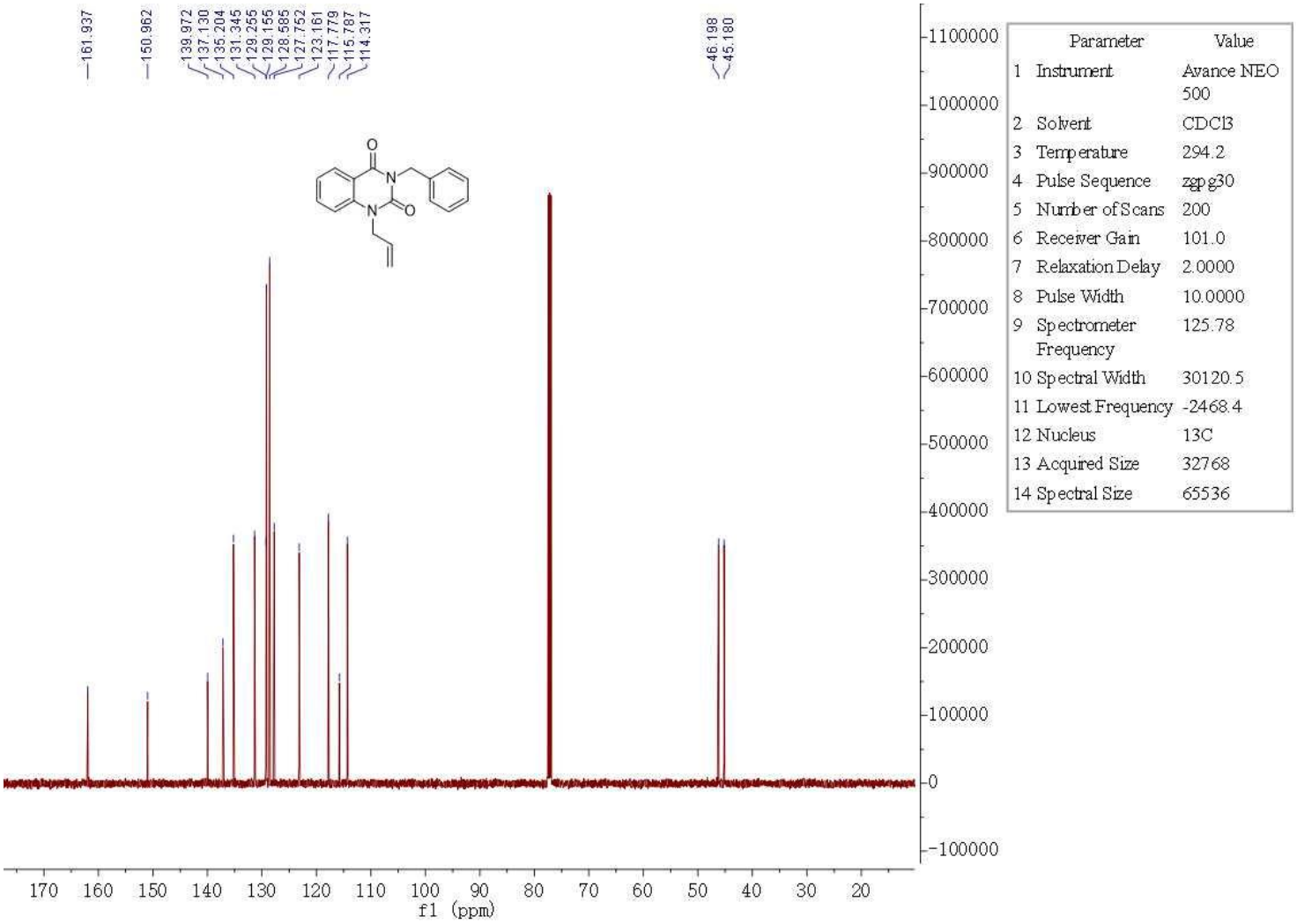


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.7
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2465.6
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1-allyl-3-benzylquinazoline-2,4(1H,3H)-dione (3o)

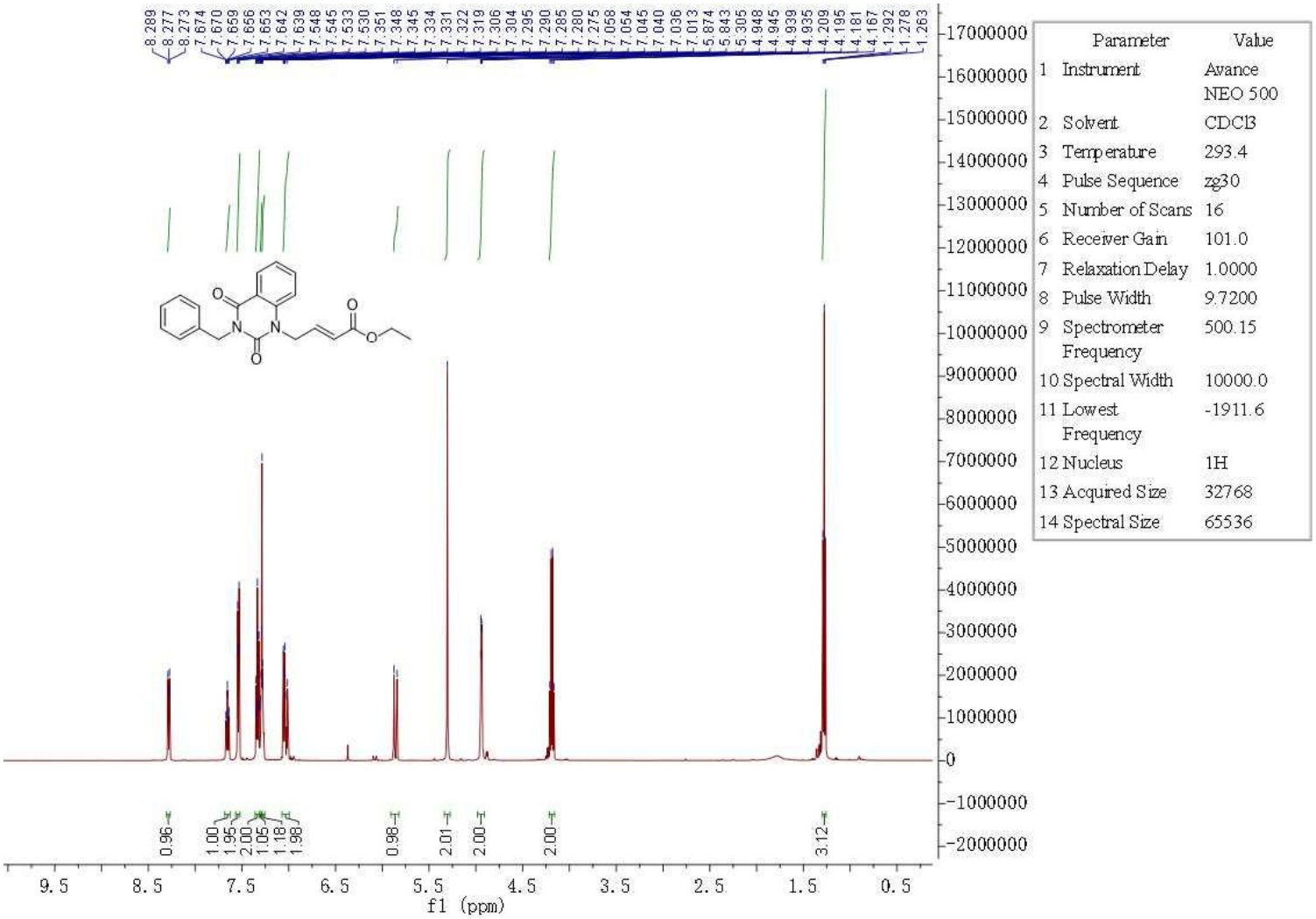


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.5
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

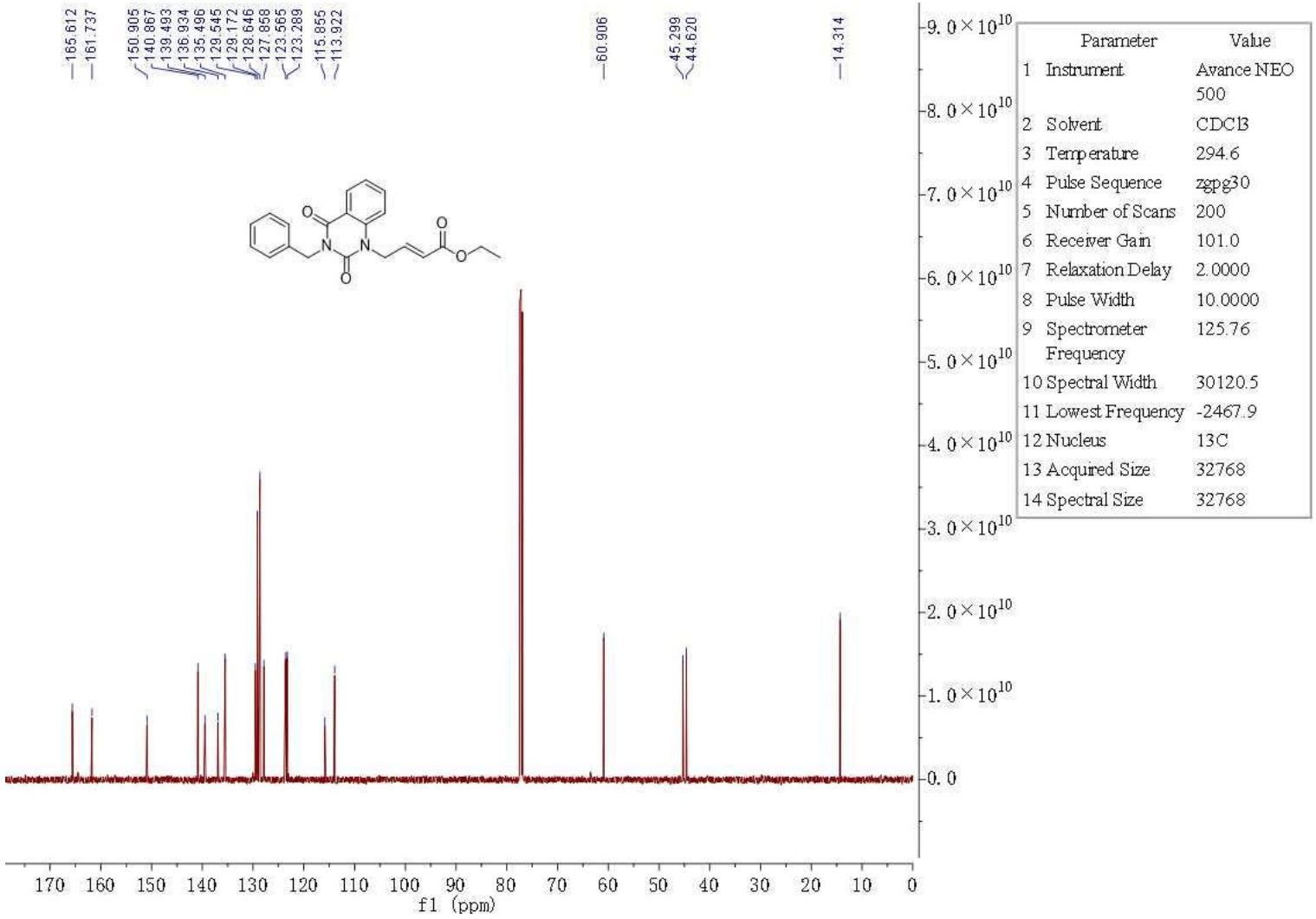


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.2
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2468.4
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

ethyl (E)-4-(3-benzyl-2,4-dioxo-3,4-dihydroquinazolin-1(2H)-yl)but-2-enoate (3p)

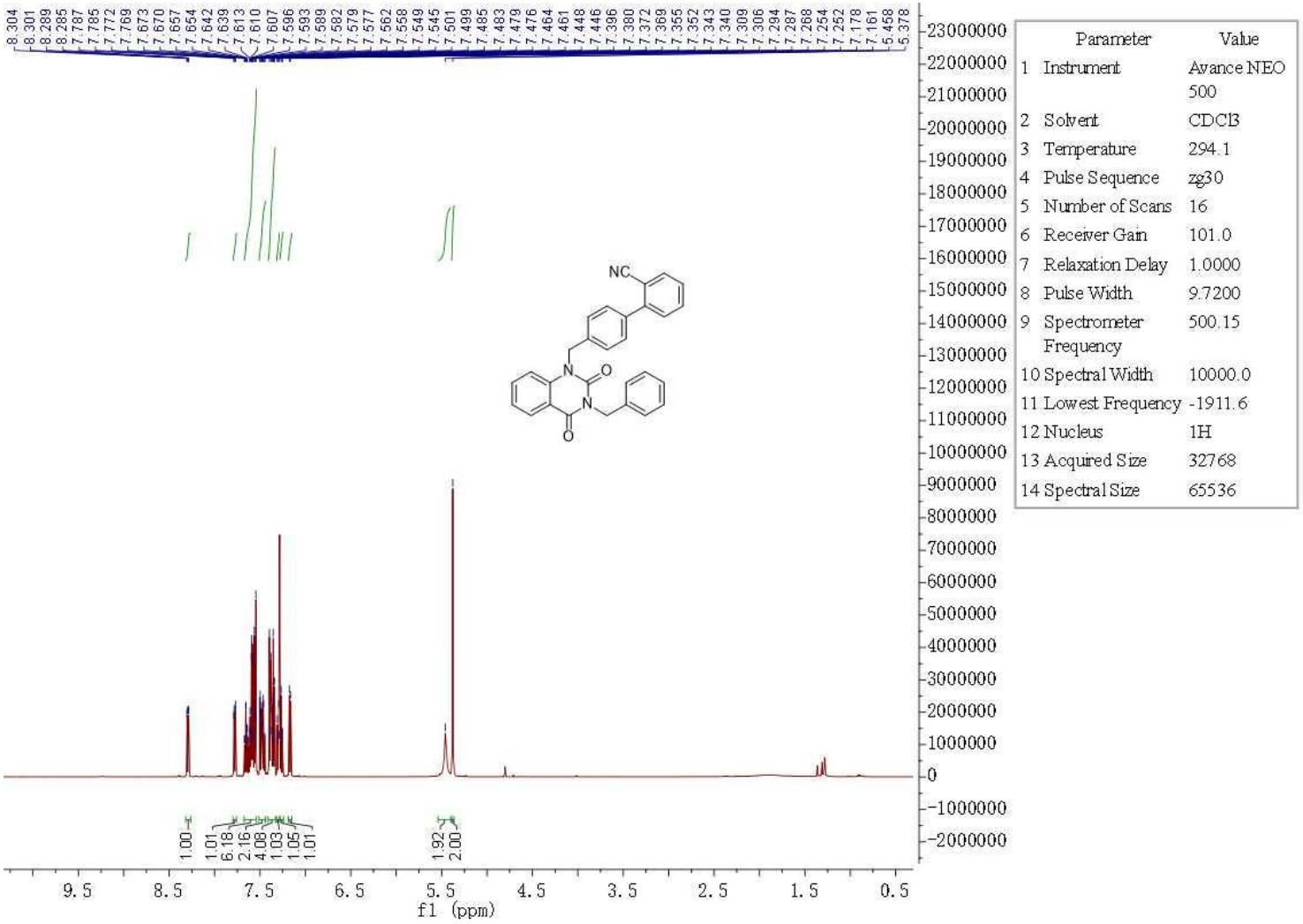


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.4
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

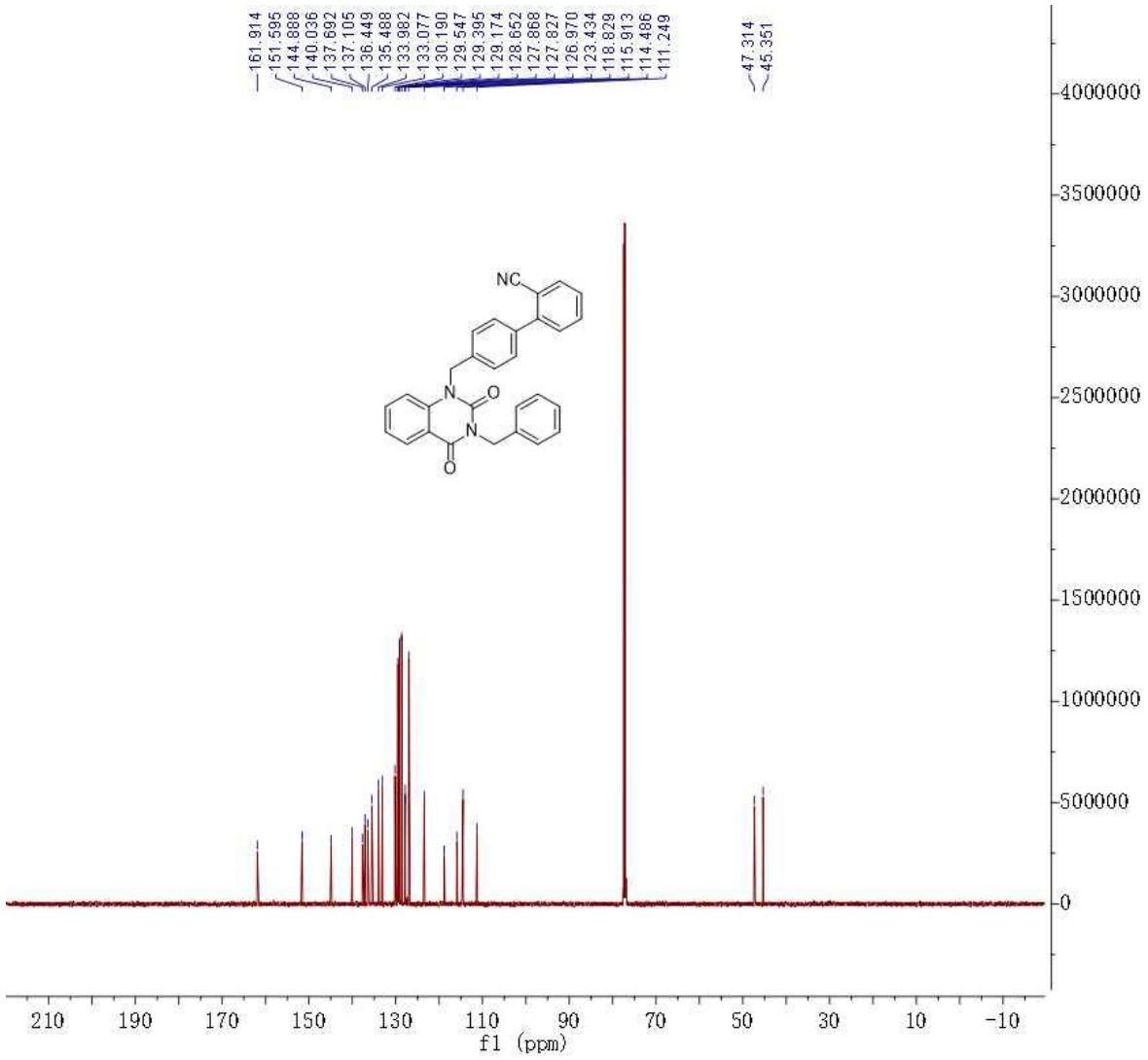


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.6
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.76
10	Spectral Width	30120.5
11	Lowest Frequency	-2467.9
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	32768

4'-((3-benzyl-2,4-dioxo-3,4-dihydroquinazolin-1(2H)-yl)methyl)-[1,1'-biphenyl]-2-carbonitrile (3q)

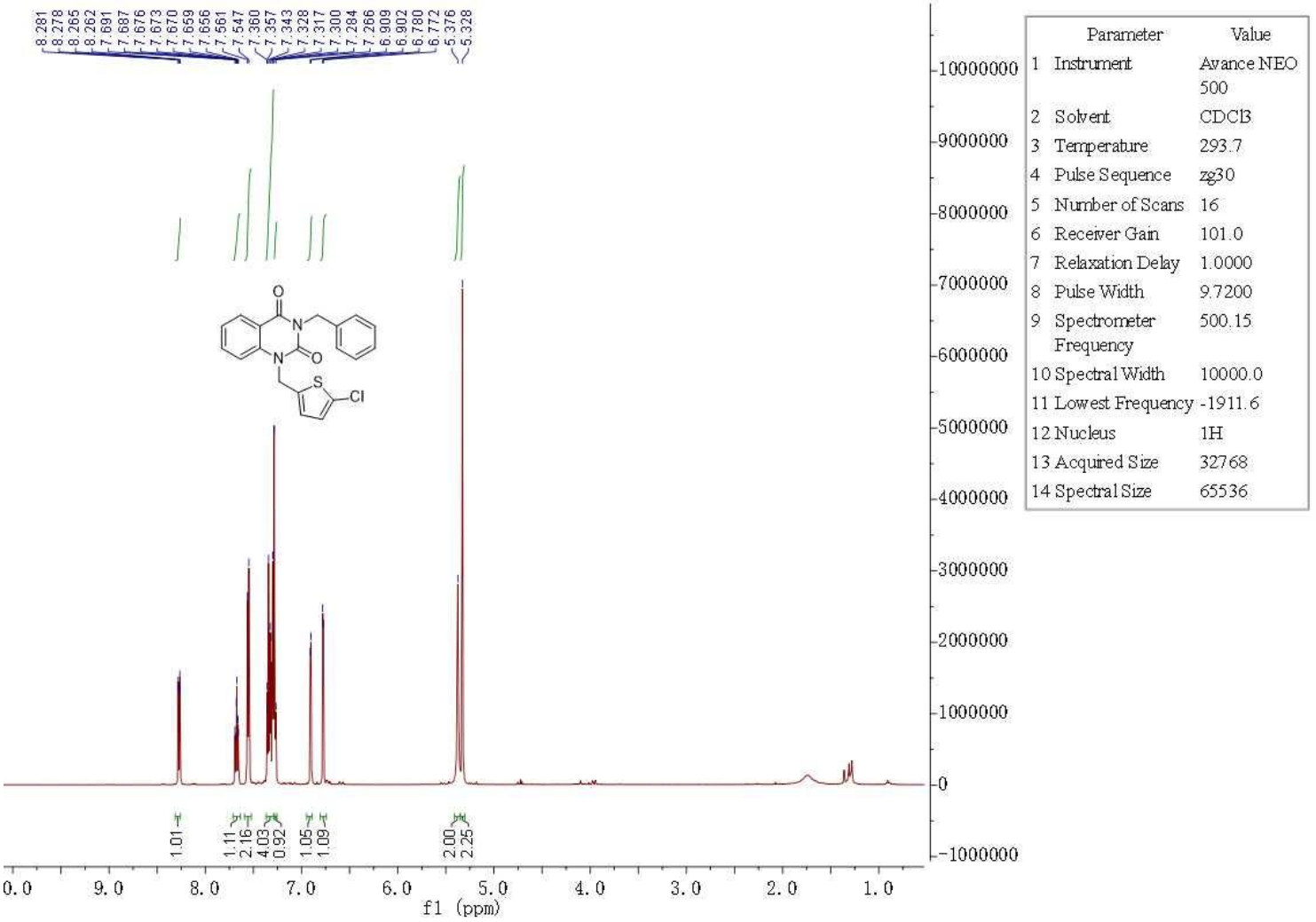


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.1
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

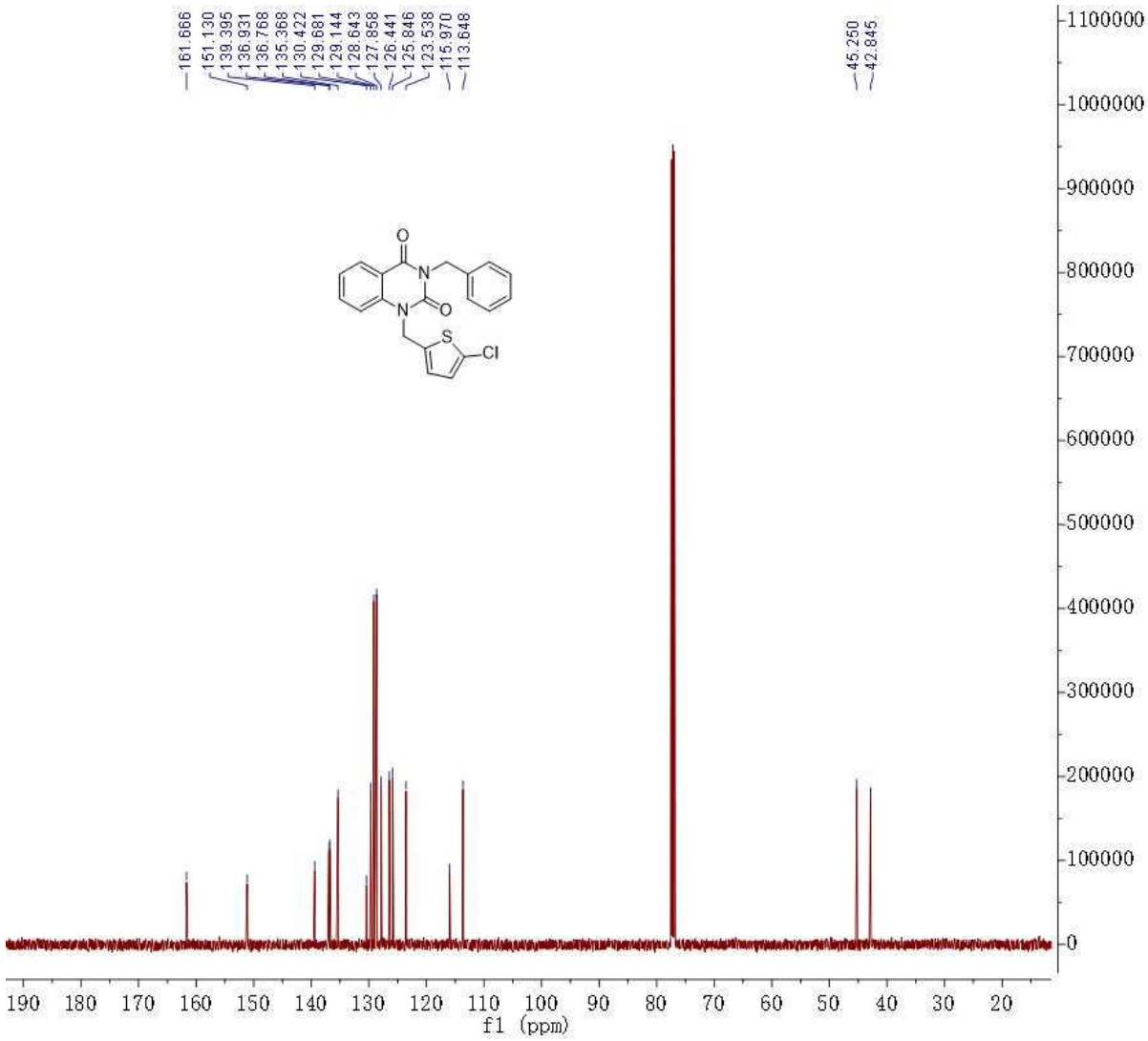


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.7
4	Pulse Sequence	zgpg30
5	Number of Scans	600
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2467.4
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-benzyl-1-((5-chlorothiophen-2-yl)methyl)quinazoline-2,4(1H,3H)-dione (3r)

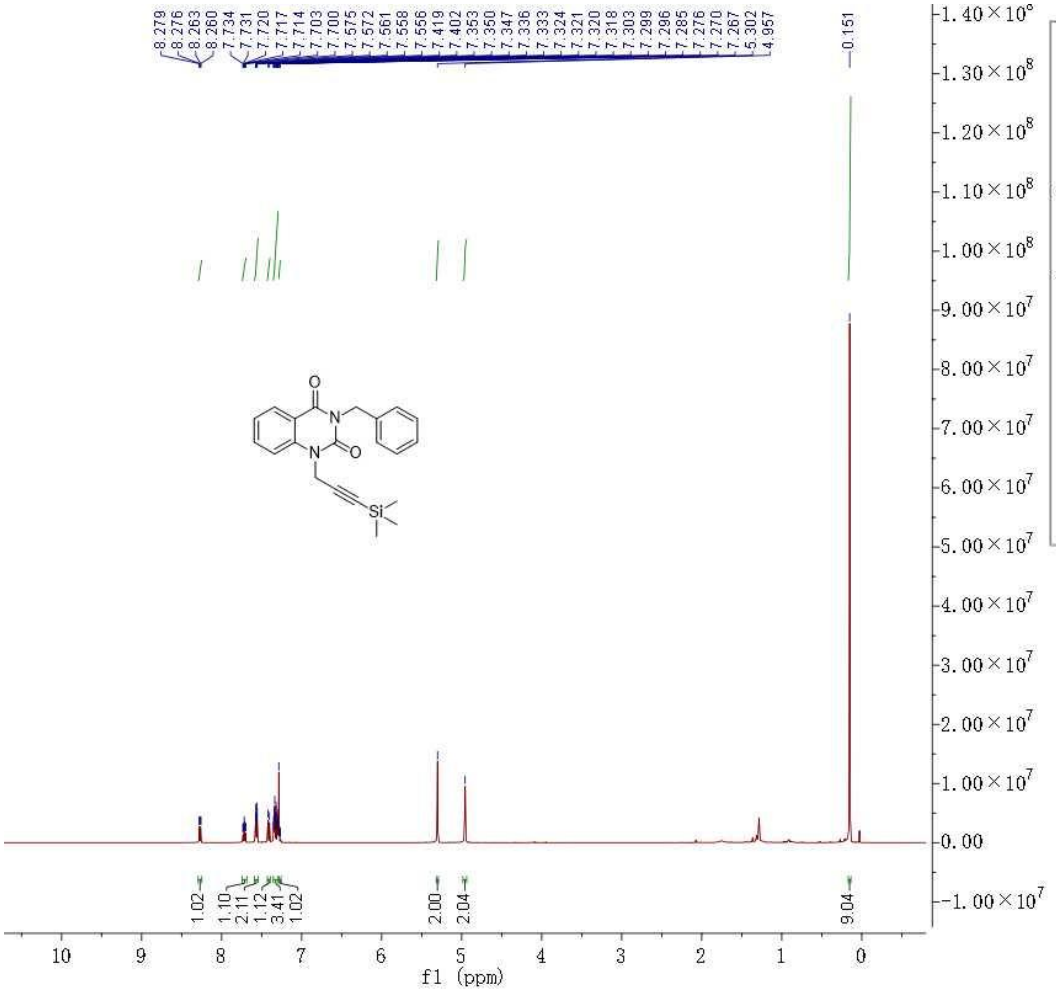


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.7
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

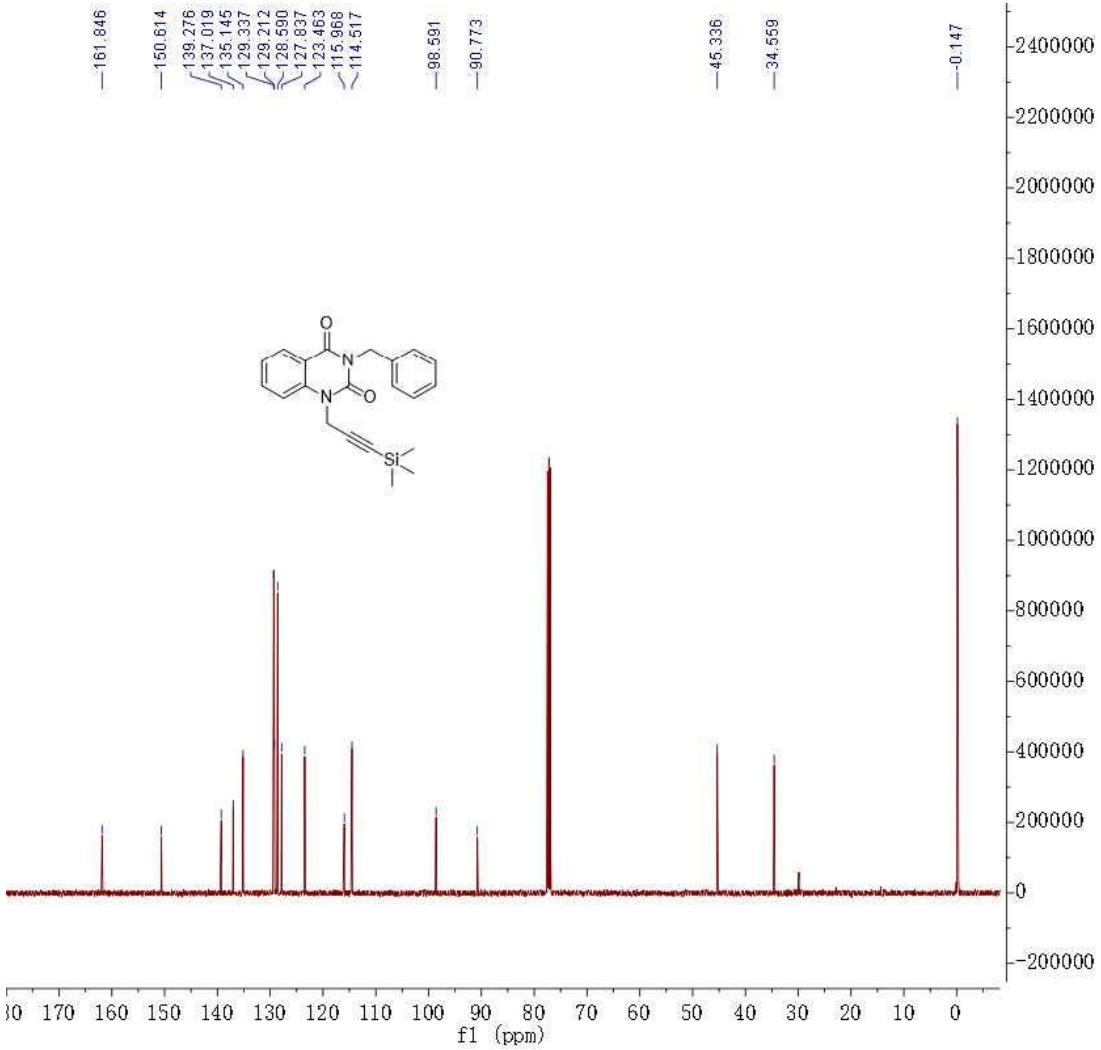


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.1
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2466.6
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-benzyl-1-(3-(trimethylsilyl)prop-2-yn-1-yl)quinazoline-2,4(1H,3H)-dione (3t)

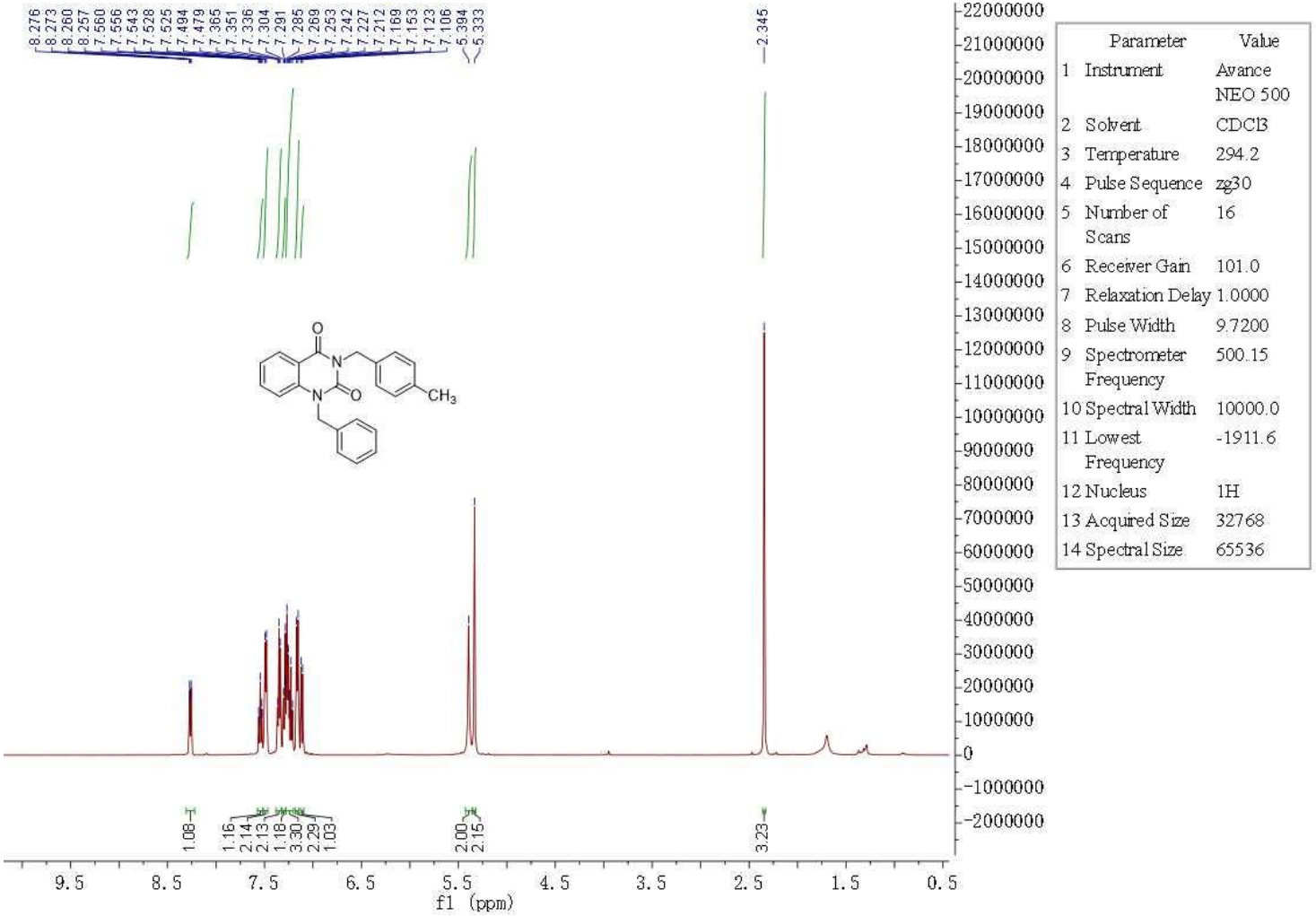


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	296.1
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

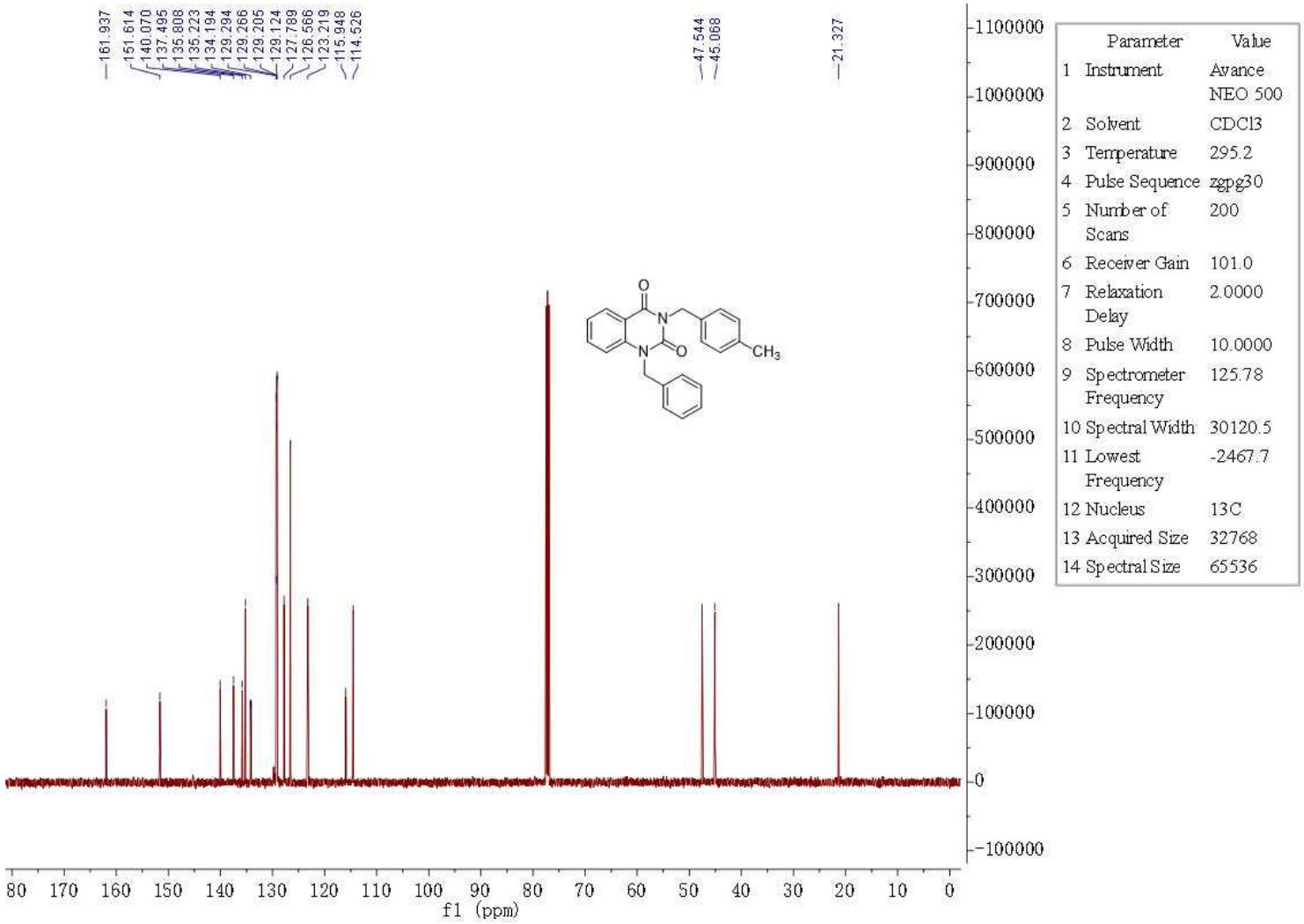


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	296.1
4	Pulse Sequence	zgpg30
5	Number of Scans	300
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2466.4
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1-benzyl-3-(4-methylbenzyl)quinazoline-2,4(1H,3H)-dione (5a)

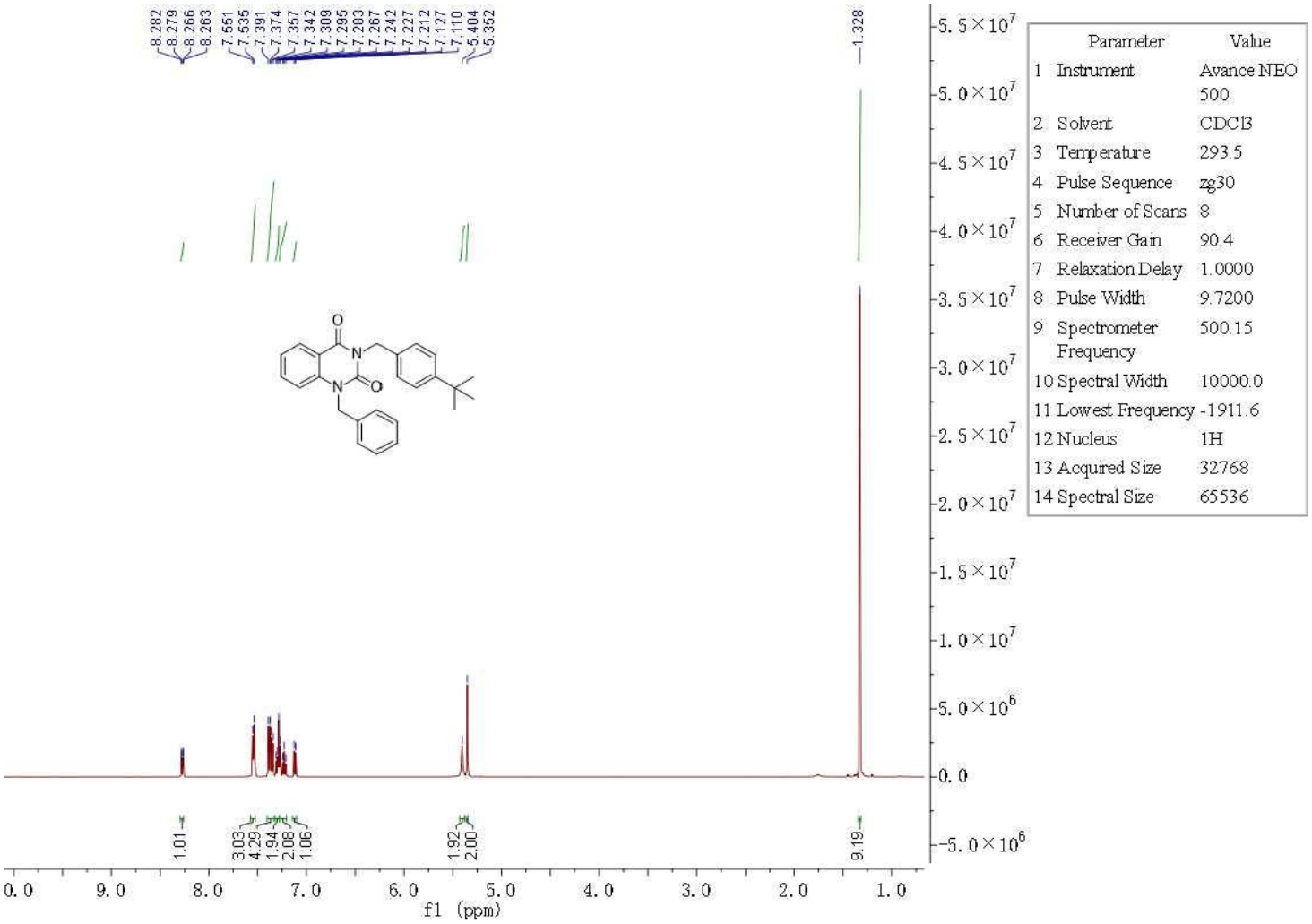


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.2
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

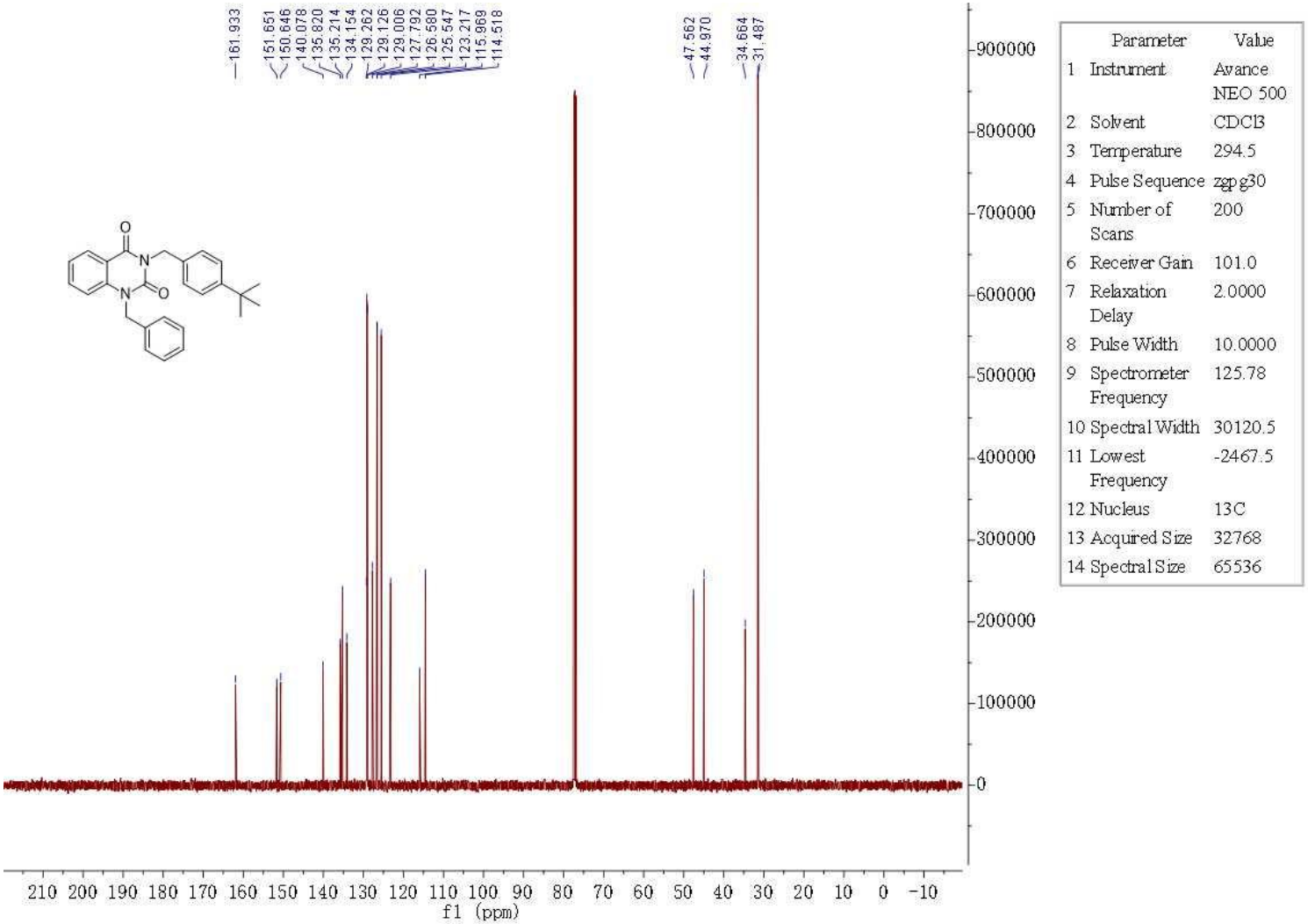


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	295.2
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2467.7
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1-benzyl-3-(4-(tert-butyl)benzyl)quinazoline-2,4(1H,3H)-dione (5b)

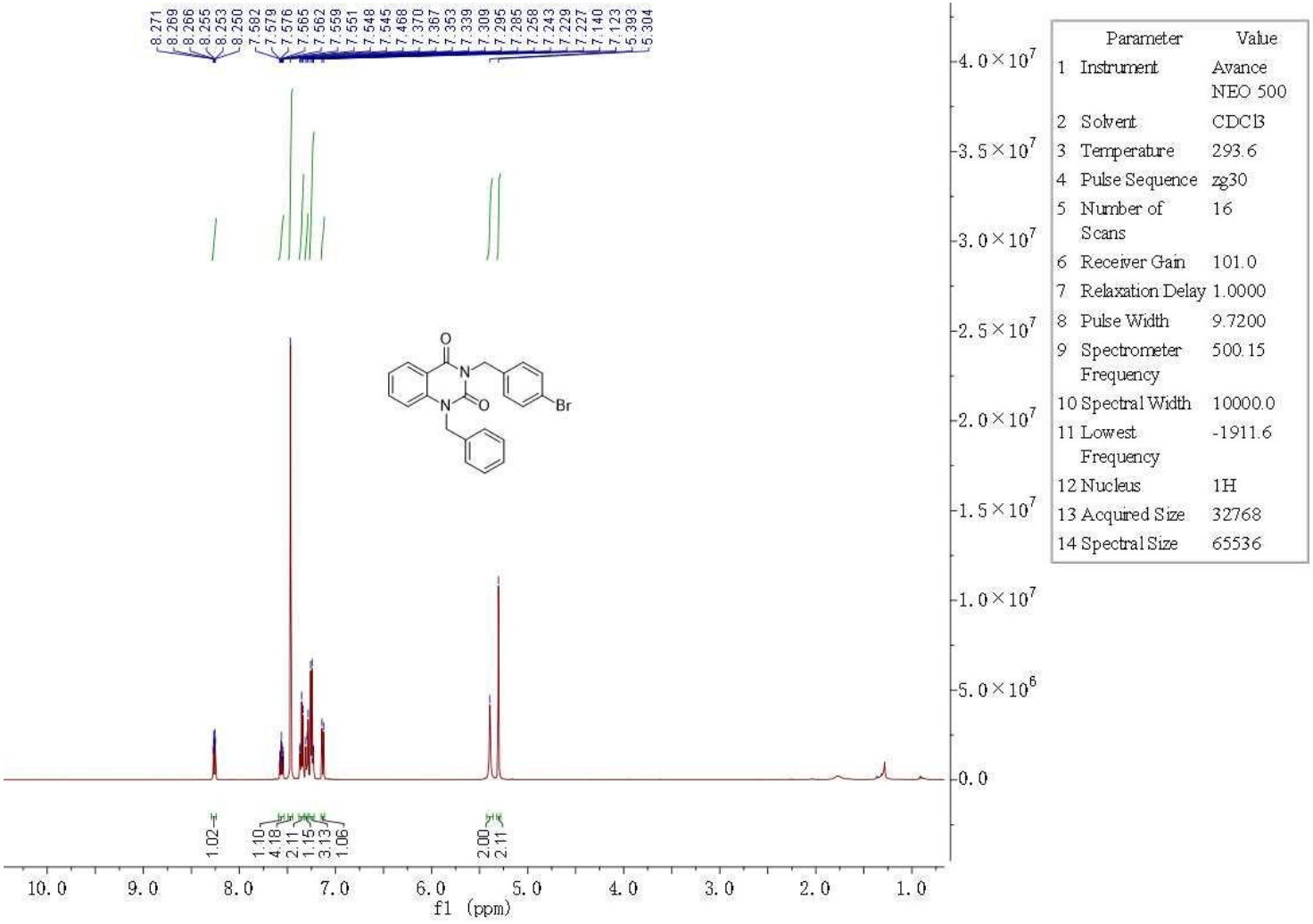


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.5
4	Pulse Sequence	zg30
5	Number of Scans	8
6	Receiver Gain	90.4
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

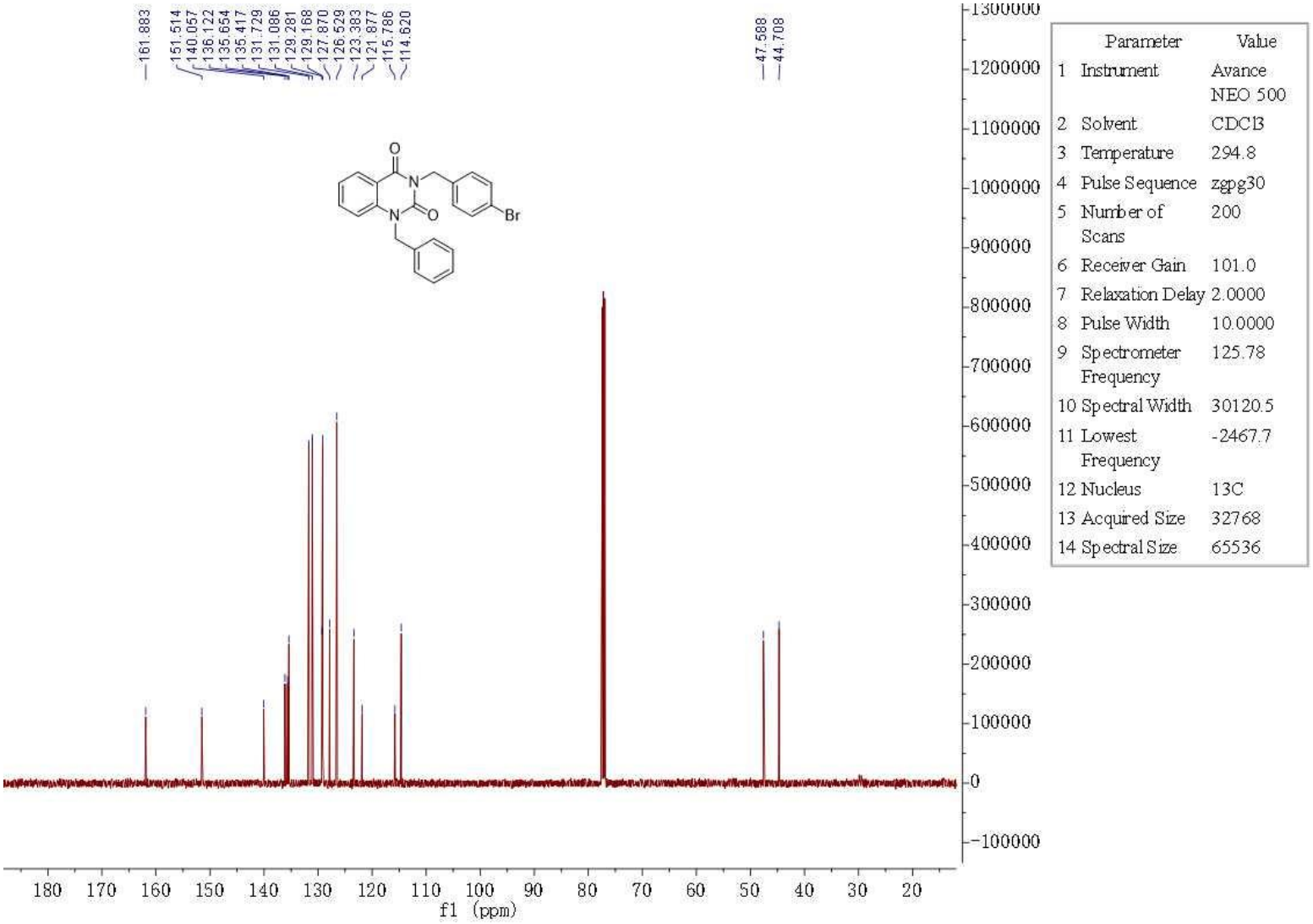


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.5
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2467.5
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1-benzyl-3-(4-bromobenzyl)quinazoline-2,4(1H,3H)-dione (5c)

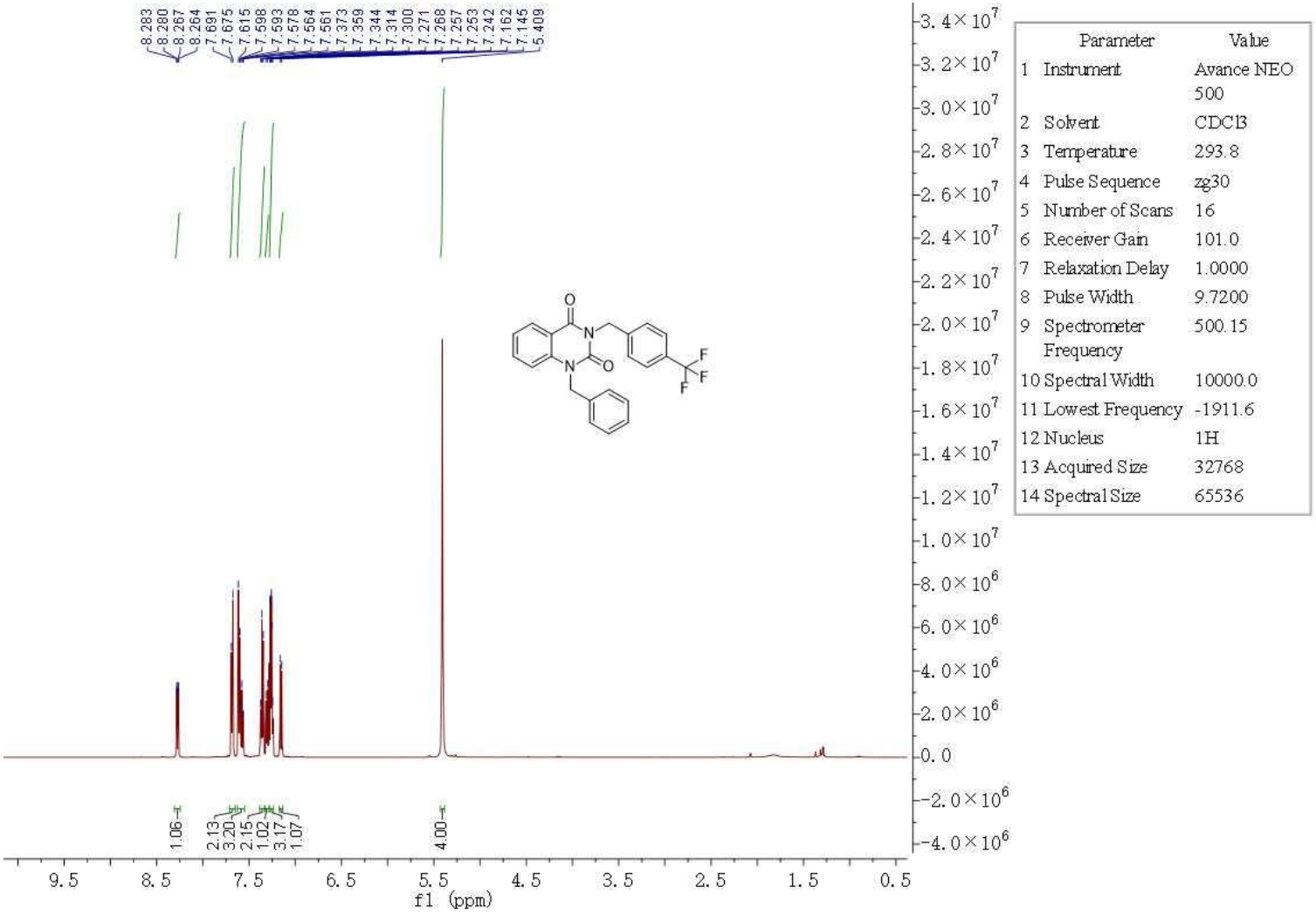


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.6
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

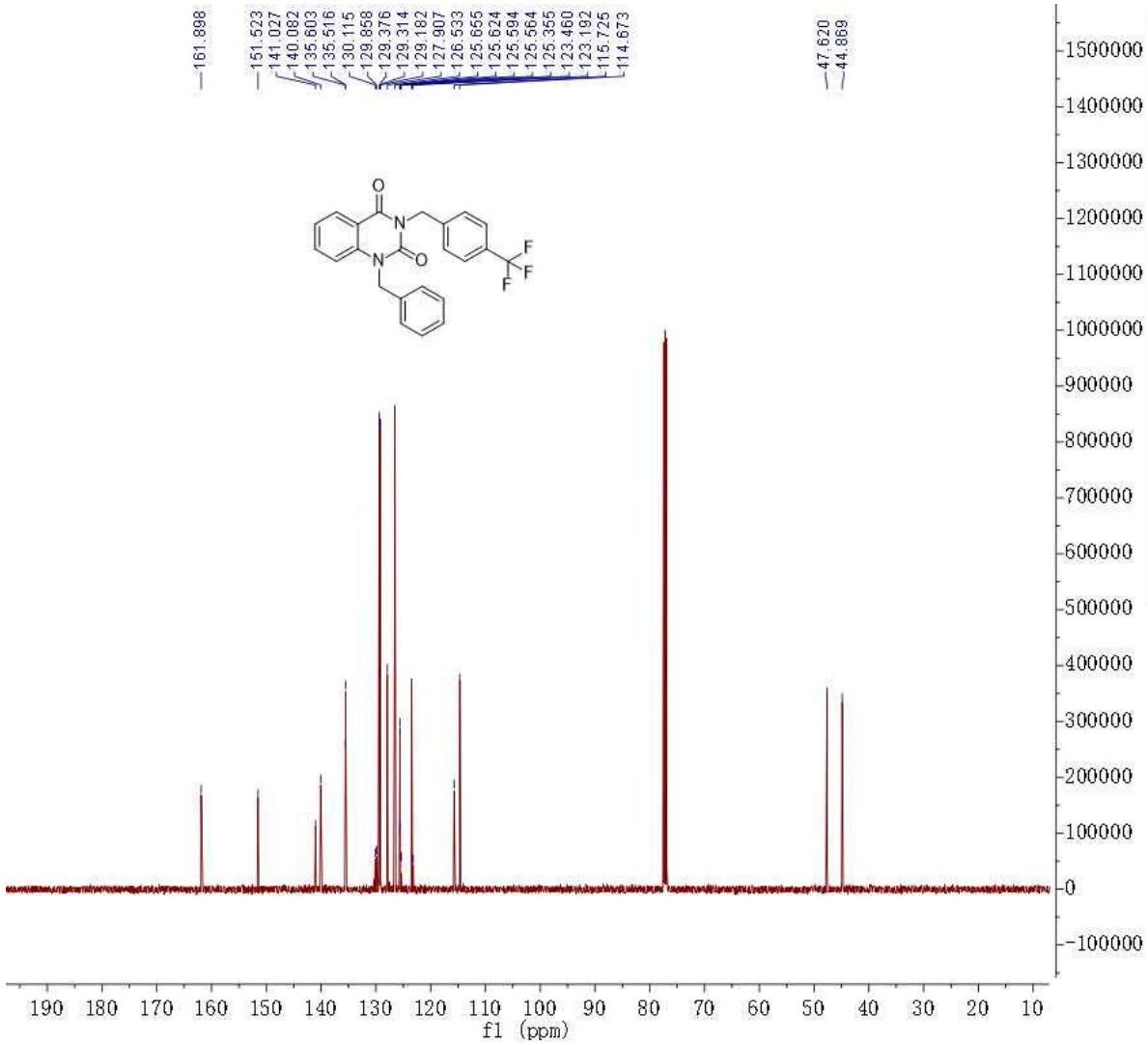


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.8
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2467.7
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1-benzyl-3-(4-(trifluoromethyl)benzyl)quinazoline-2,4(1H,3H)-dione (5d)

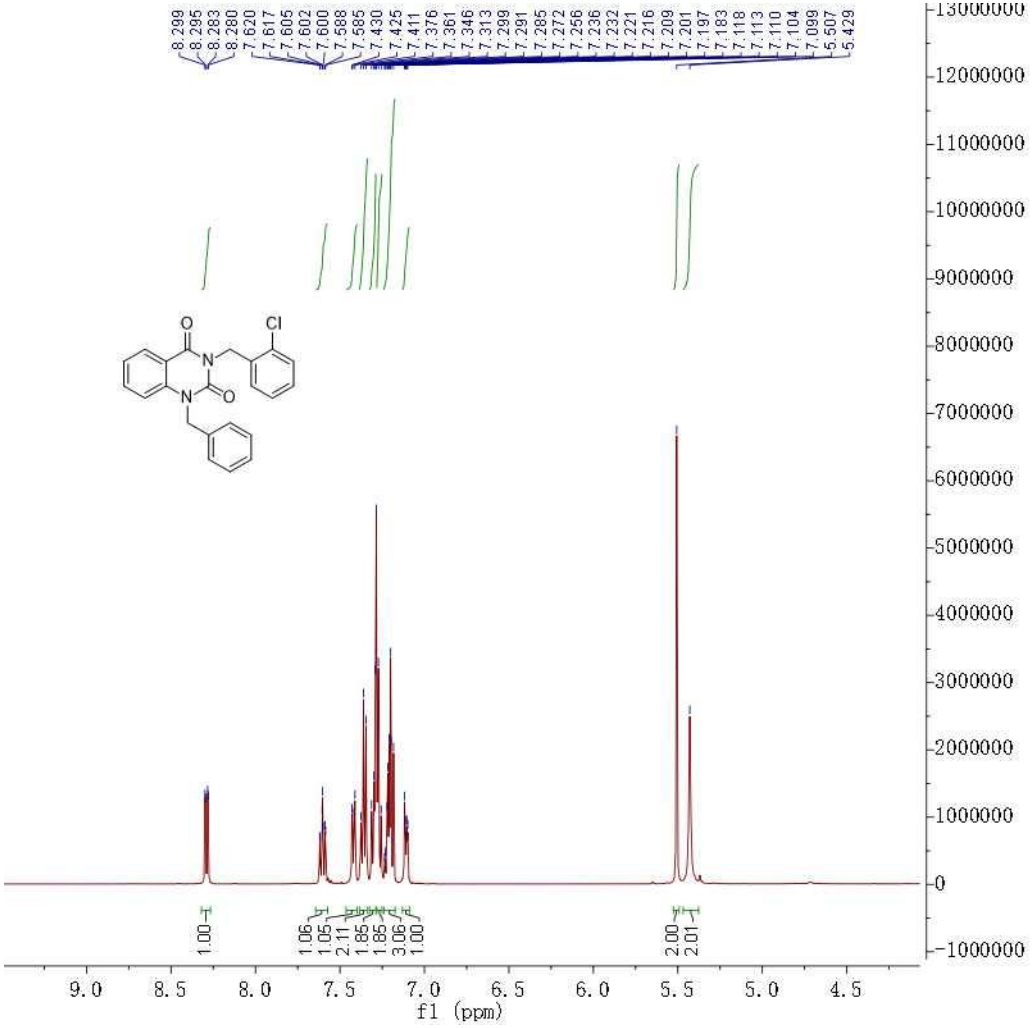


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.8
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

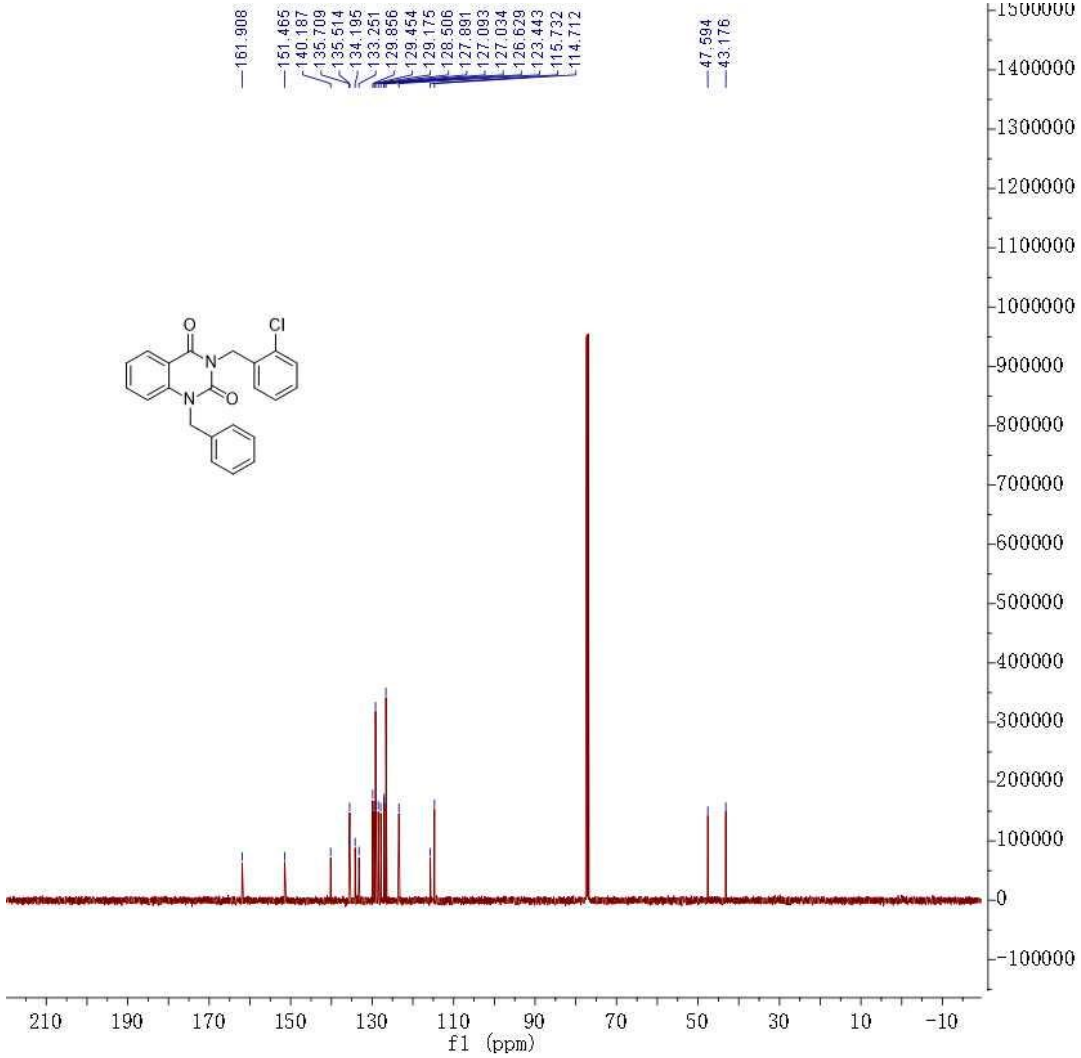


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.4
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2467.7
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1-benzyl-3-(2-chlorobenzyl)quinazoline-2,4(1H,3H)-dione (5e)

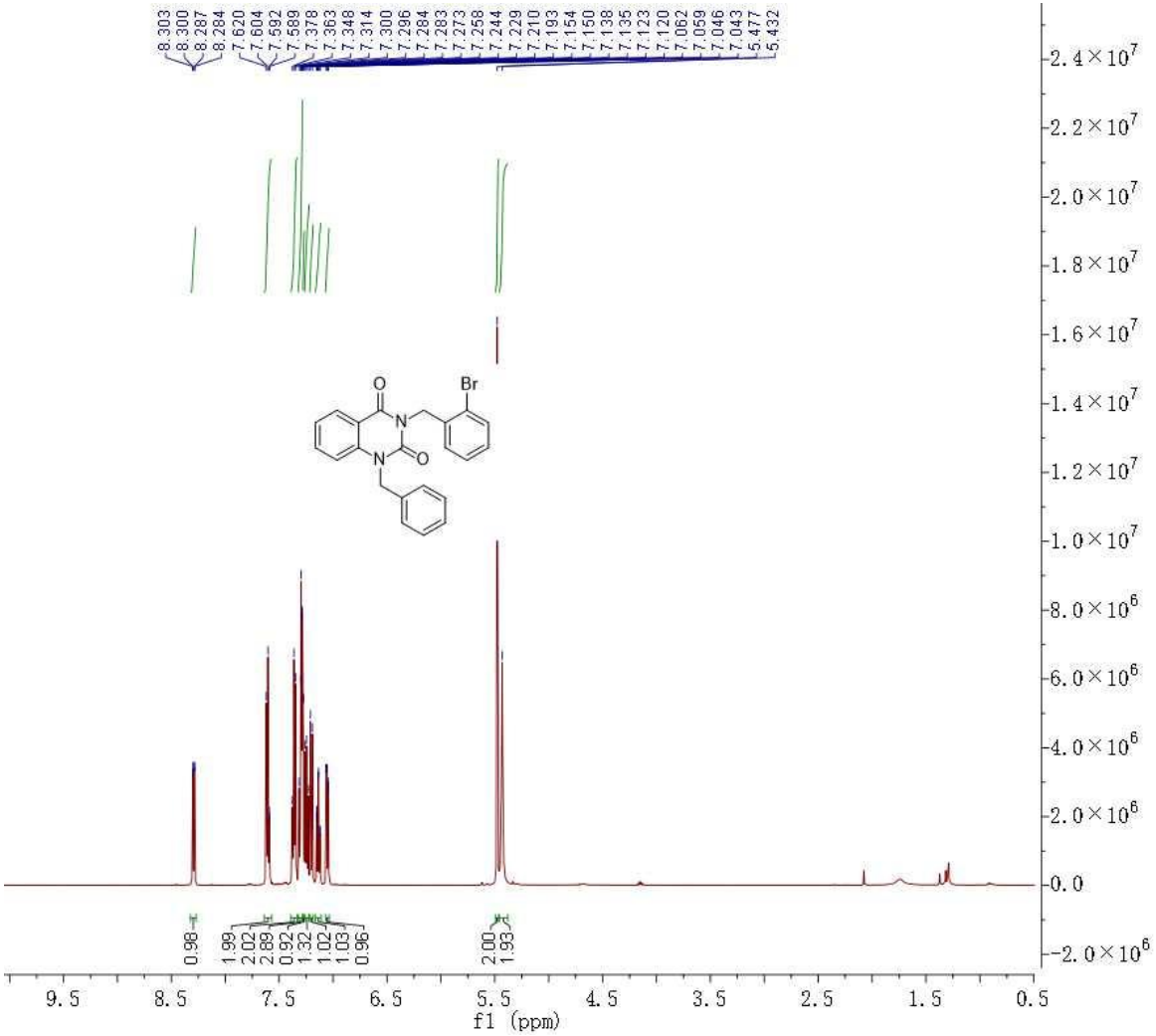


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.8
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

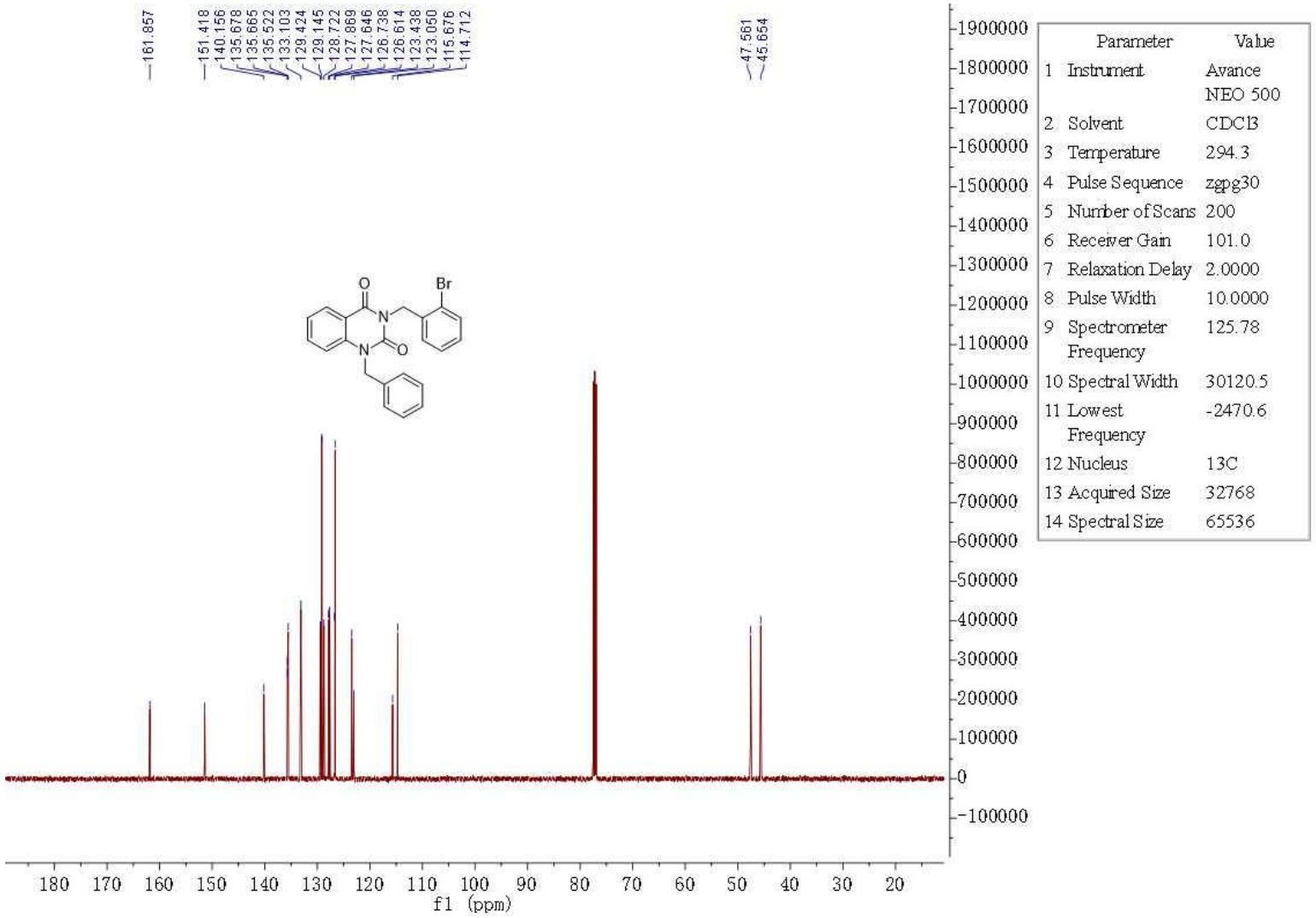


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.5
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2484.0
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1-benzyl-3-(2-bromobenzyl)quinazoline-2,4(1H,3H)-dione (5f)

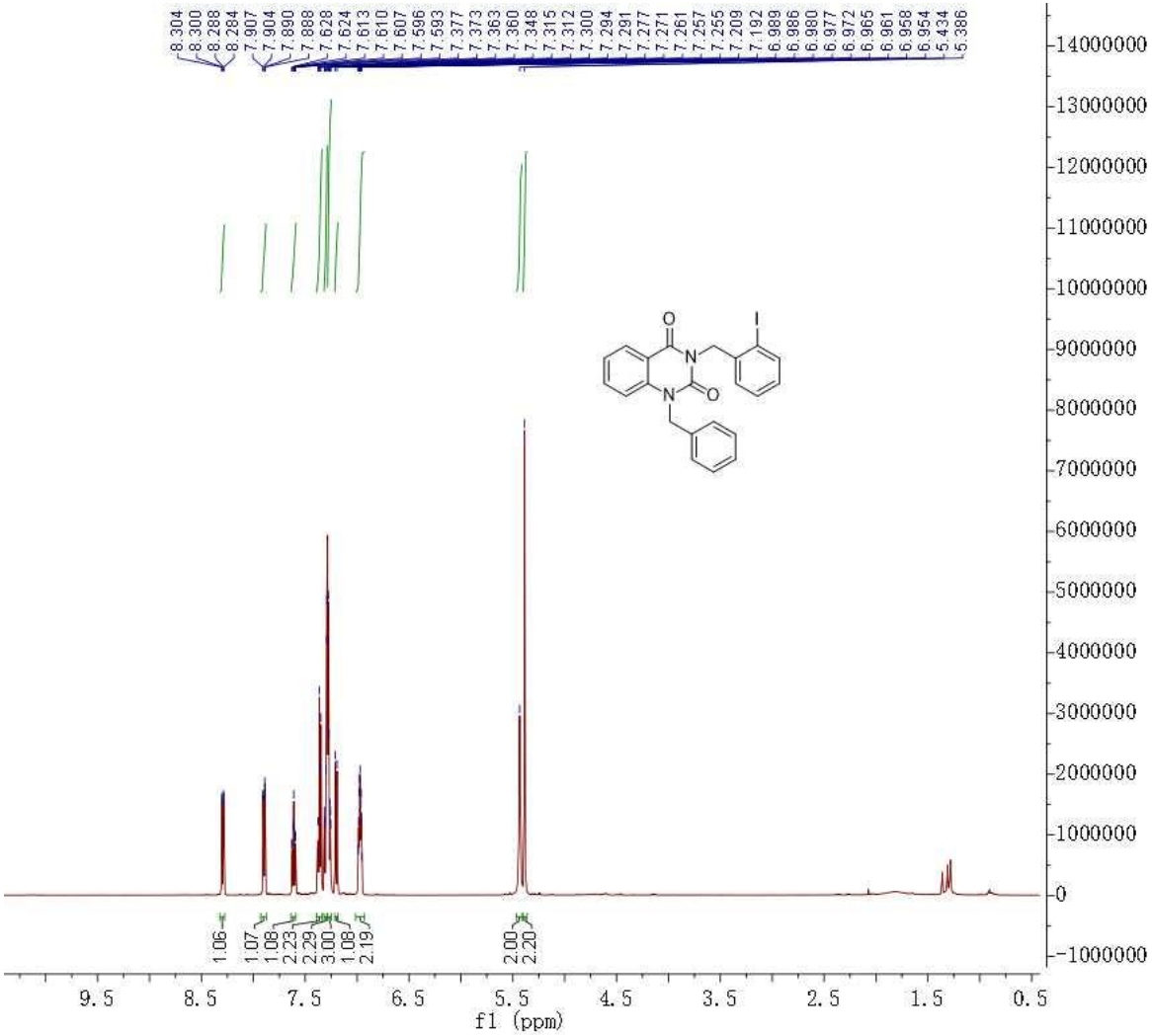


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.6
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

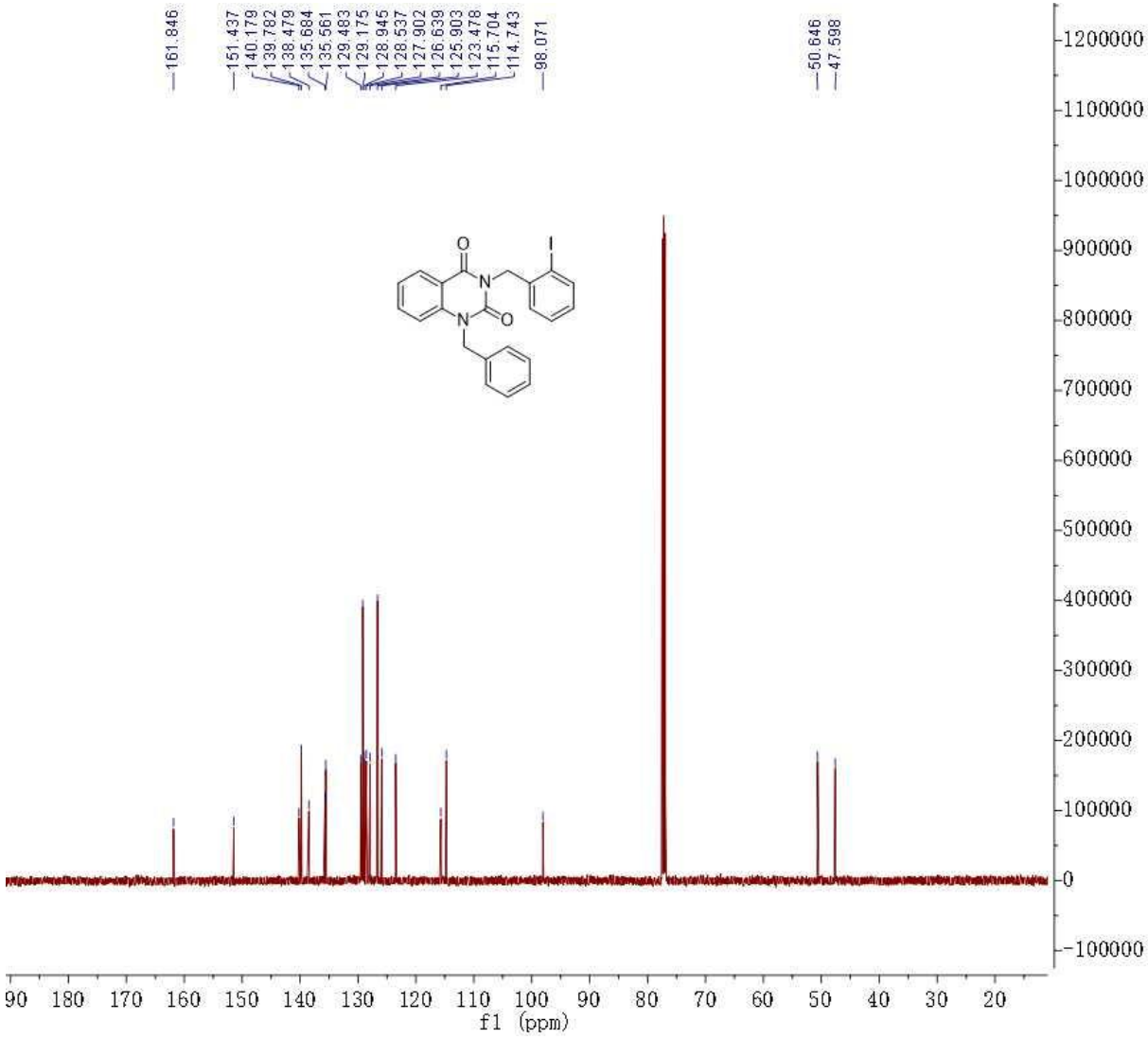


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.3
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2470.6
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1-benzyl-3-(2-iodobenzyl)quinazoline-2,4(1H,3H)-dione (5g)

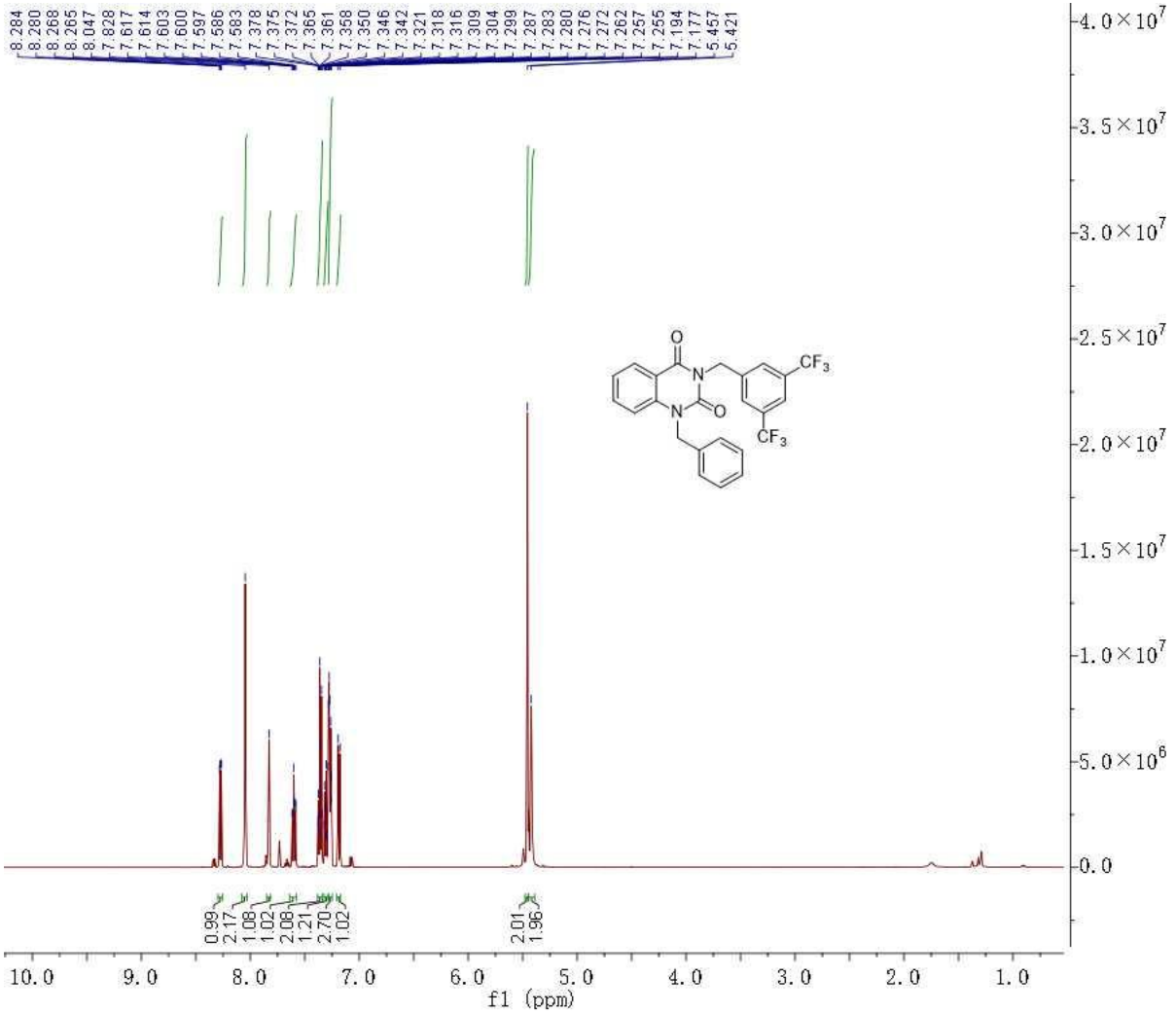


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.5
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

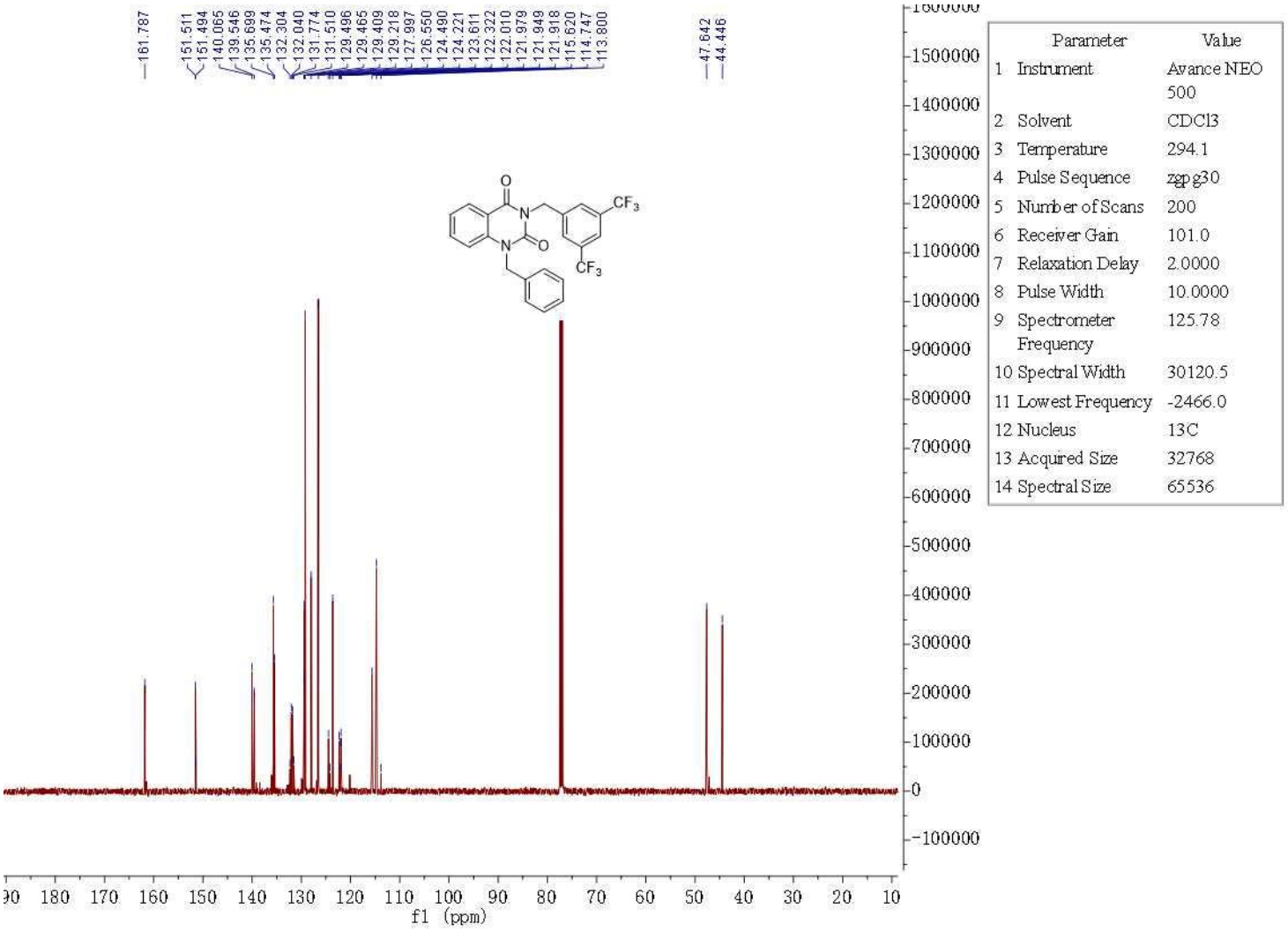


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.3
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2466.9
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1-benzyl-3-(3,5-bis(trifluoromethyl)benzyl)quinazoline-2,4(1H,3H)-dione (5h)

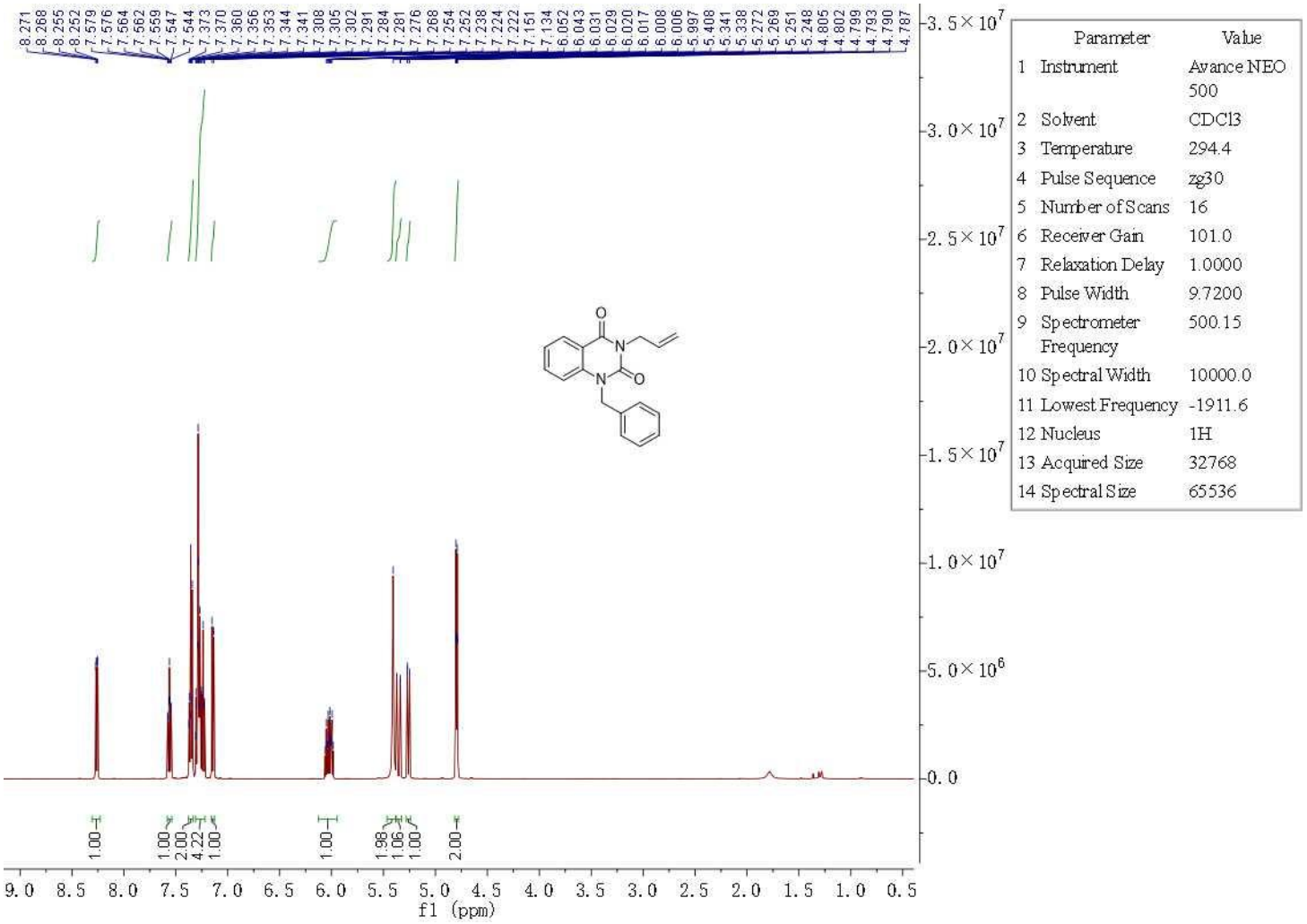


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.6
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

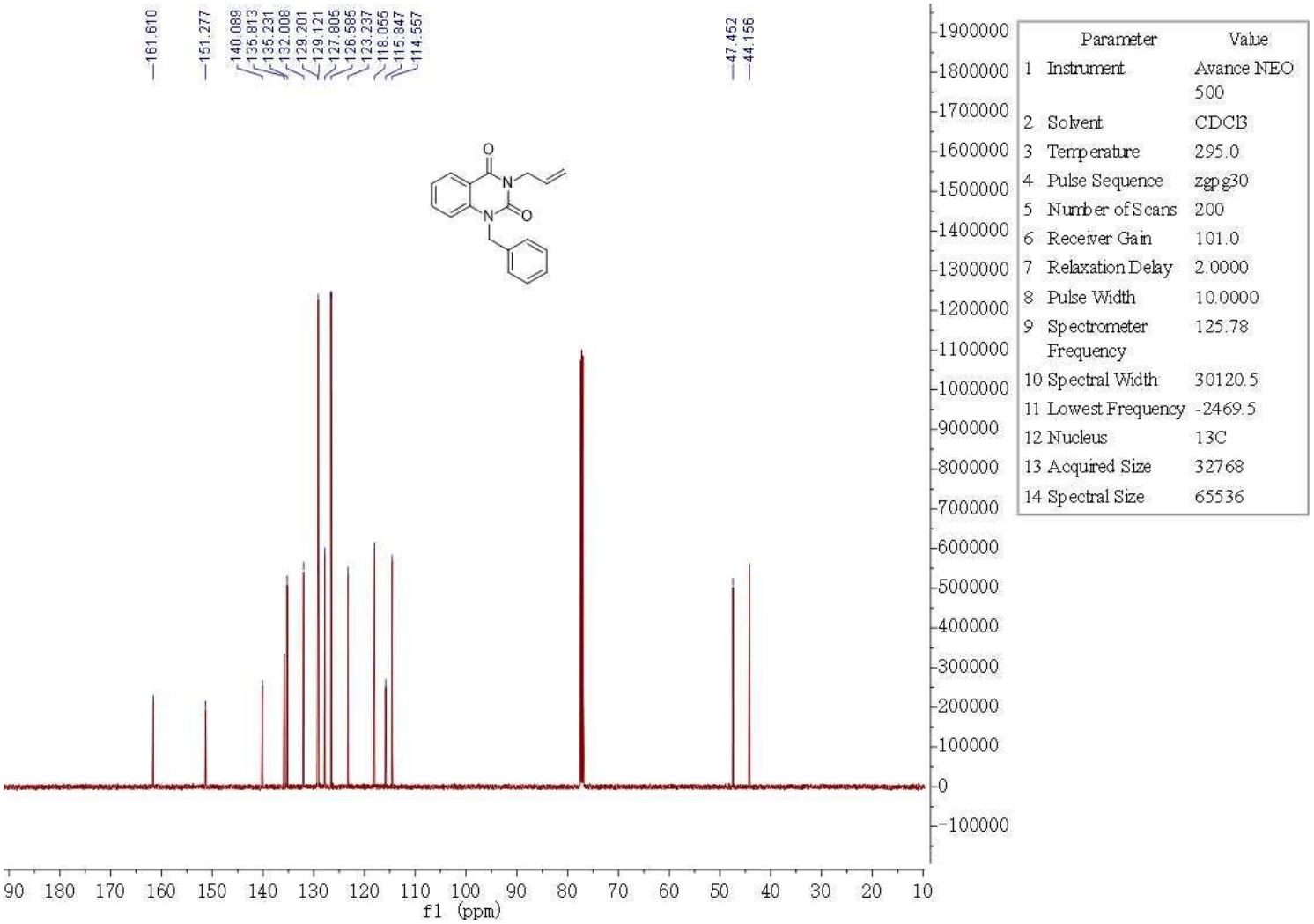


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.1
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2466.0
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-allyl-1-benzylquinazoline-2,4(1H,3H)-dione (5i)

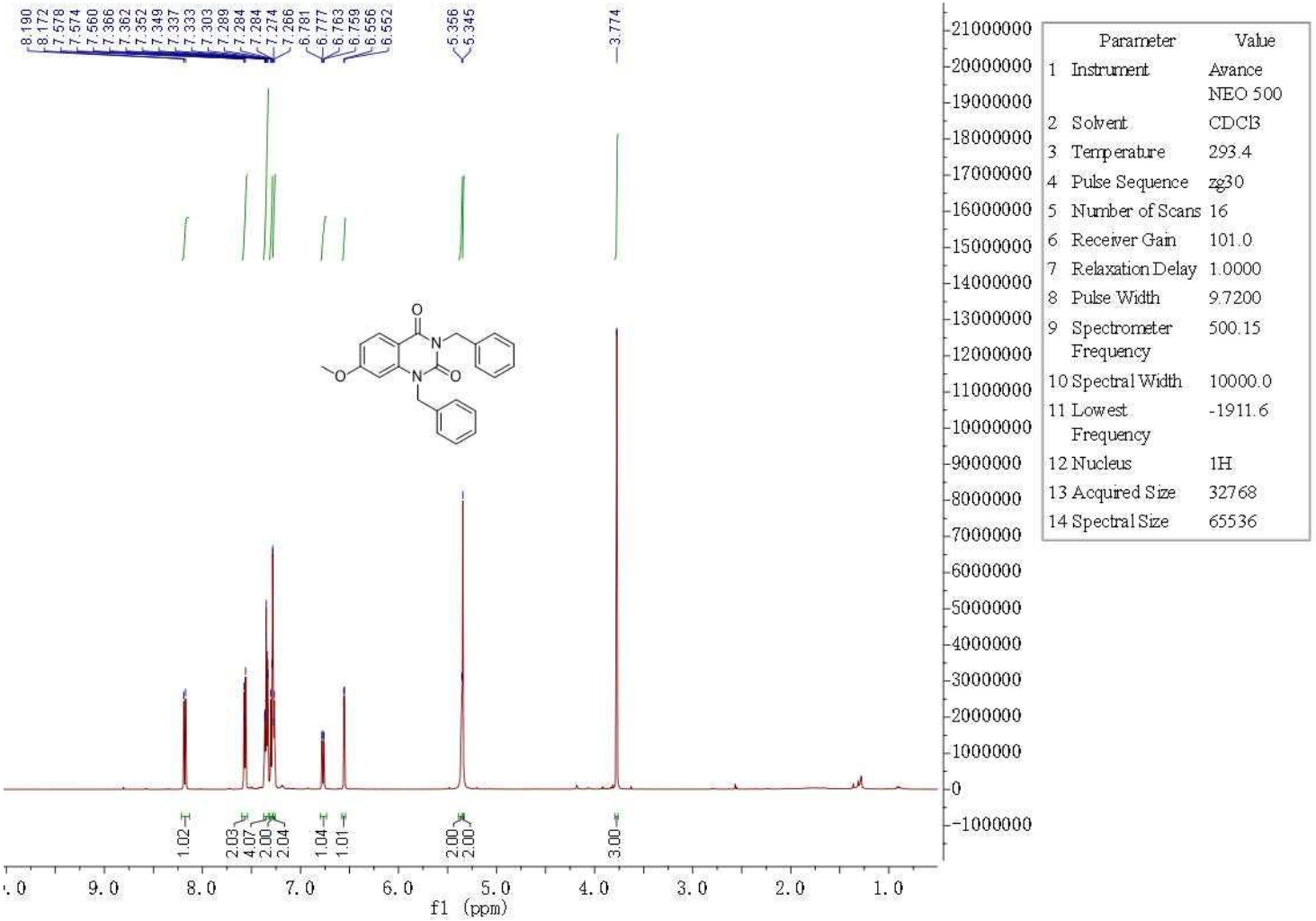


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.4
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

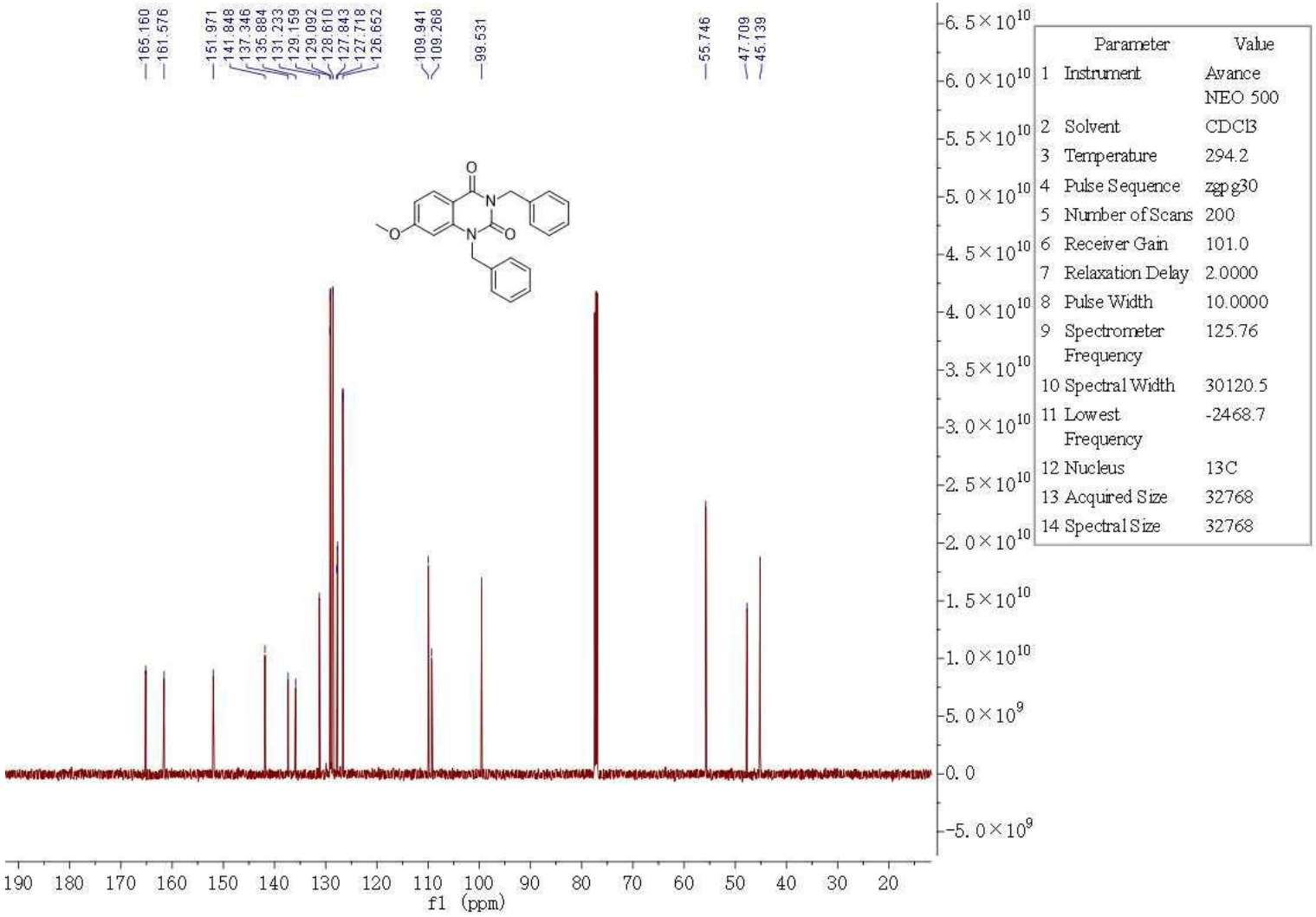


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	295.0
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2469.5
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1,3-dibenzyl-7-methoxyquinazoline-2,4(1H,3H)-dione (5j)

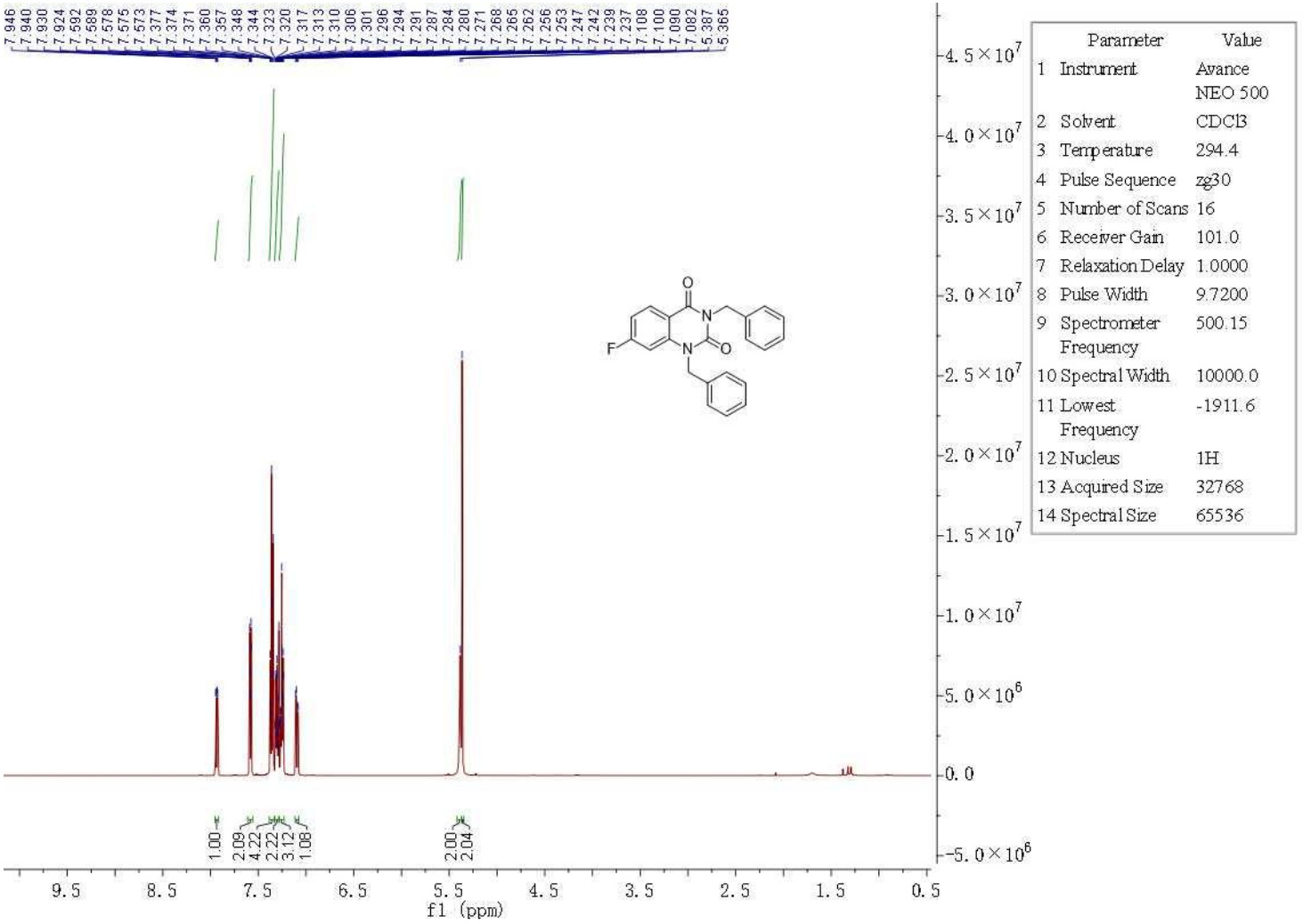


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.4
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

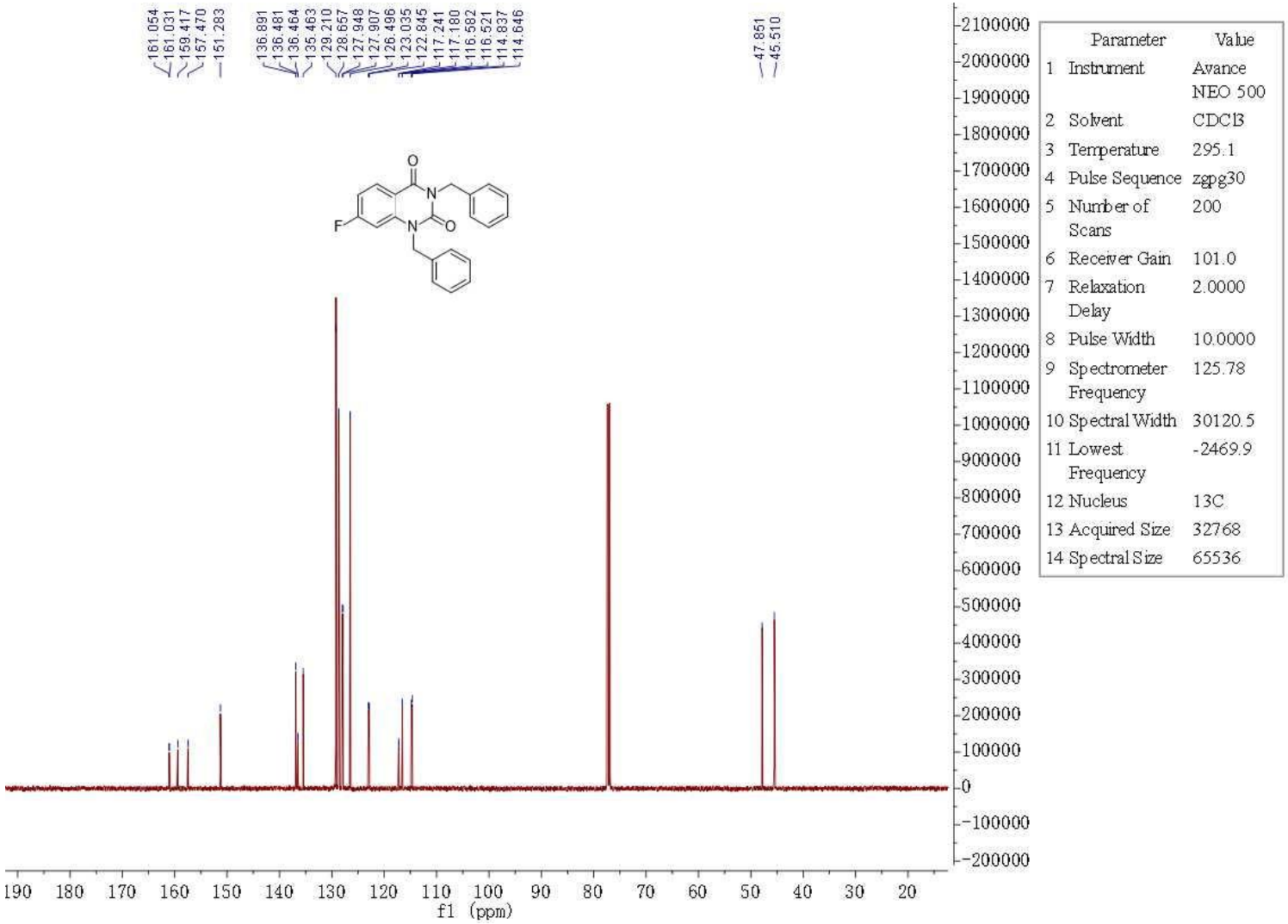


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.2
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.76
10	Spectral Width	30120.5
11	Lowest Frequency	-2468.7
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	32768

1,3-dibenzyl-7-fluoroquinazoline-2,4(1H,3H)-dione (5k)

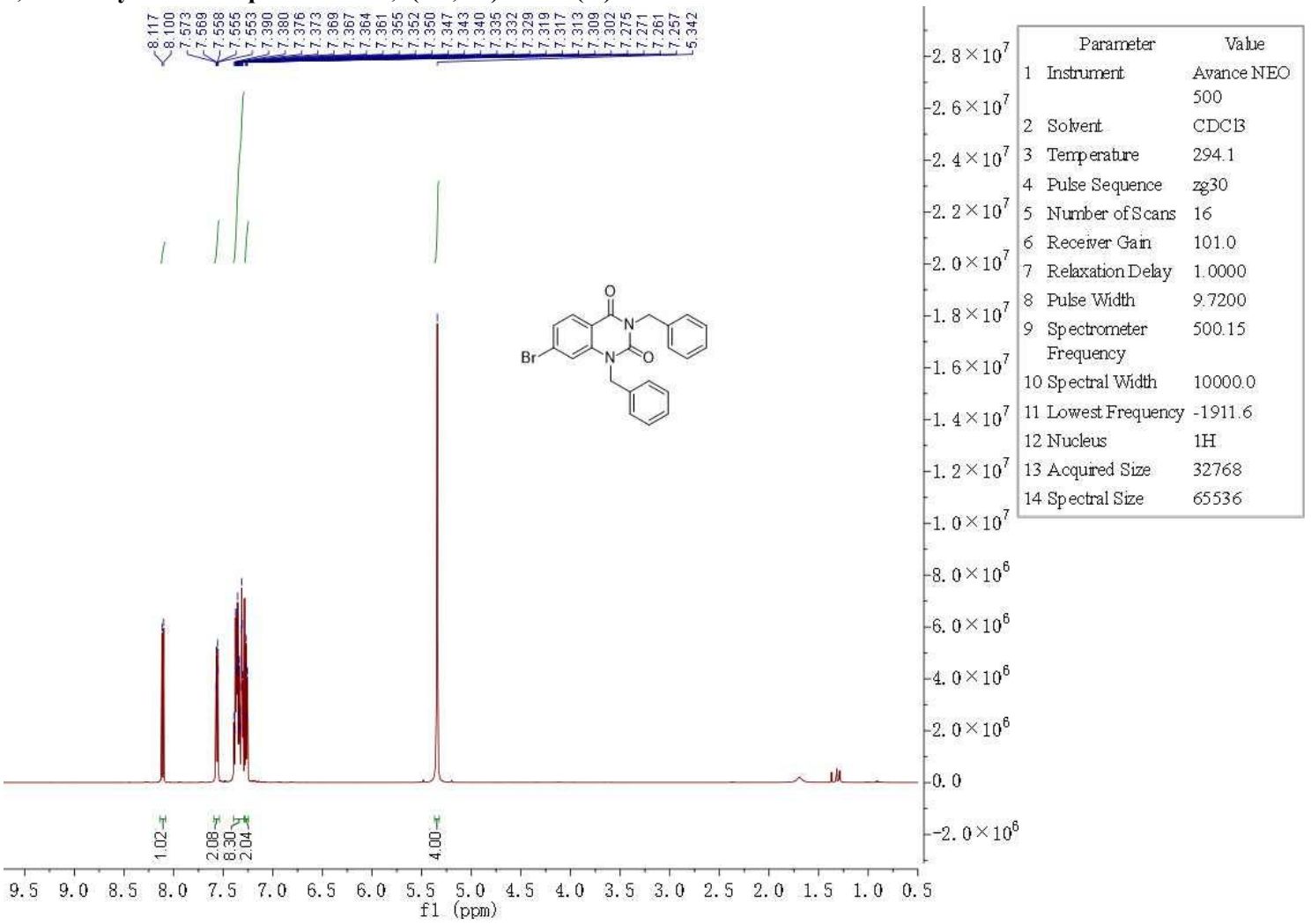


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.4
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

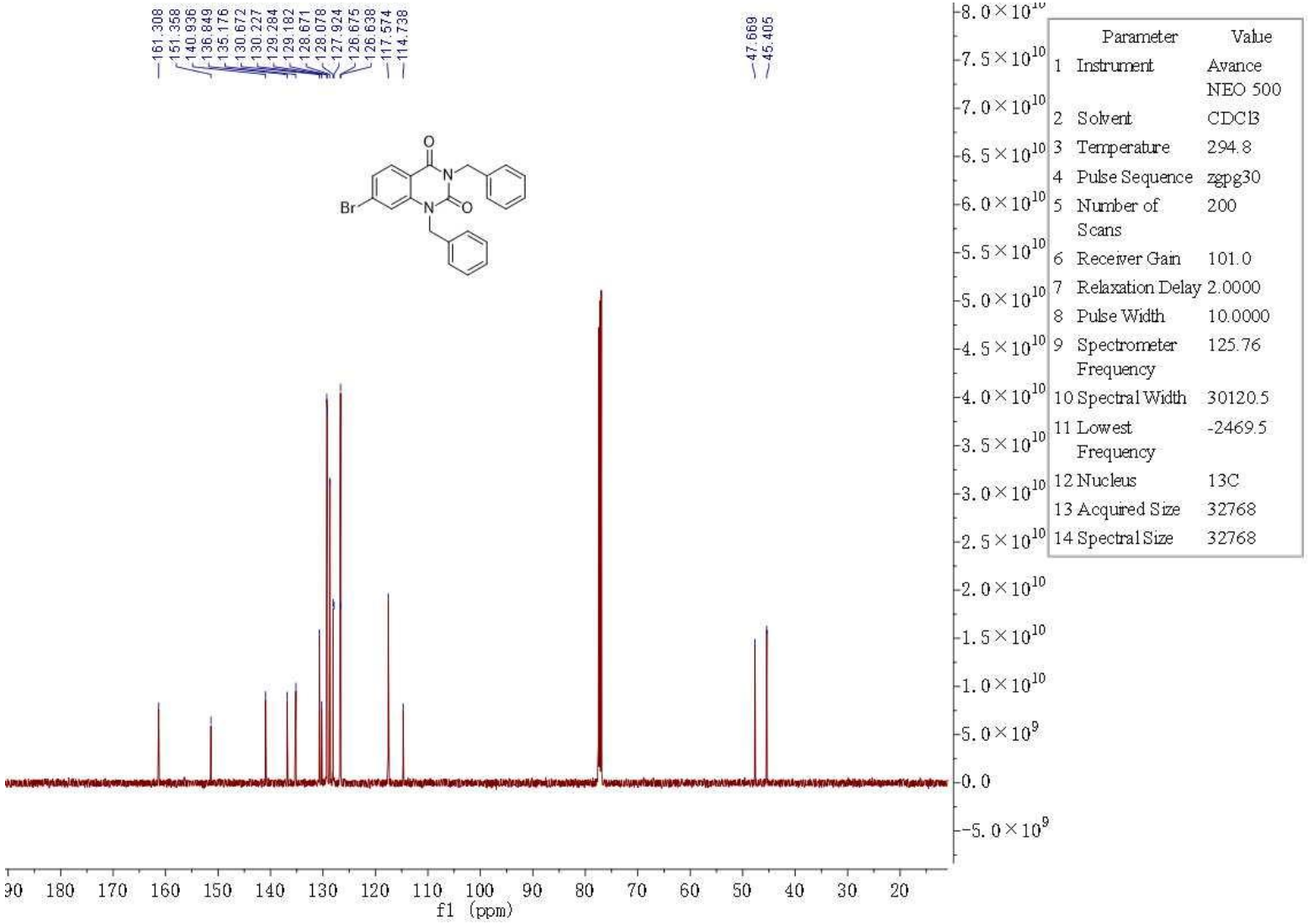


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	295.1
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2469.9
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1,3-dibenzyl-7-bromoquinazoline-2,4(1H,3H)-dione (5l)

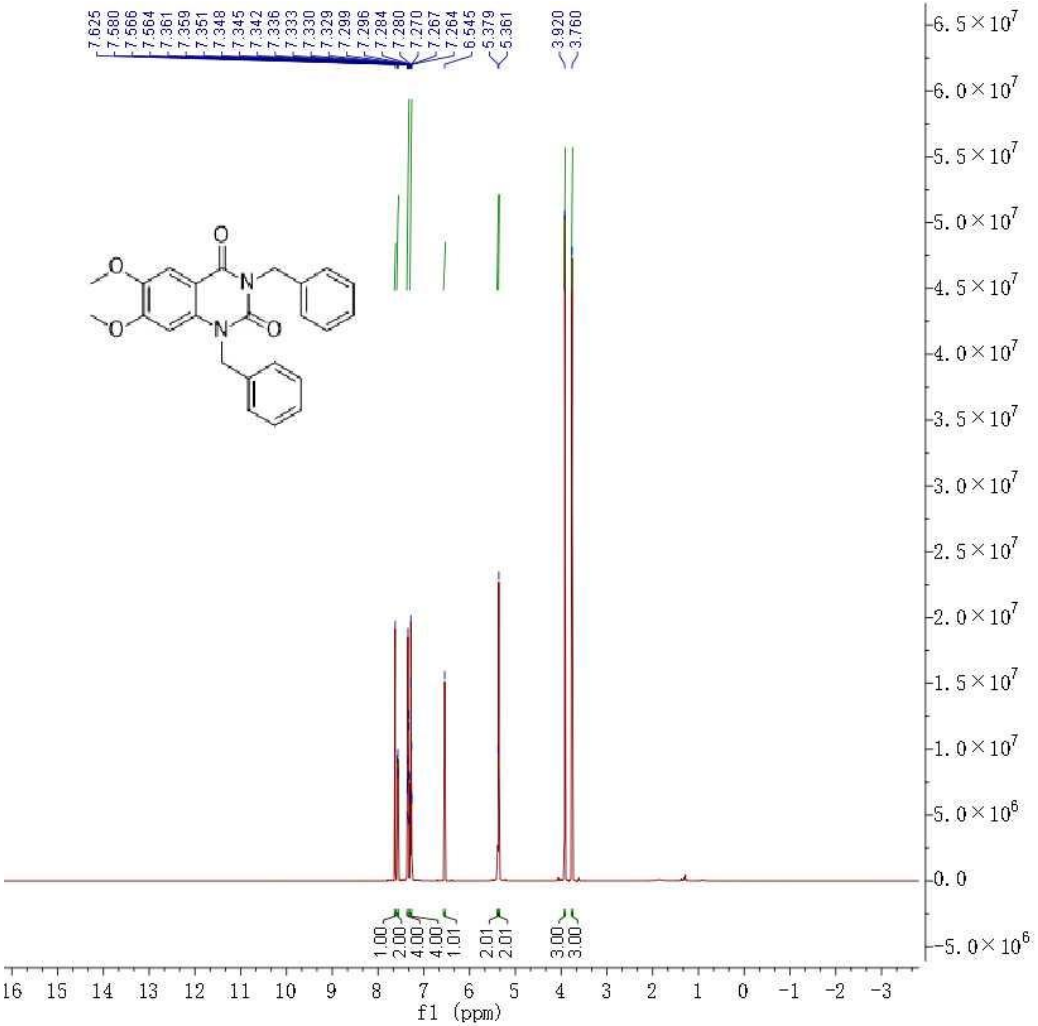


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.1
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

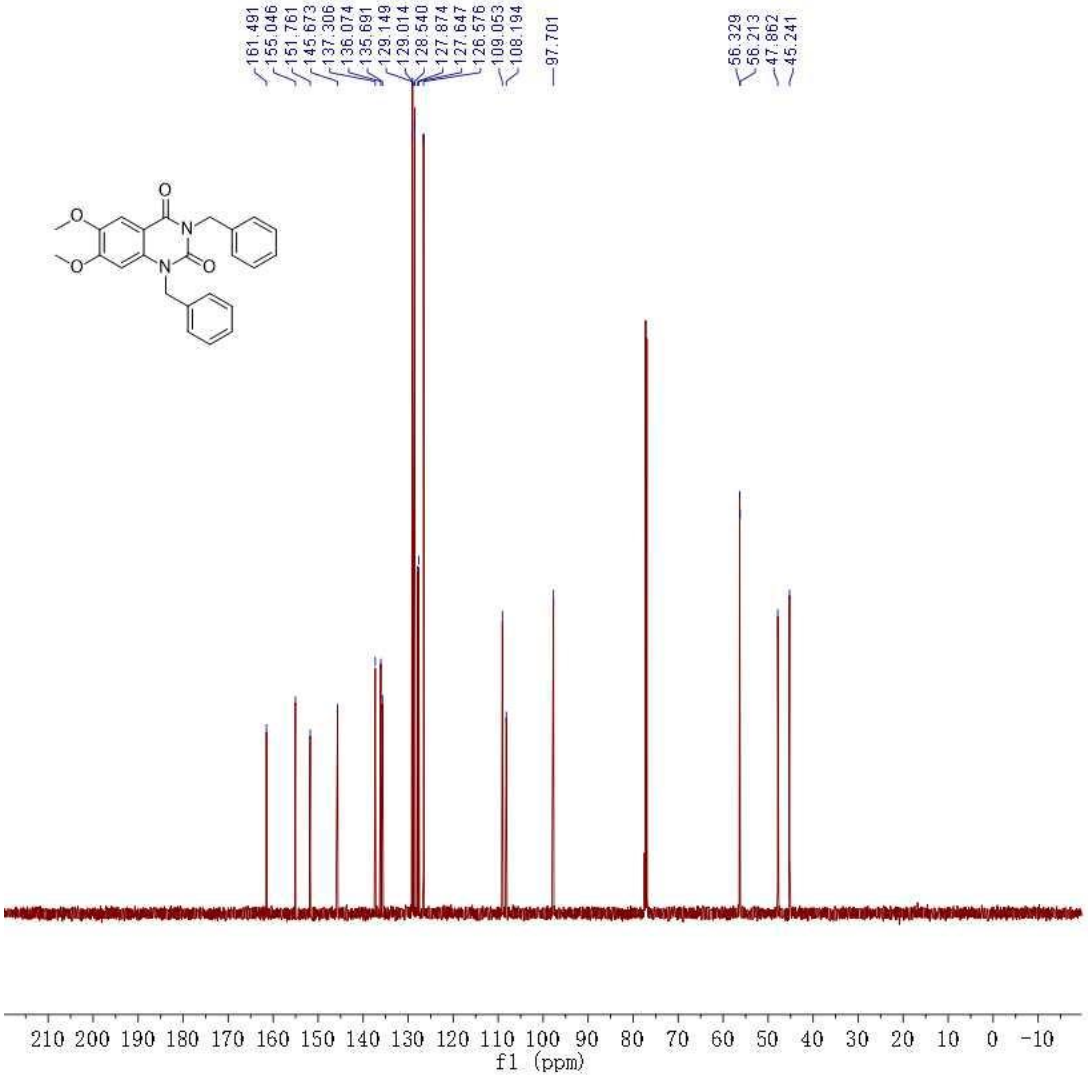


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.8
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.76
10	Spectral Width	30120.5
11	Lowest Frequency	-2469.5
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	32768

1,3-dibenzyl-6,7-dimethoxyquinazoline-2,4(1H,3H)-dione (5m)

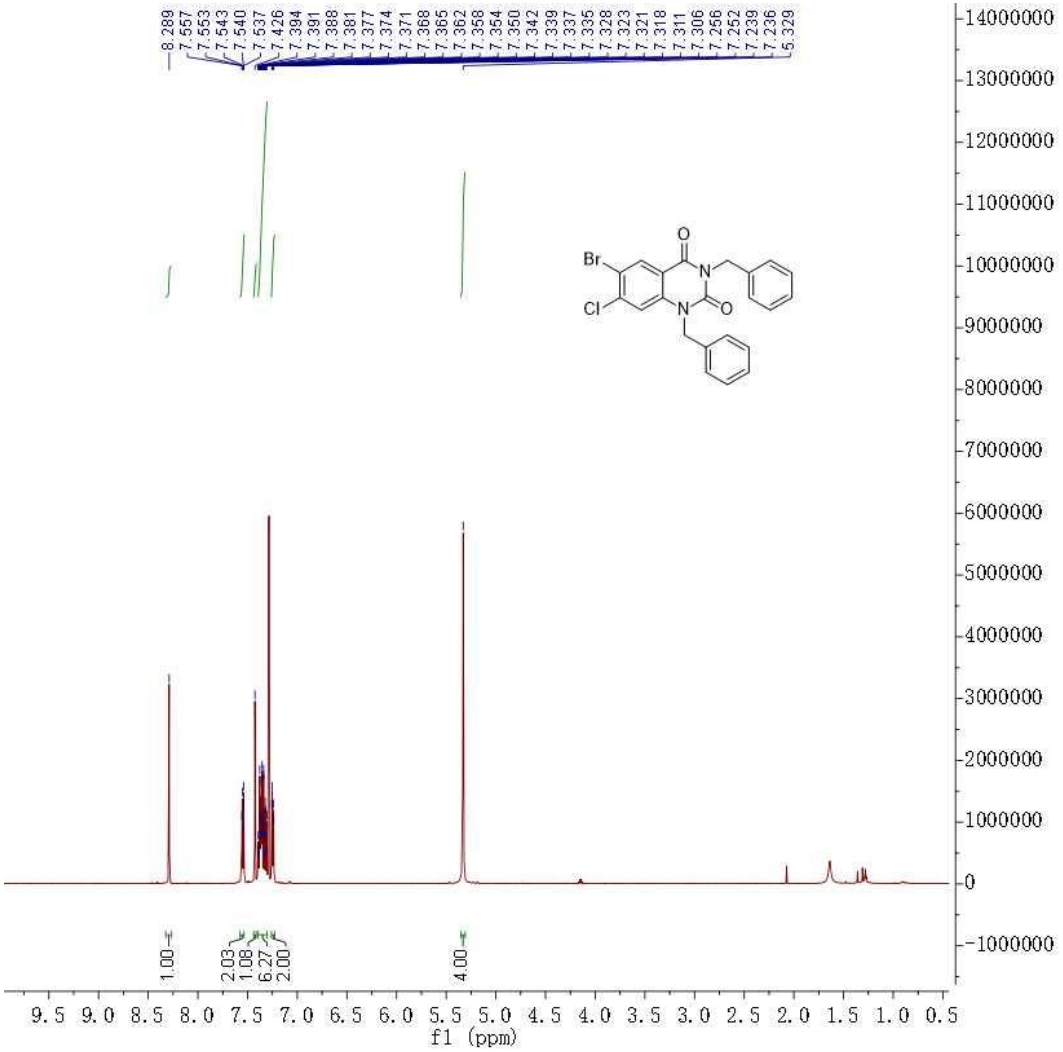


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.5
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	69.3
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

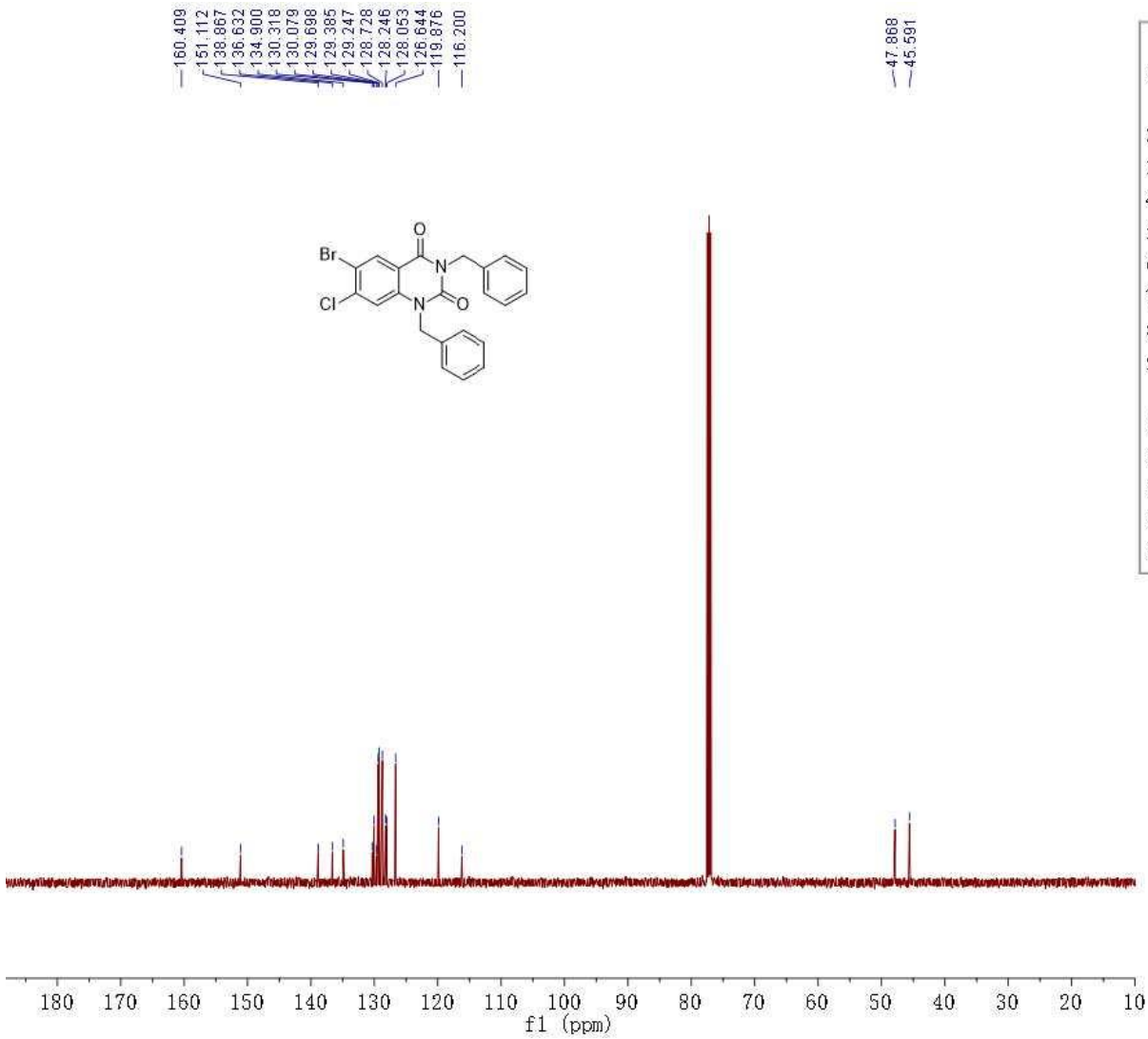


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.9
4	Pulse Sequence	zgpg30
5	Number of Scans	60
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2476.0
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1,3-dibenzyl-6-bromo-7-chloroquinazoline-2,4(1H,3H)-dione (5n)

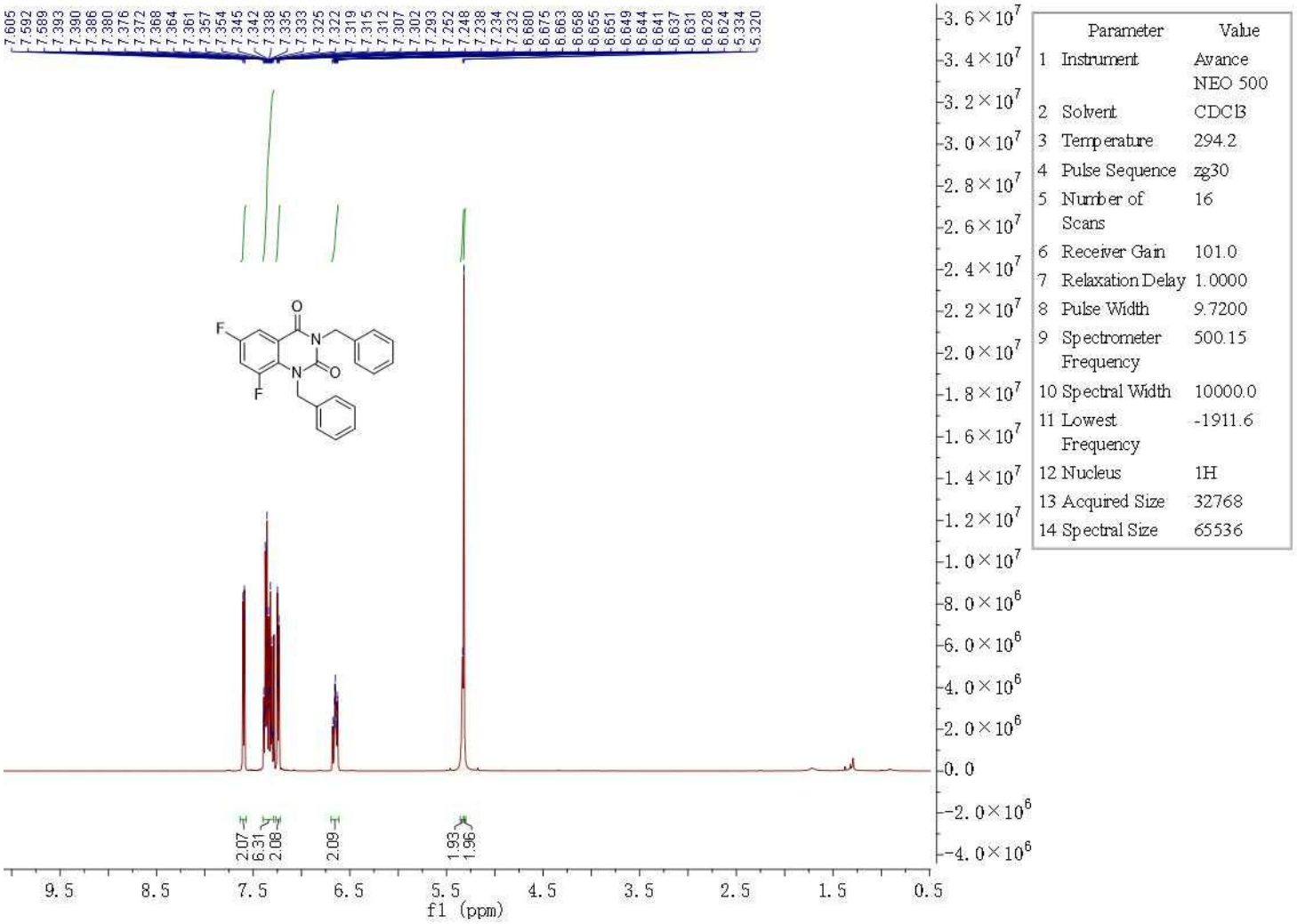


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.8
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

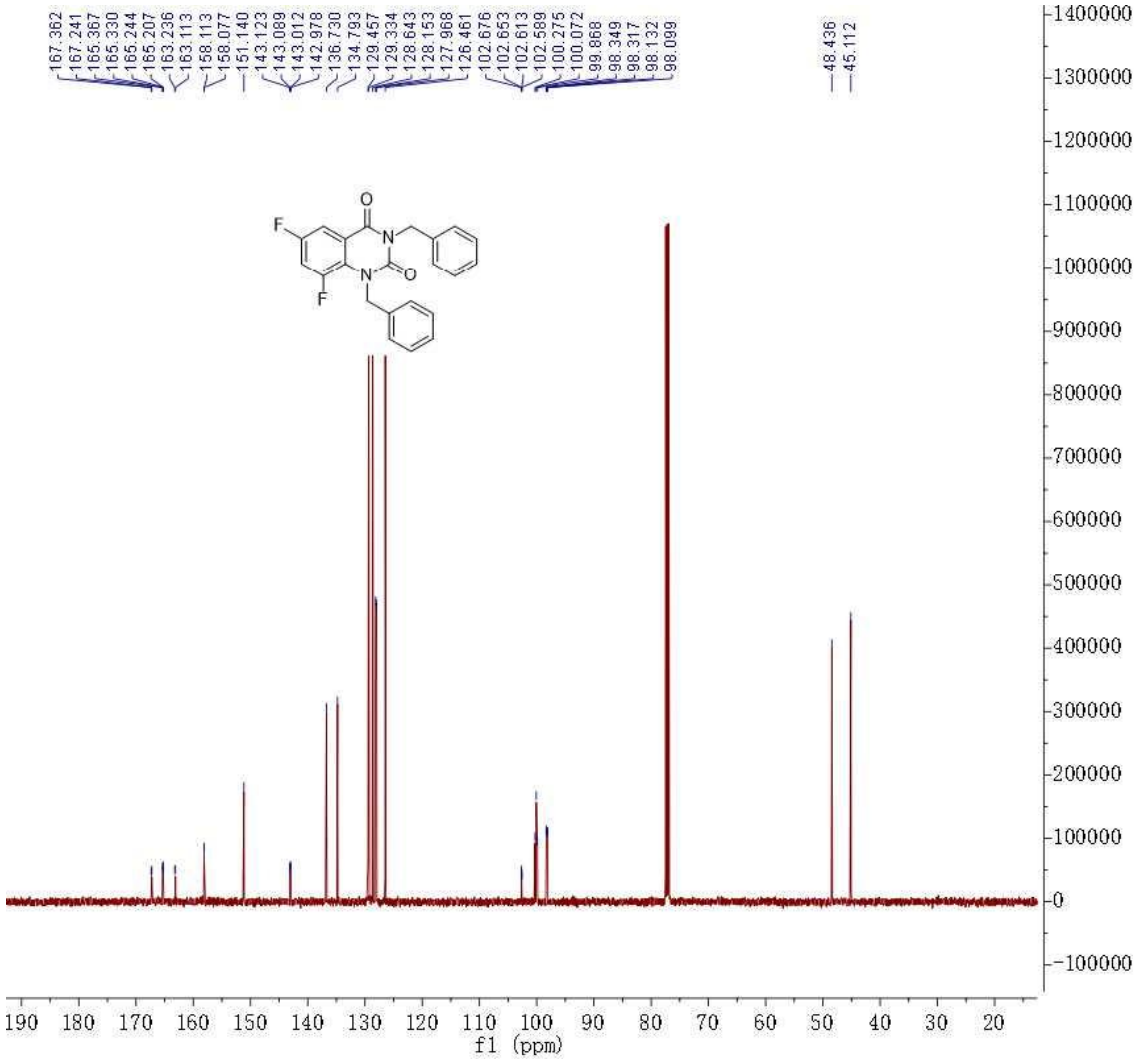


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	295.2
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2464.2
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

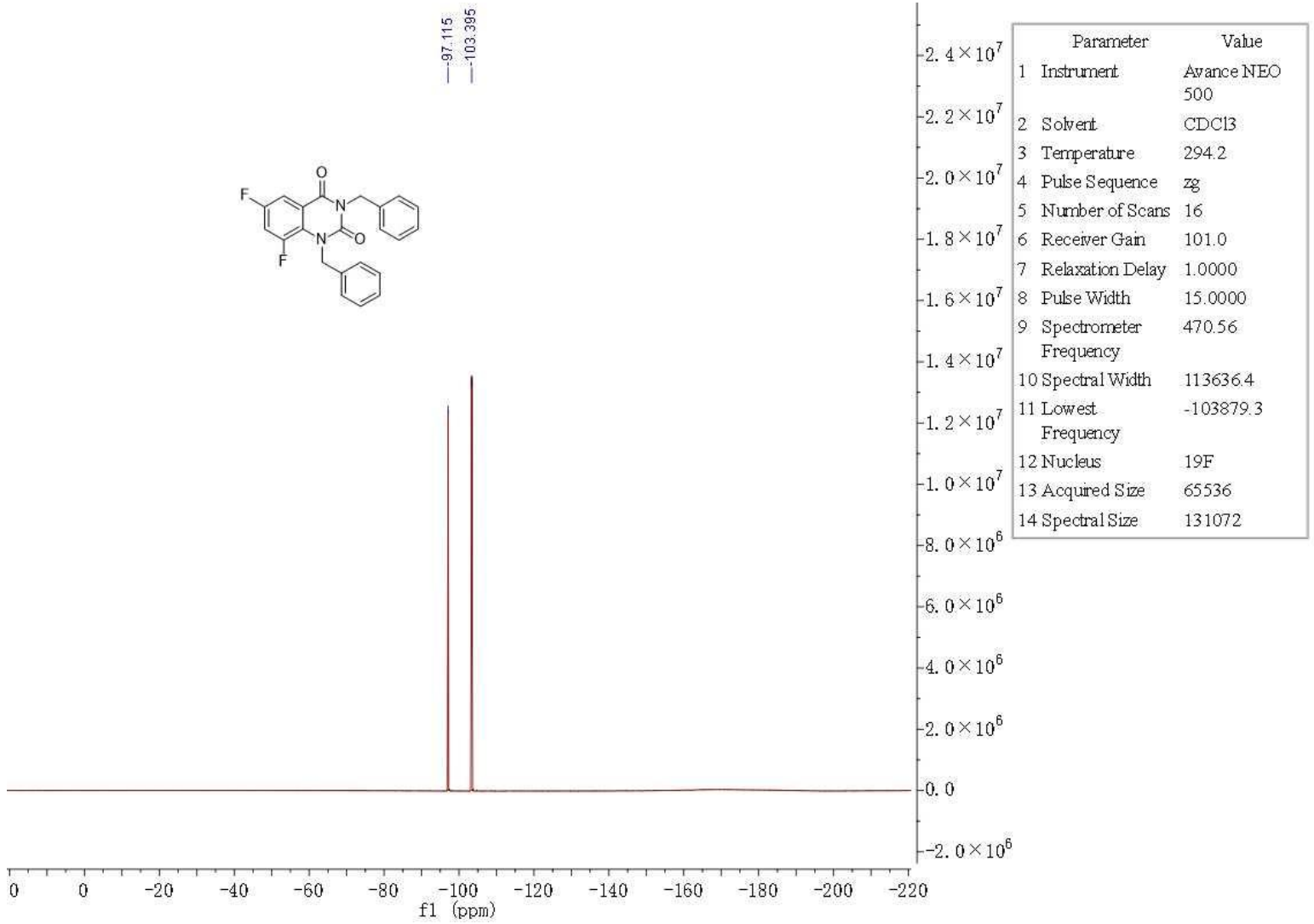
1,3-dibenzyl-6,8-difluoroquinazoline-2,4(1H,3H)-dione (5o)



	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.2
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

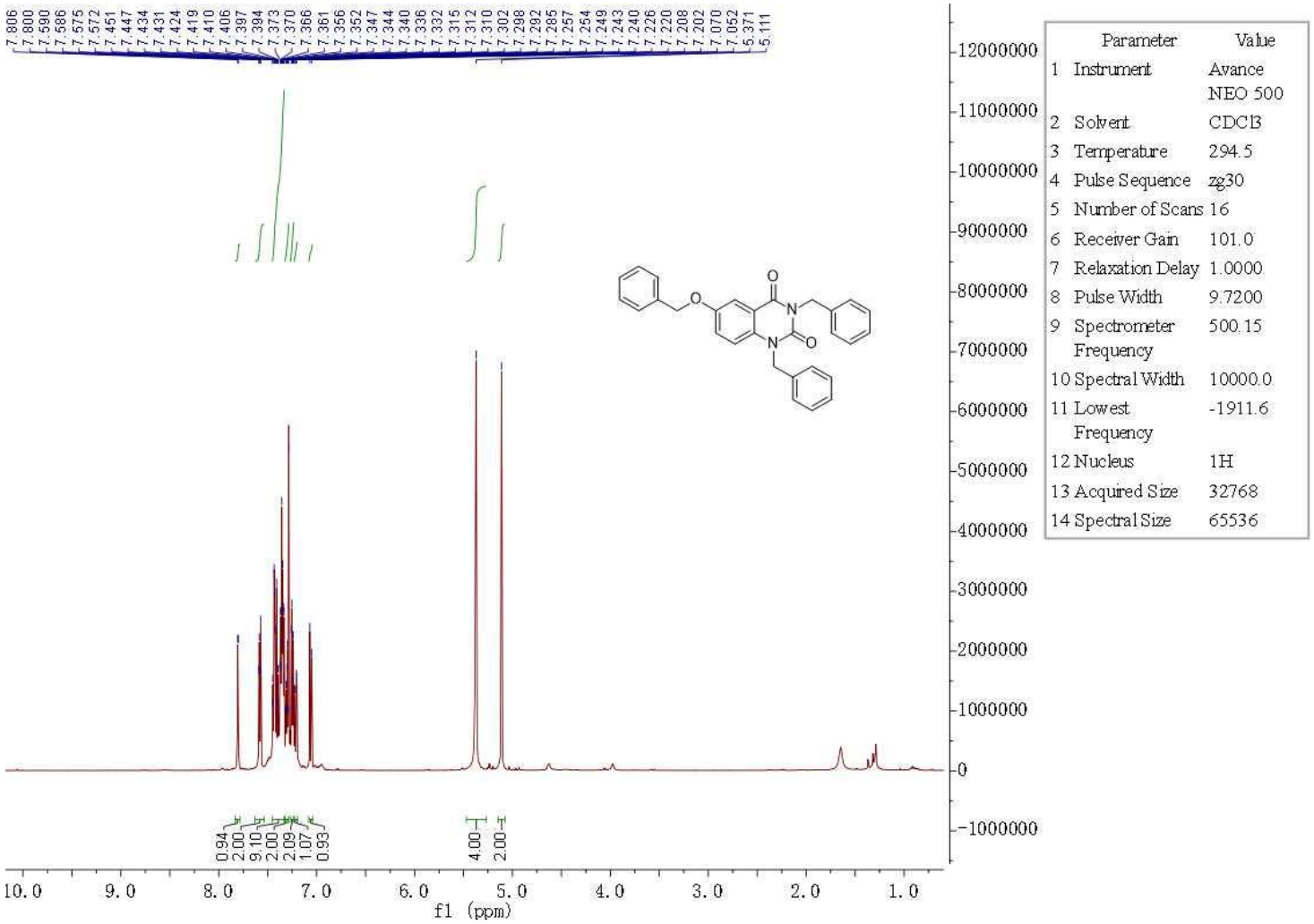


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.7
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2469.9
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

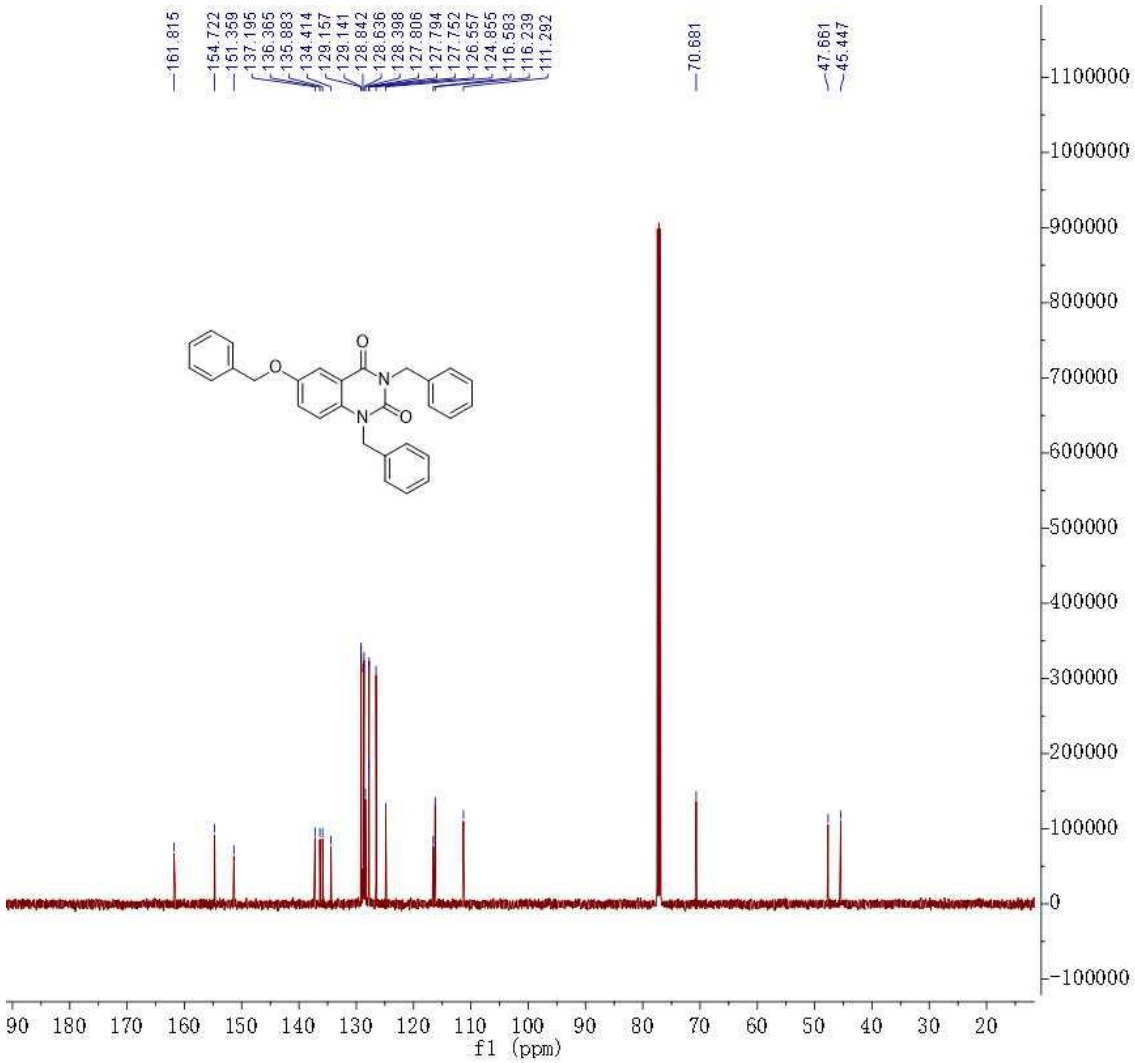


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.2
4	Pulse Sequence	zg
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	15.0000
9	Spectrometer Frequency	470.56
10	Spectral Width	113636.4
11	Lowest Frequency	-103879.3
12	Nucleus	19F
13	Acquired Size	65536
14	Spectral Size	131072

1,3-dibenzyl-6-(benzyloxy)quinazoline-2,4(1H,3H)-dione (5p)

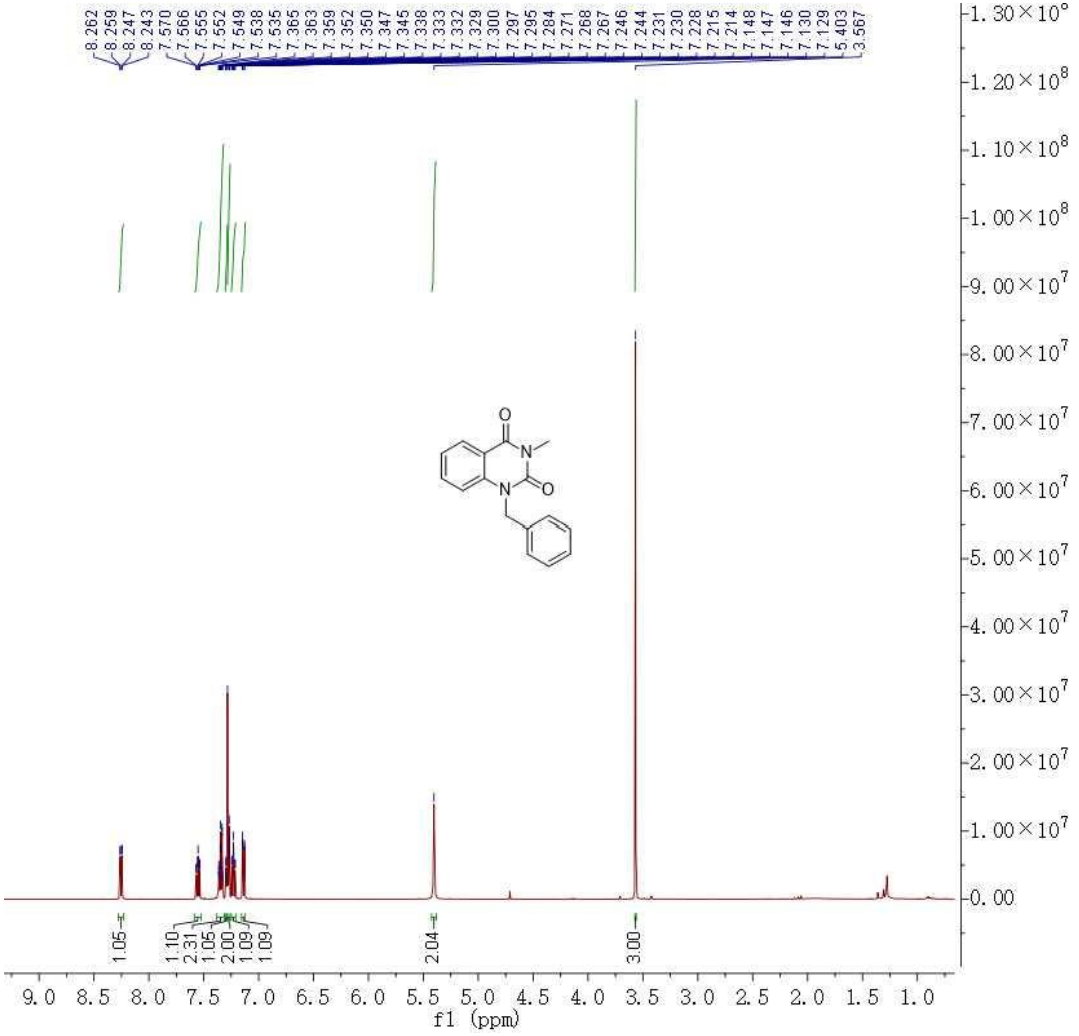


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.5
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

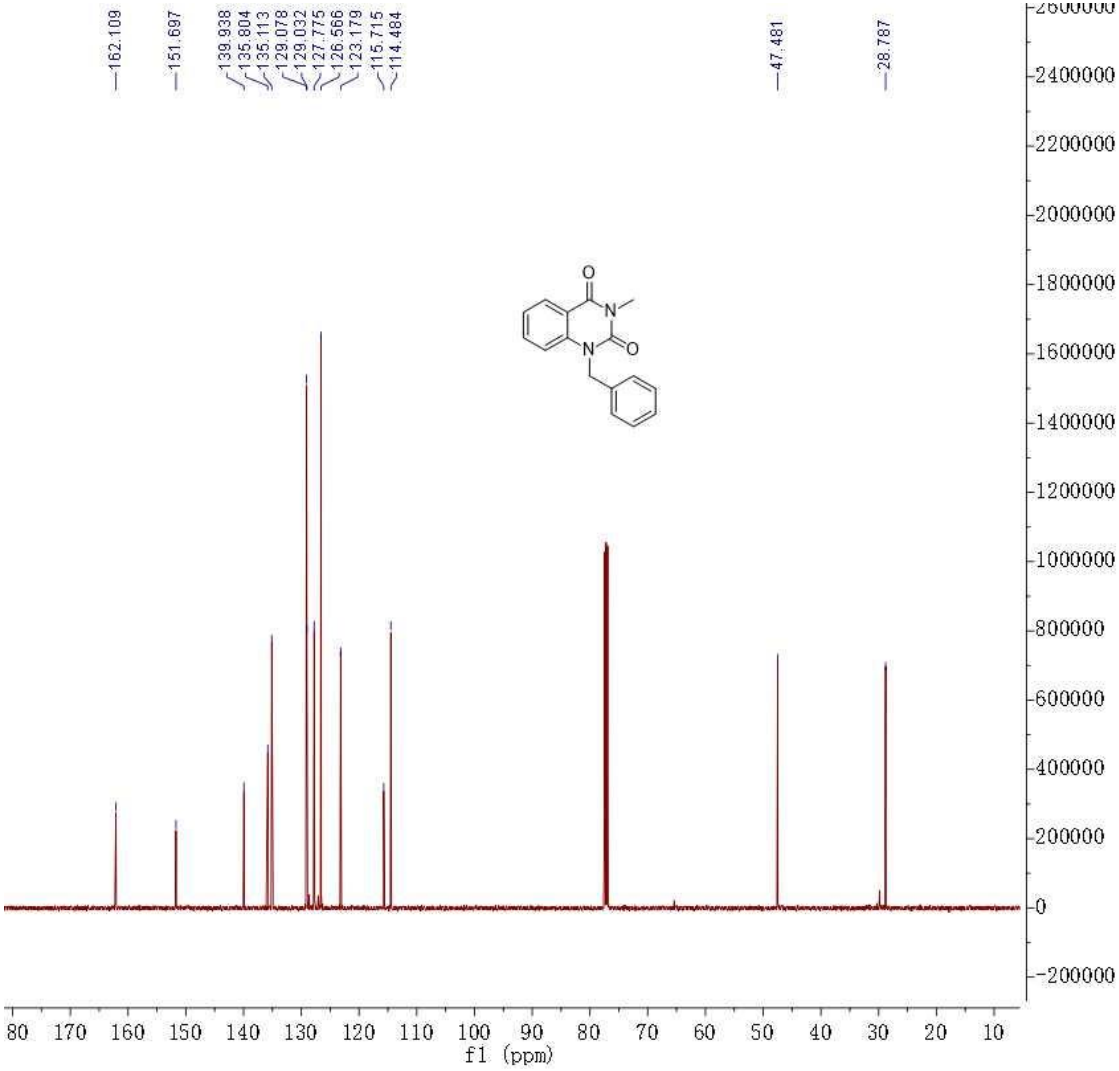


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	295.2
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2466.6
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1-benzyl-3-methylquinazoline-2,4(1H,3H)-dione（5q）

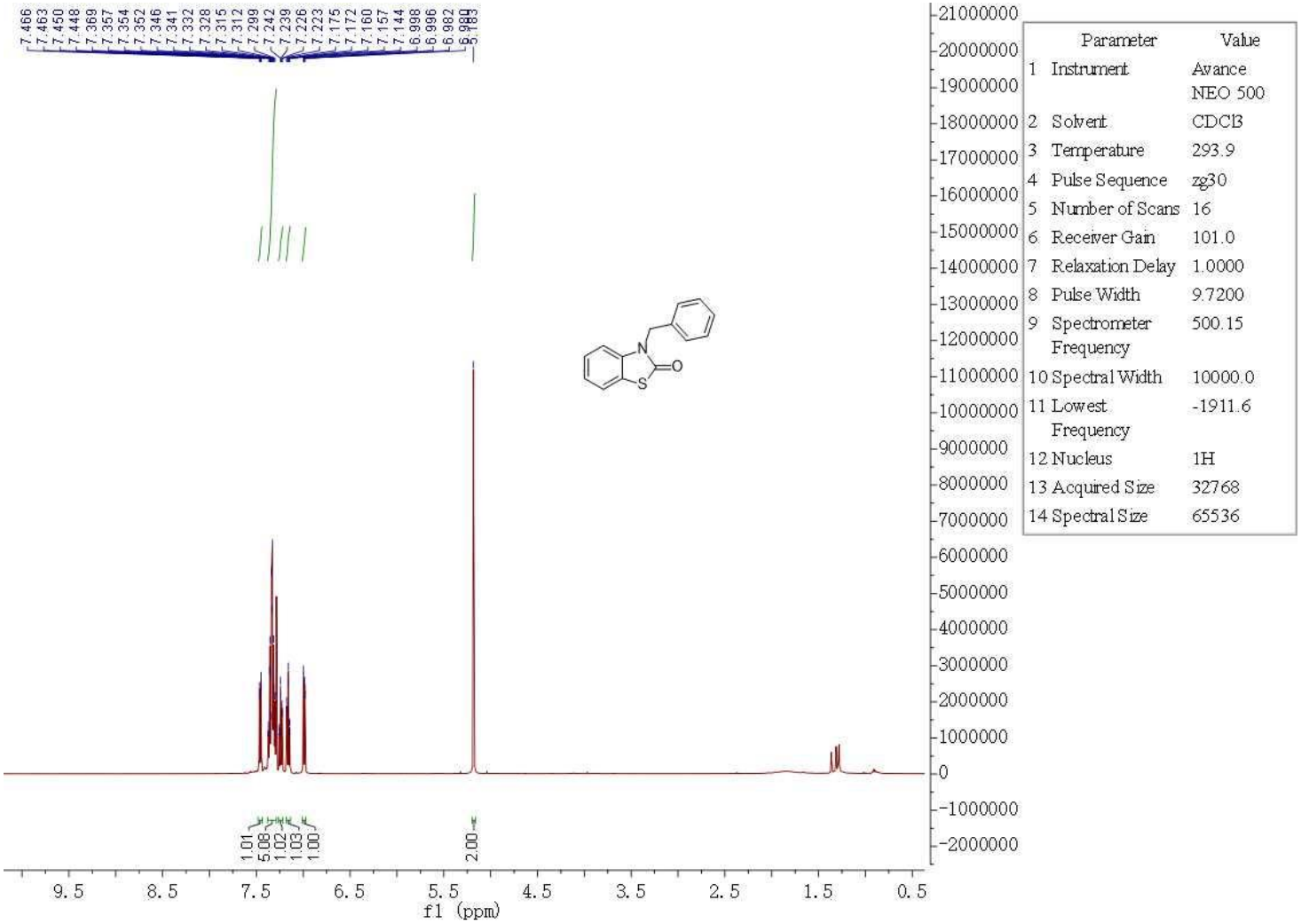


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	296.2
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	86.7
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

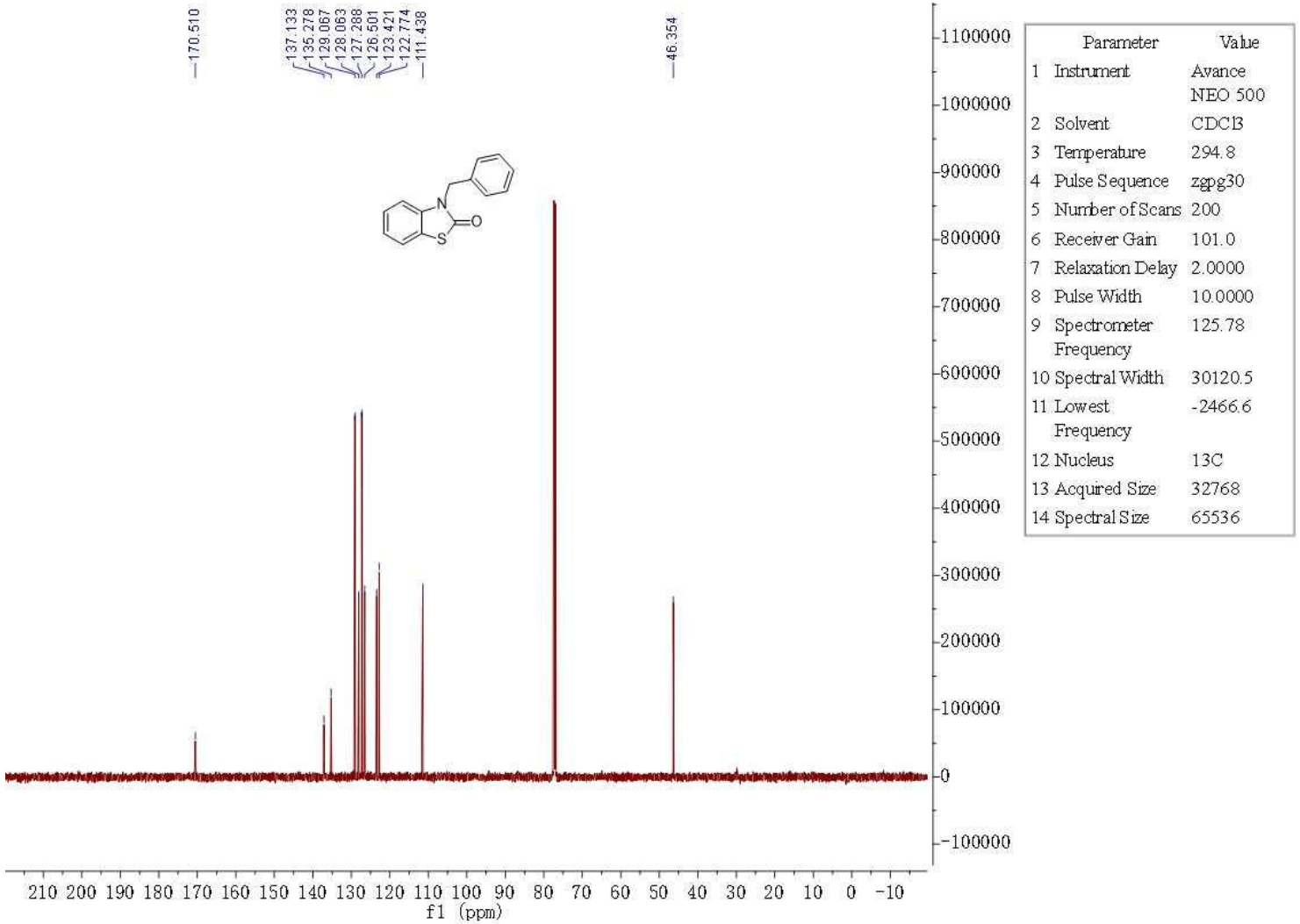


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	296.1
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2471.9
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-benzylbenzo[d]thiazol-2(3H)-one (7a)

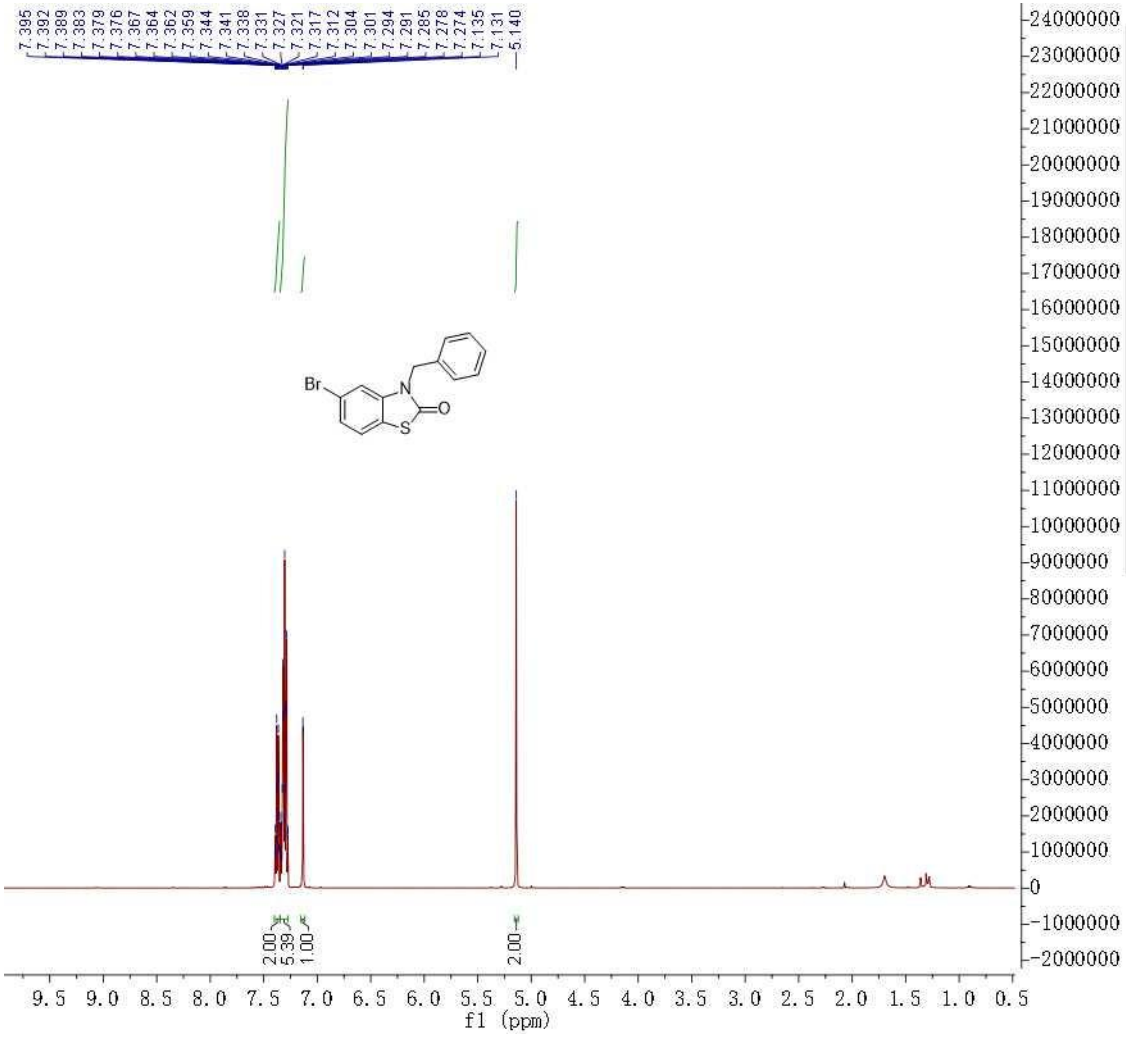


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.9
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

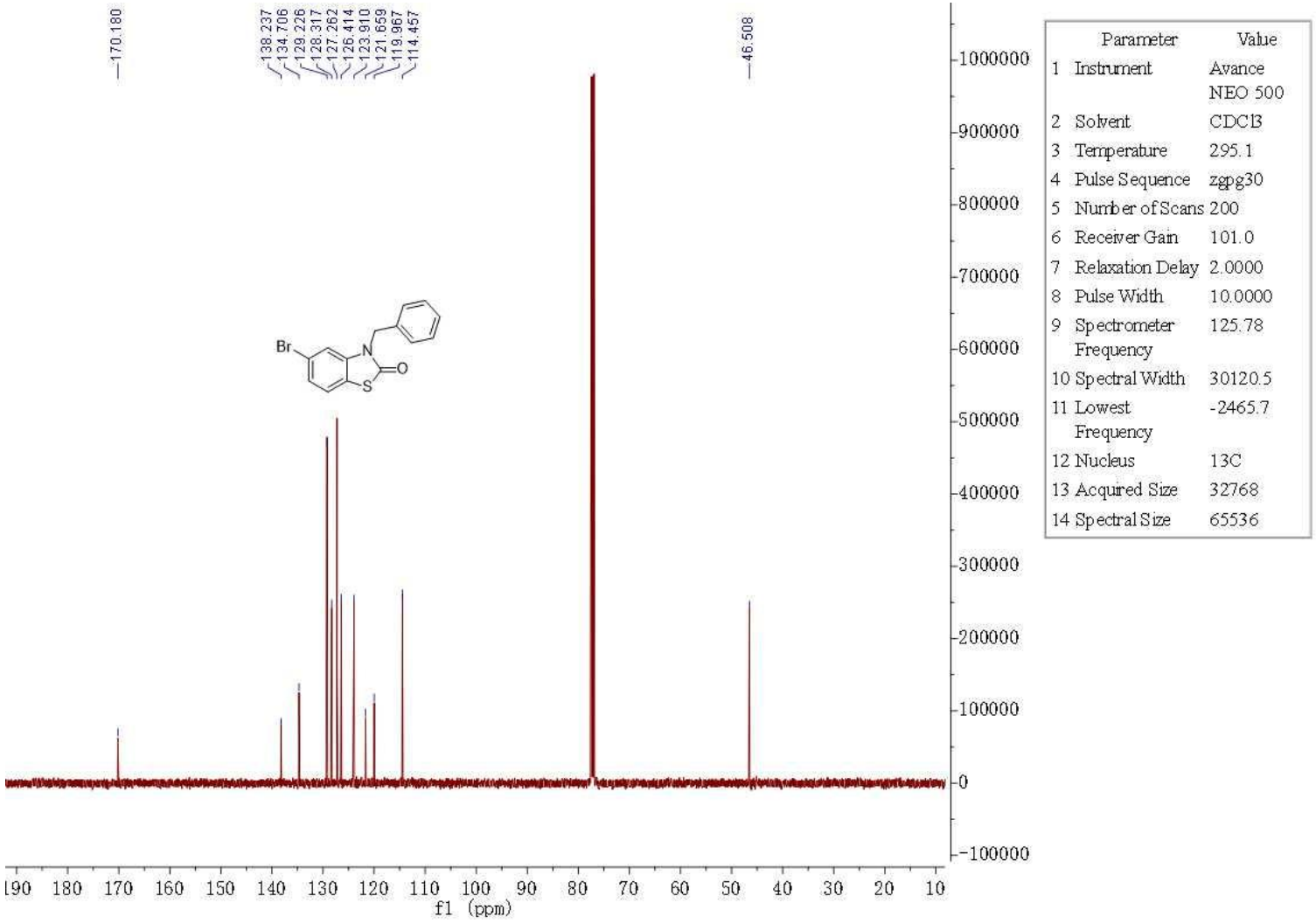


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.8
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2466.6
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-benzyl-6-bromobenzo[d]thiazol-2(3H)-one (7b)

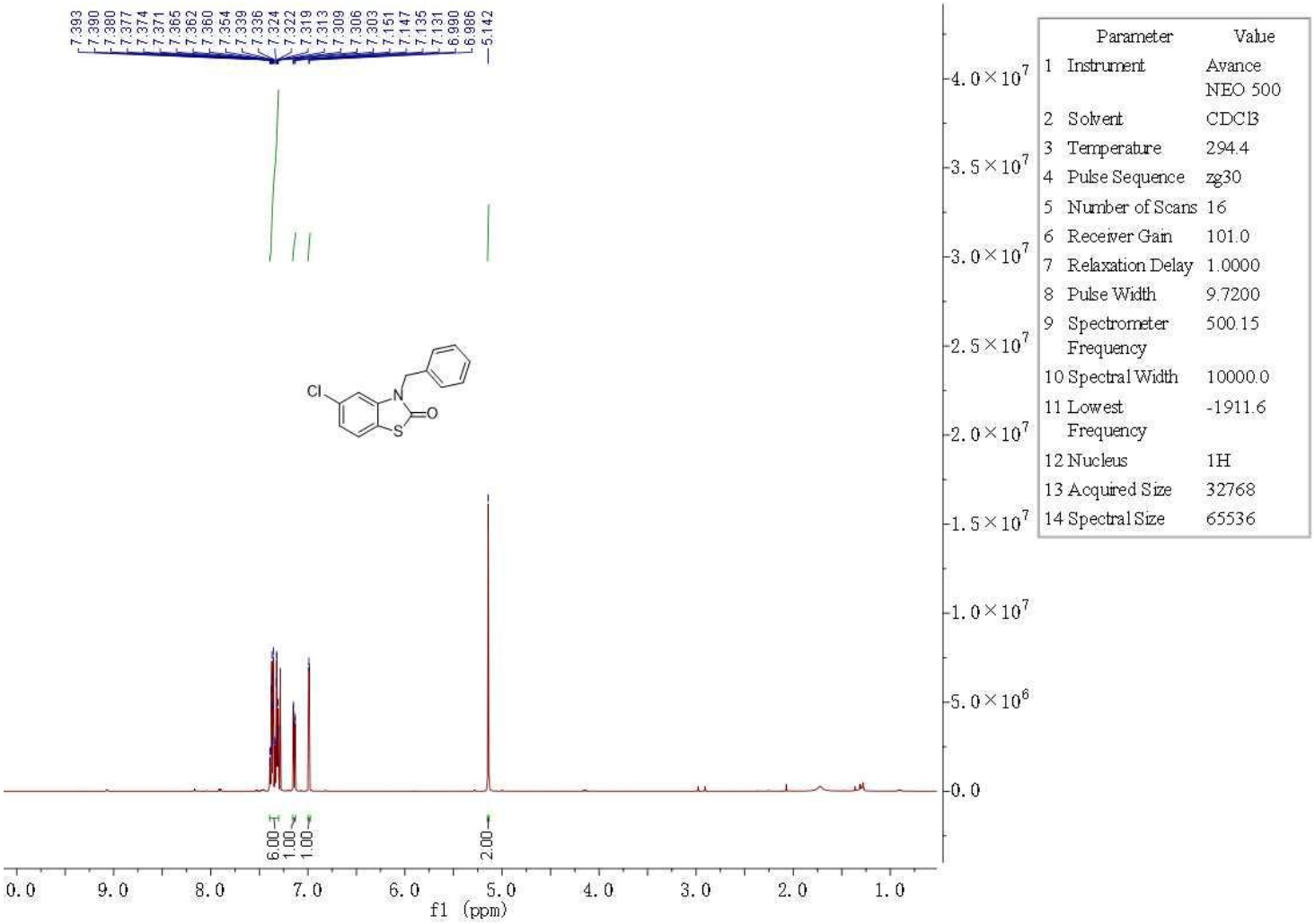


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.5
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

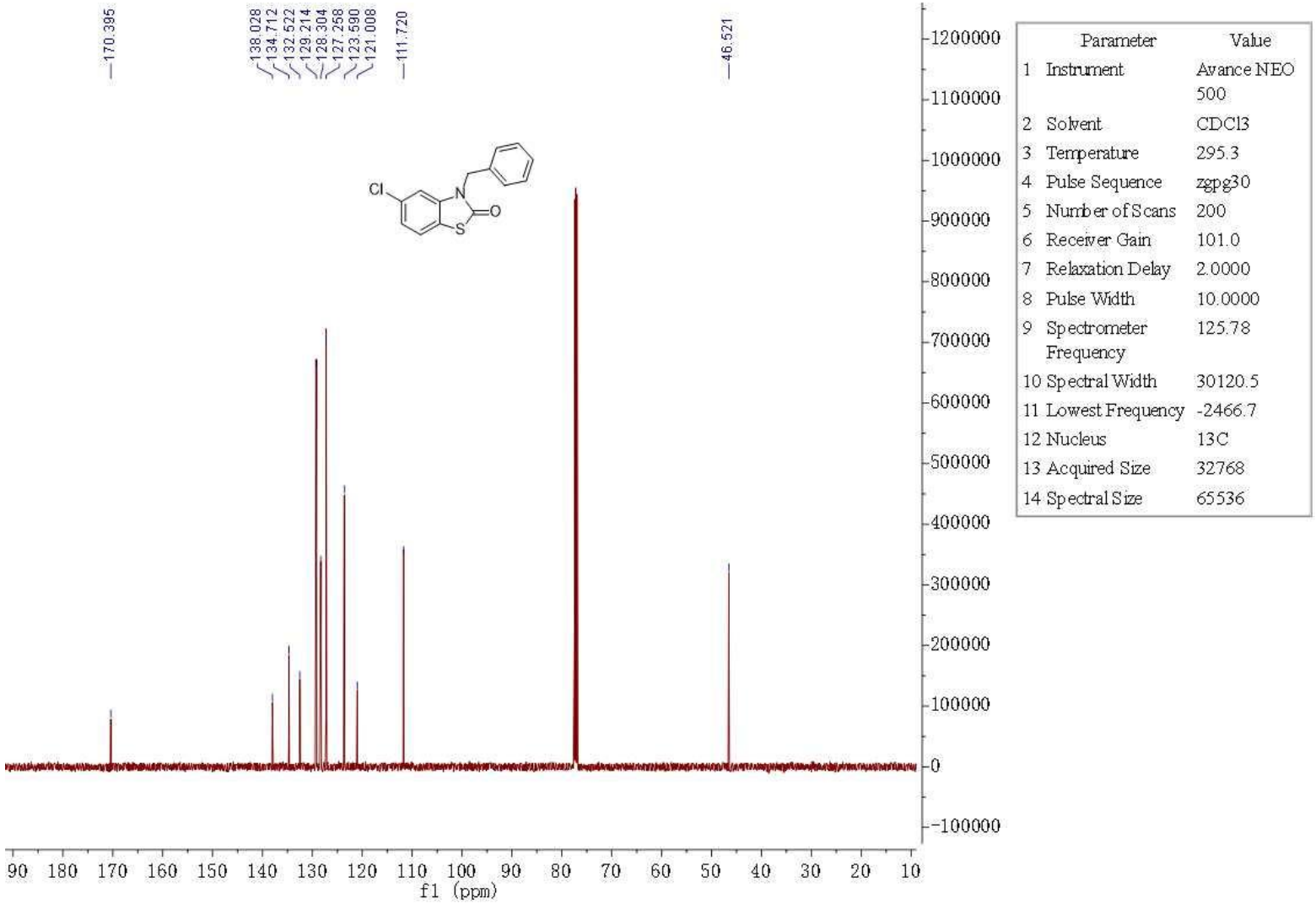


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	295.1
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2465.7
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-benzyl-6-chlorobenzo[d]thiazol-2(3H)-one (7c)

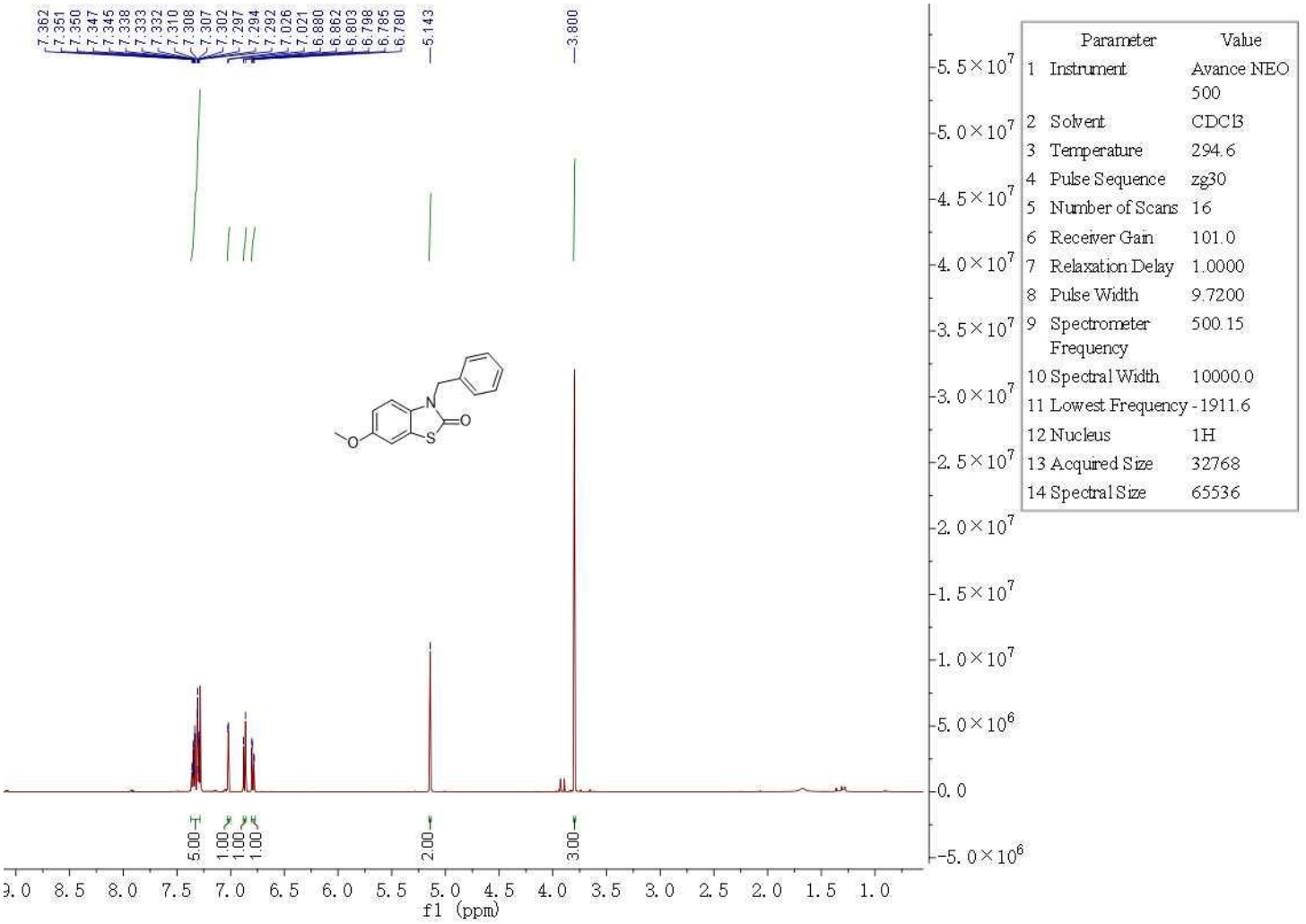


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.4
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

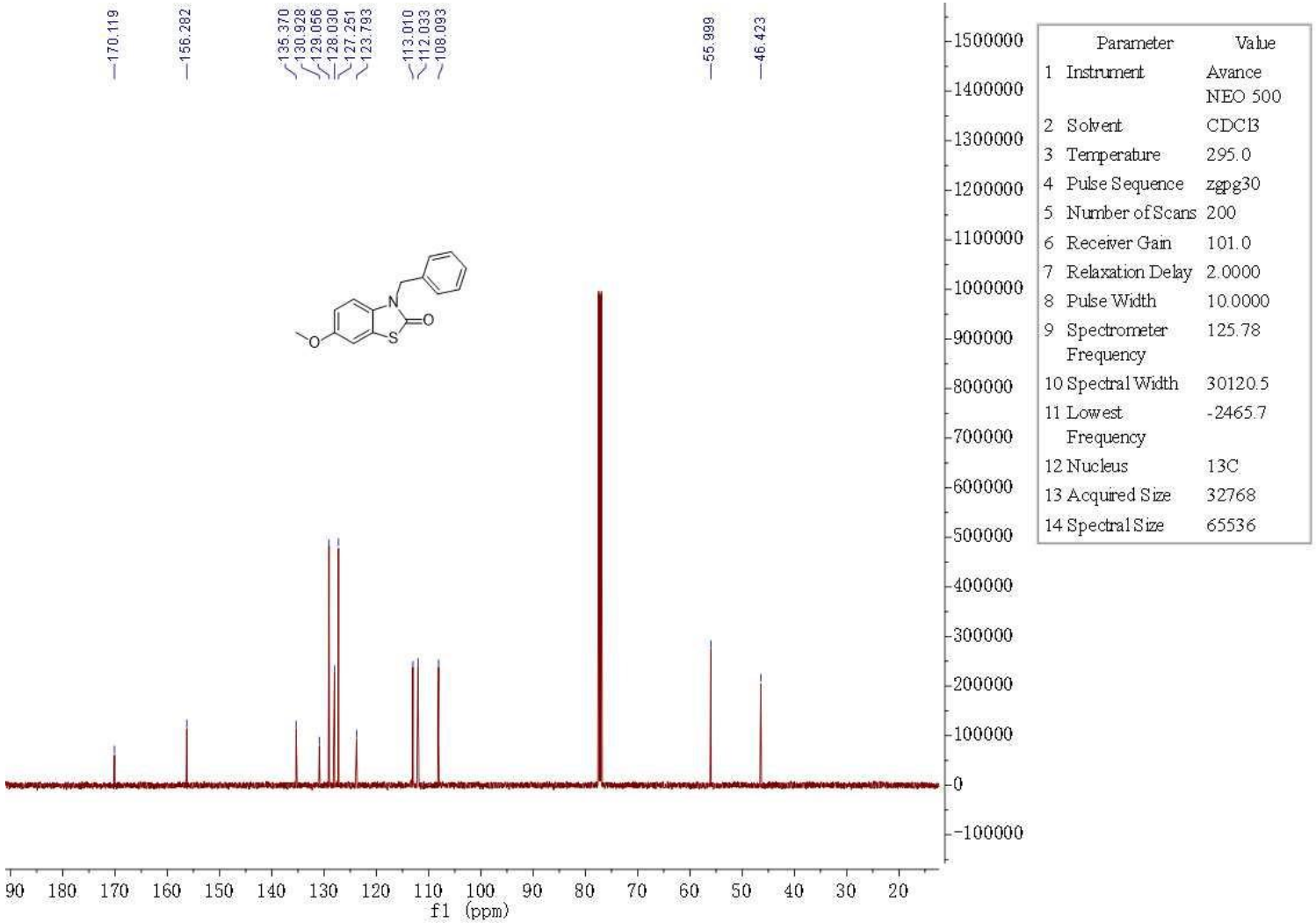


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	295.3
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2466.7
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-benzyl-6-methoxybenzo[d]thiazol-2(3H)-one (7d)

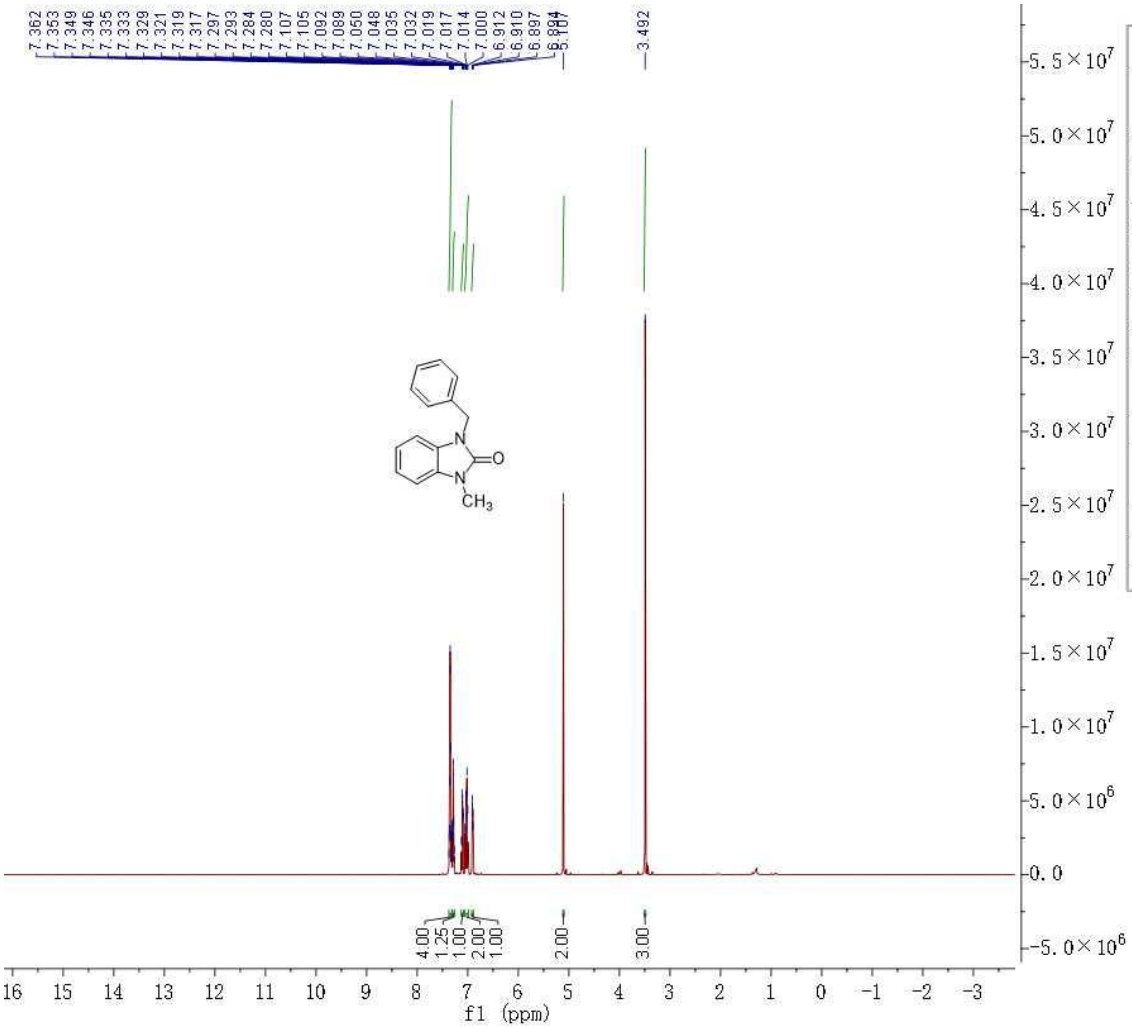


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.6
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

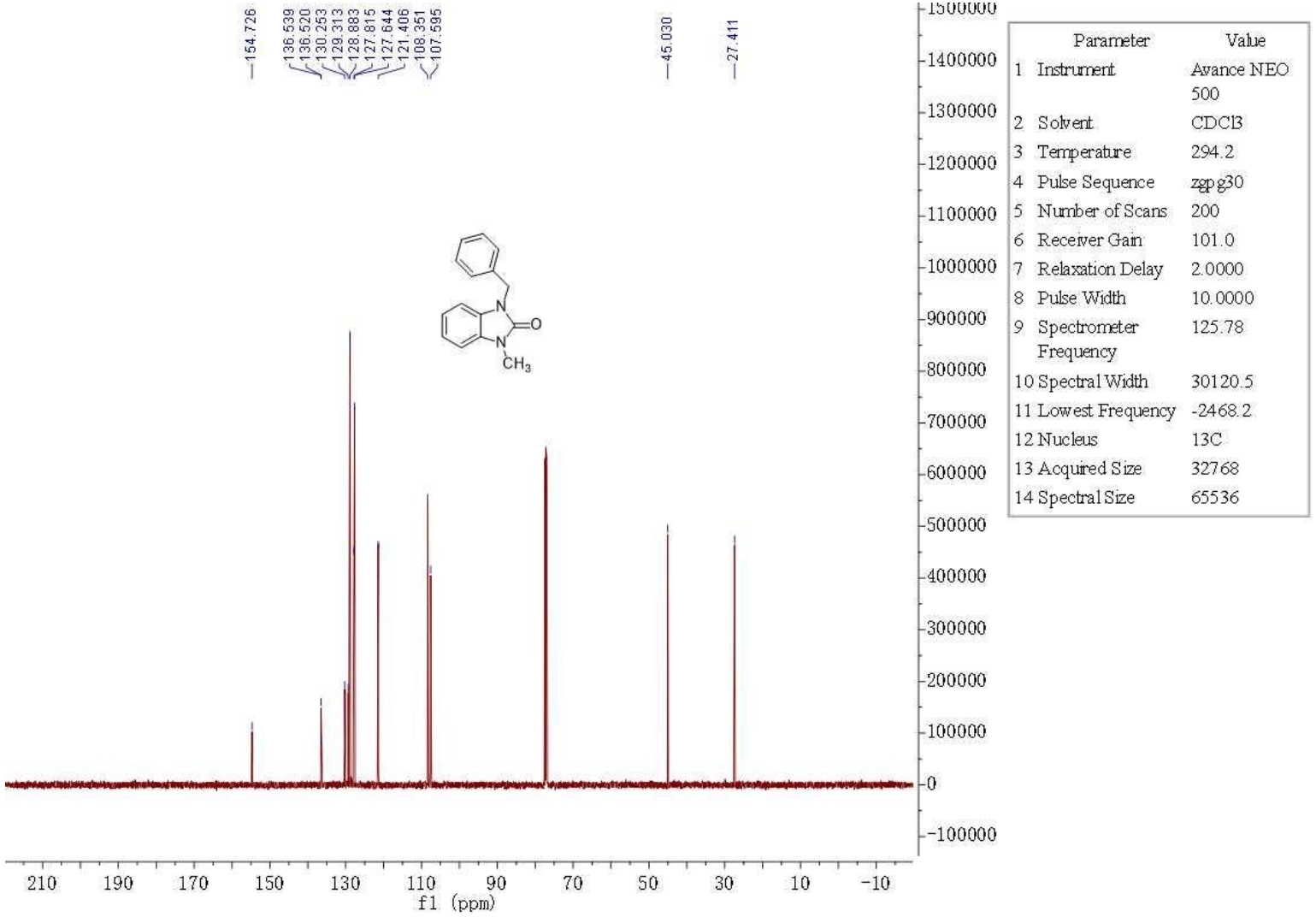


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	295.0
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2465.7
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1-benzyl-3-methyl-1,3-dihydro-2H-benzo[d]imidazol-2-one (7e)

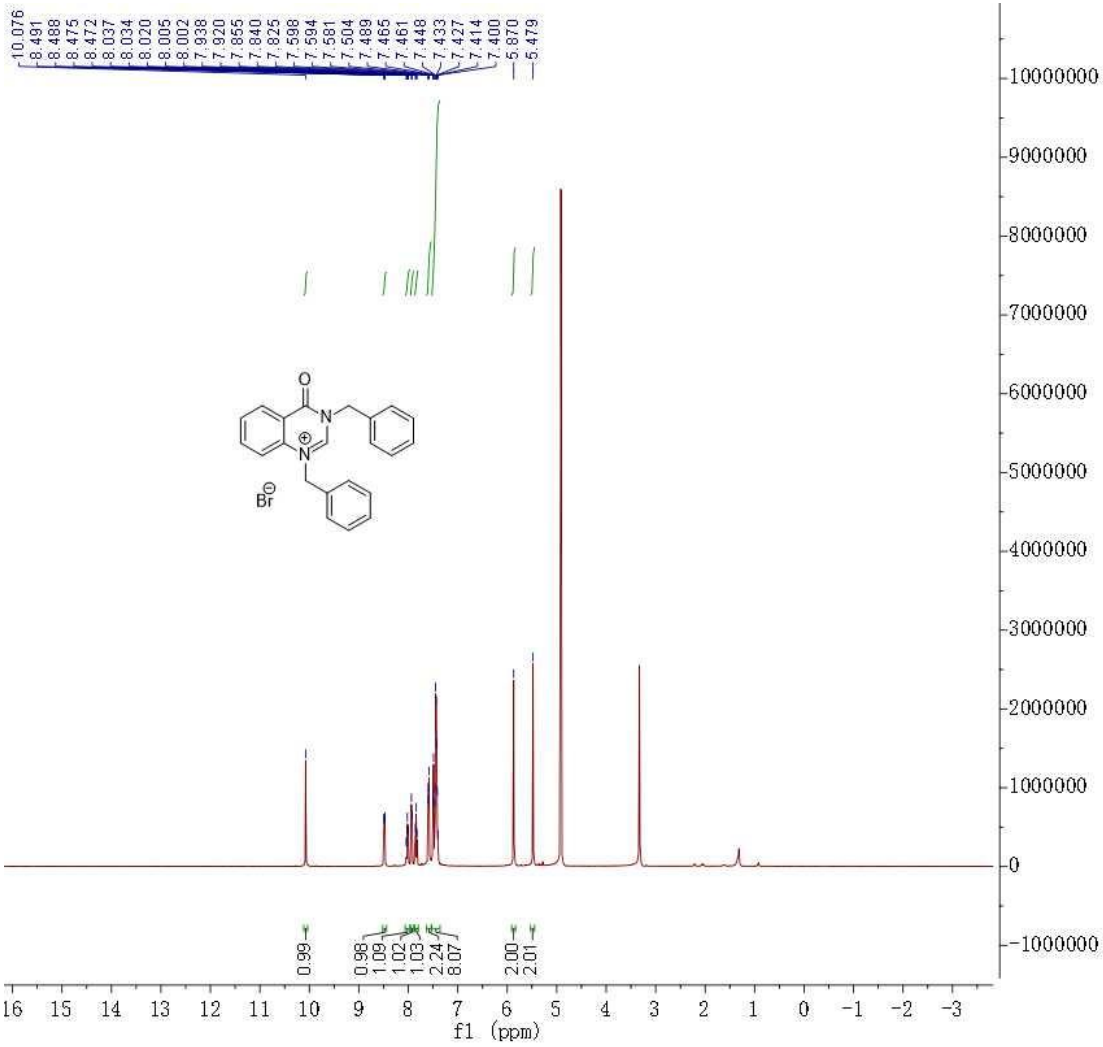


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	293.6
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

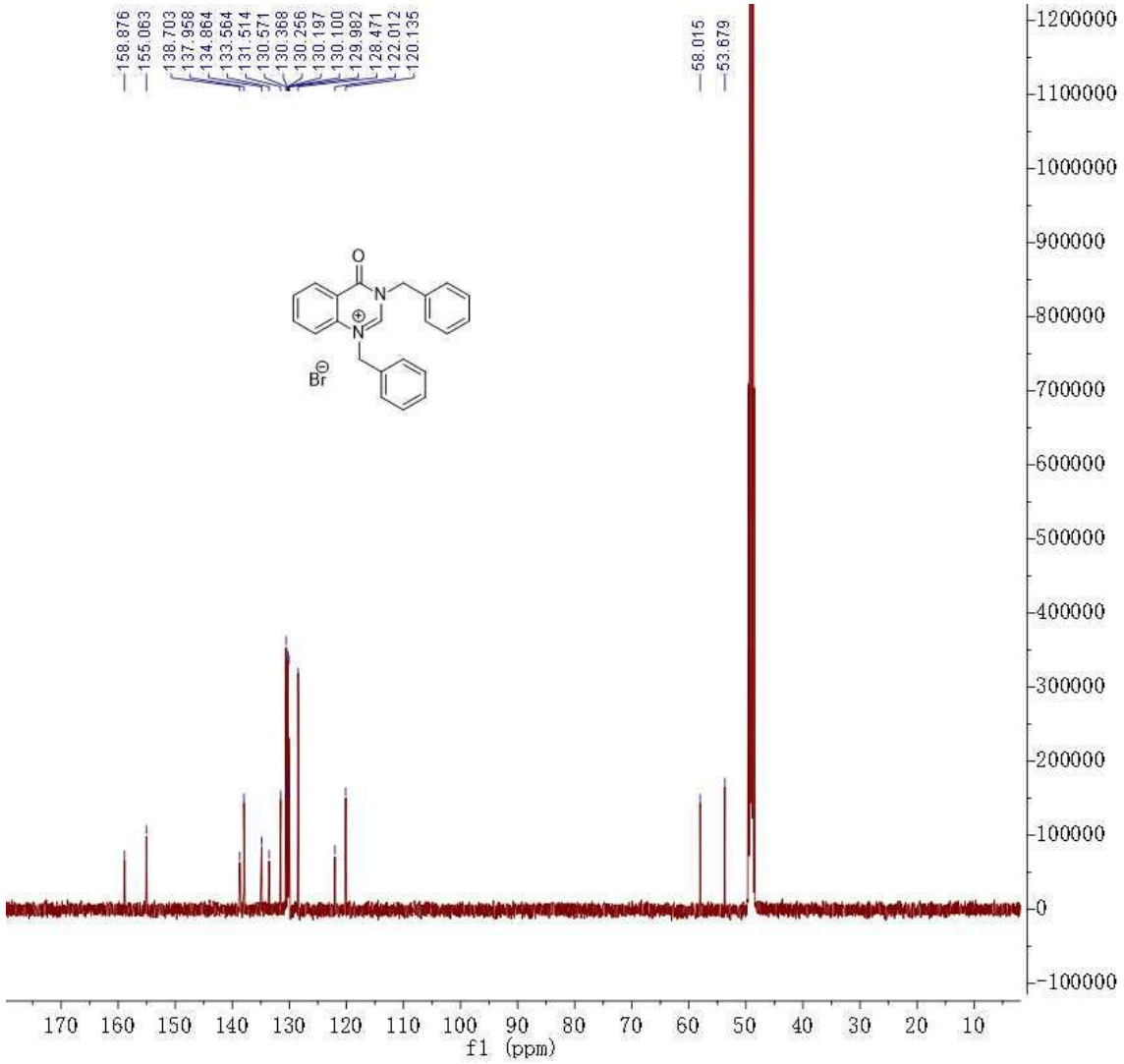


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	294.2
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2468.2
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

1,3-dibenzyl-4-oxo-3,4-dihydroquinazolin-1-ium bromide (8)

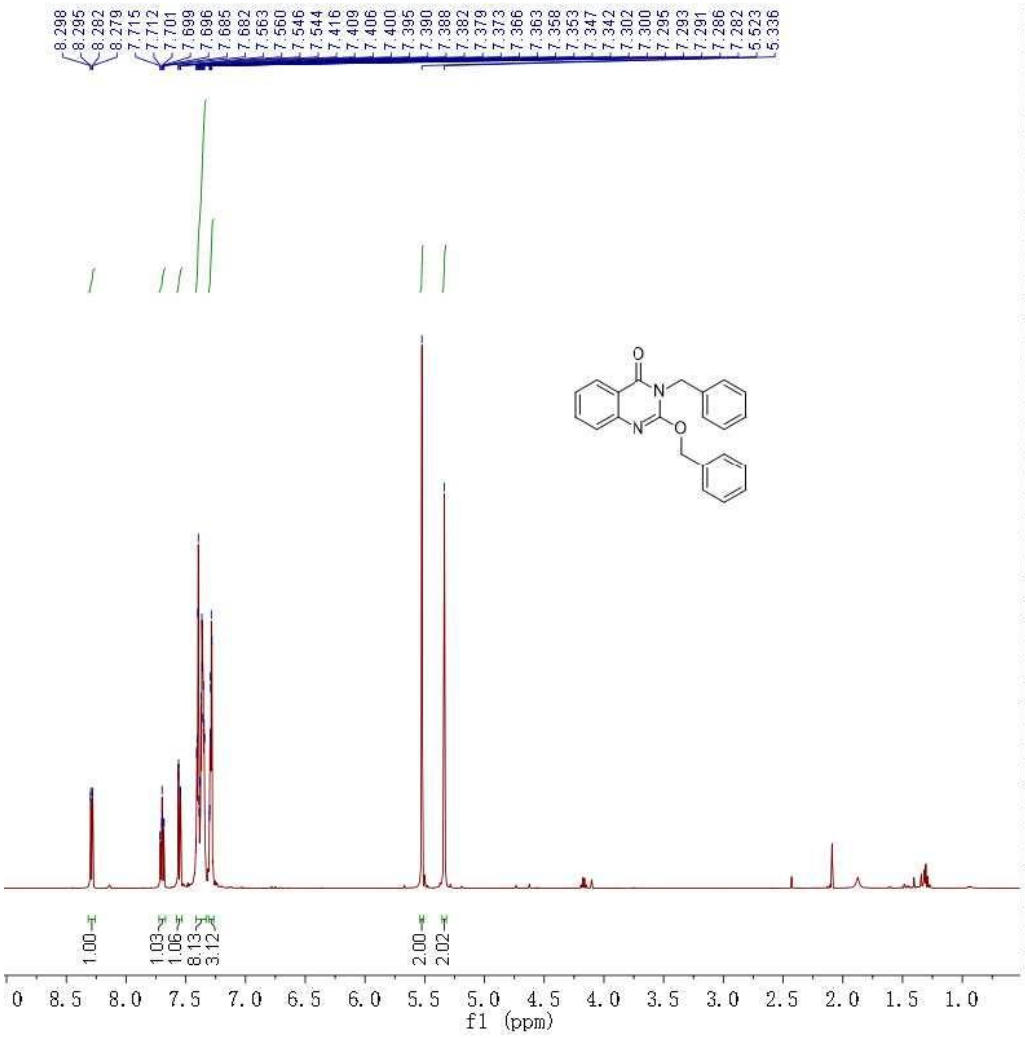


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CD3OD_SPE
3	Temperature	293.5
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	101.0
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536

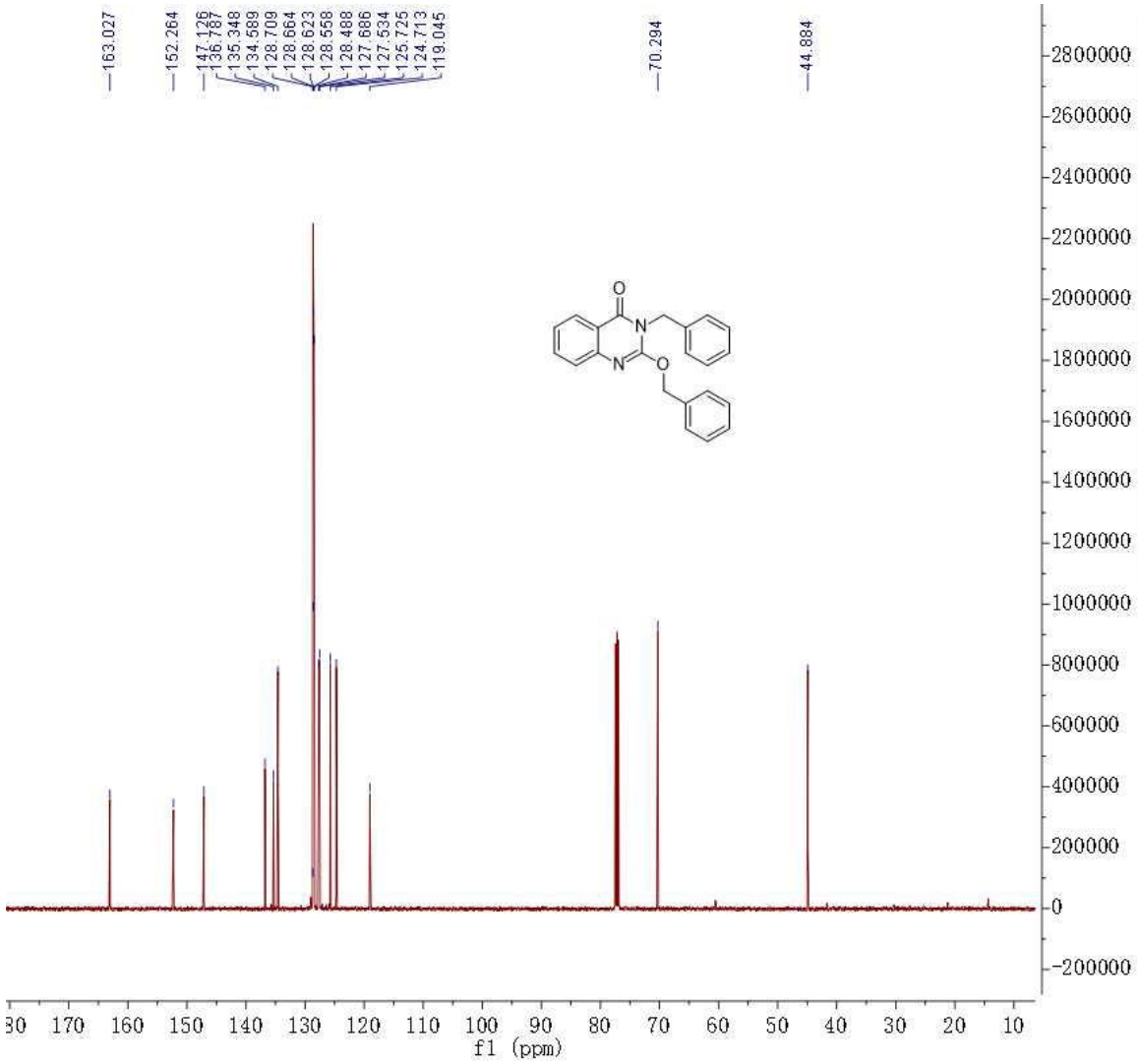


	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CD3OD_SPE
3	Temperature	295.5
4	Pulse Sequence	zgpg30
5	Number of Scans	500
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2308.8
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536

3-benzyl-2-(benzyloxy)quinazolin-4(3H)-one（9）



	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	296.2
4	Pulse Sequence	zg30
5	Number of Scans	16
6	Receiver Gain	67.1
7	Relaxation Delay	1.0000
8	Pulse Width	9.7200
9	Spectrometer Frequency	500.15
10	Spectral Width	10000.0
11	Lowest Frequency	-1911.6
12	Nucleus	1H
13	Acquired Size	32768
14	Spectral Size	65536



	Parameter	Value
1	Instrument	Avance NEO 500
2	Solvent	CDCl3
3	Temperature	296.2
4	Pulse Sequence	zgpg30
5	Number of Scans	200
6	Receiver Gain	101.0
7	Relaxation Delay	2.0000
8	Pulse Width	10.0000
9	Spectrometer Frequency	125.78
10	Spectral Width	30120.5
11	Lowest Frequency	-2475.5
12	Nucleus	13C
13	Acquired Size	32768
14	Spectral Size	65536