

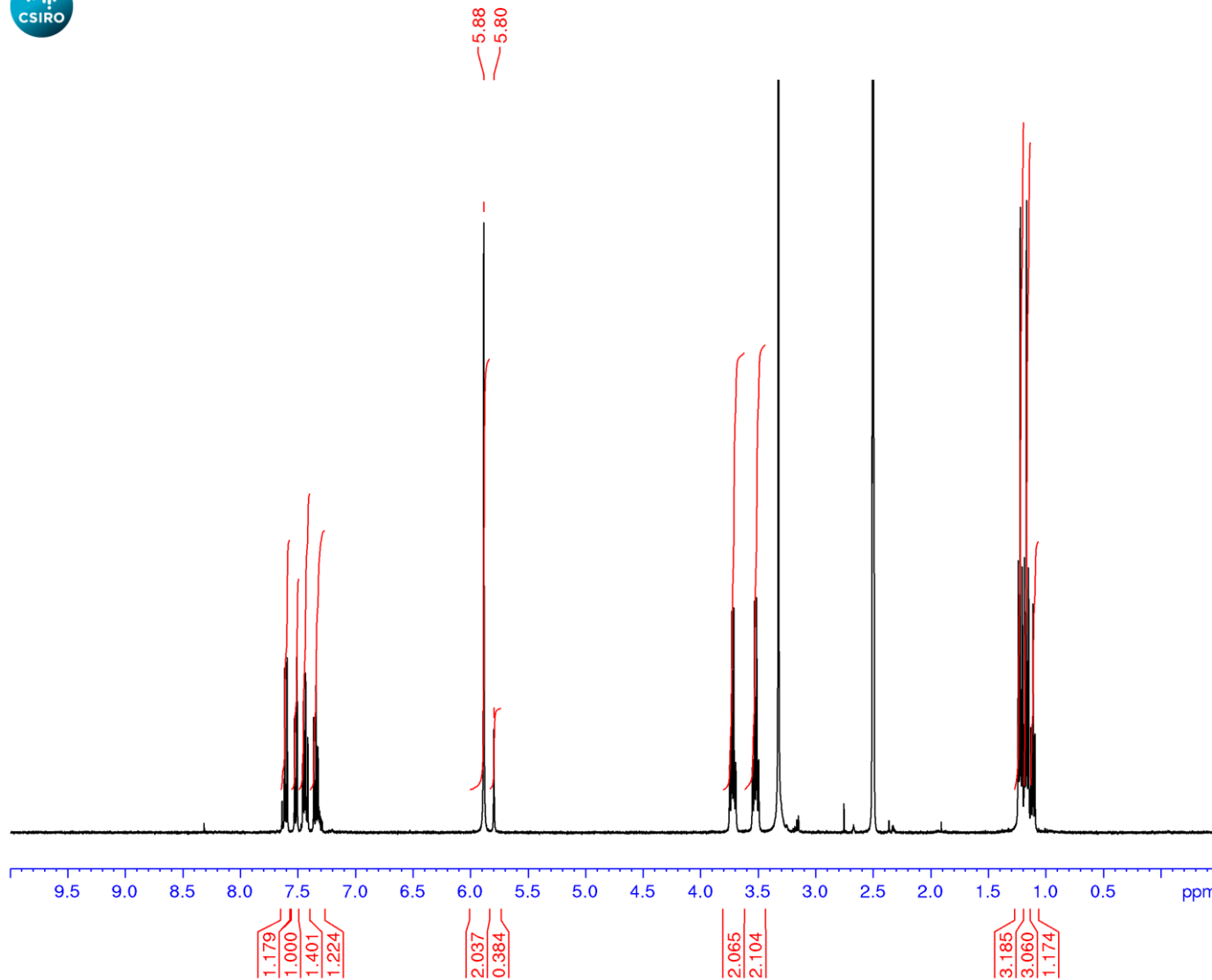
Supporting Information

5-Amino-3-(diethylamino)-5H-benzo[4,5]imidazo[1,2-b] [1,2,4,6]thiatriazine 1,1-dioxide

Victor Tran, Craig M. Forsyth, and Craig L. Francis *

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¹H-NMR spectrum of crude product (precipitate)

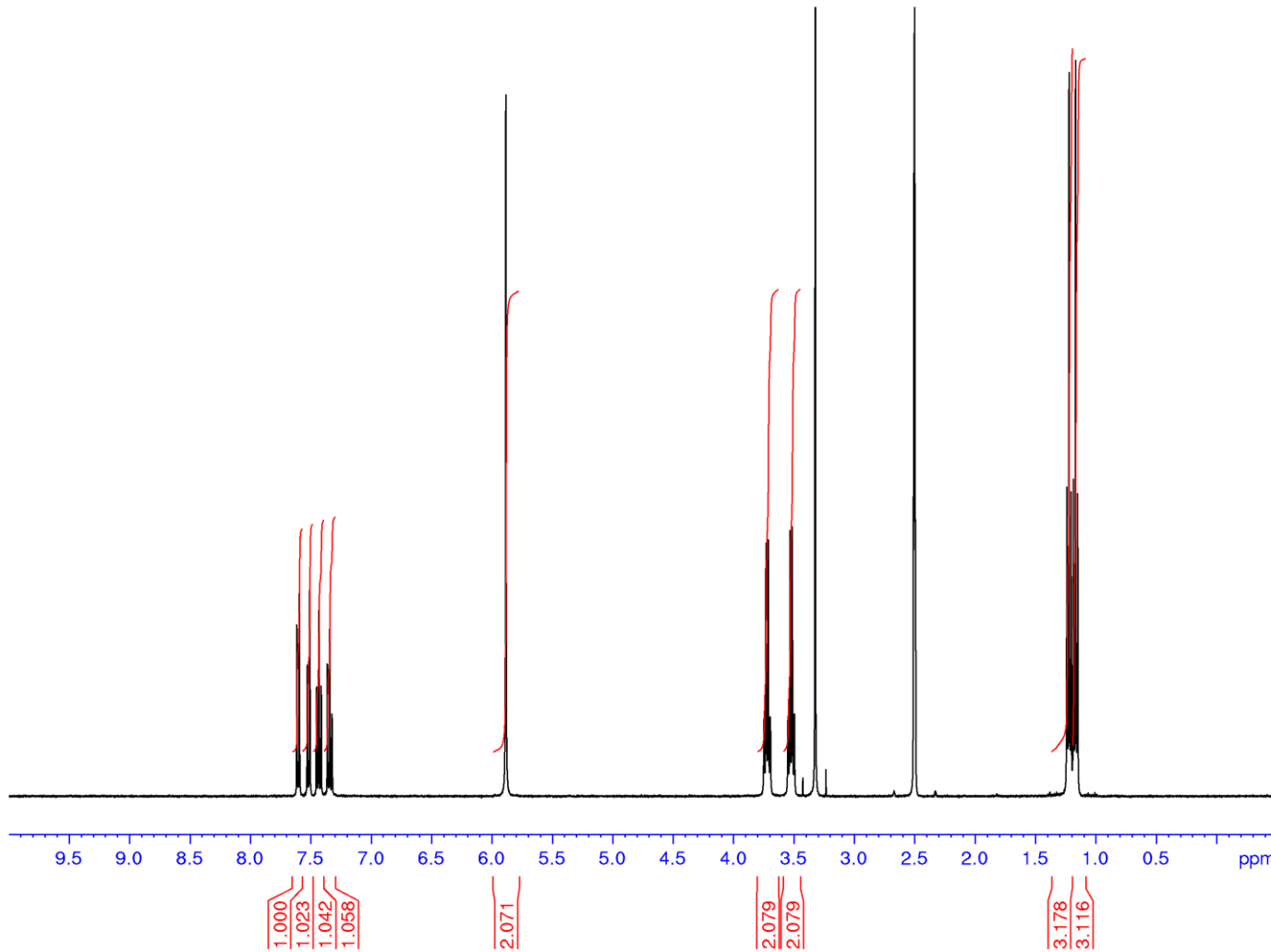


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EXPNO     10
PROCNO    1

F2 - Acquisition Parameters
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PULPROG   zg30
TD         32768
SOLVENT   DMSO
NS         32
DS         2
SWH        6393.862 Hz
FIDRES     0.390250 Hz
AQ         2.5624576 sec
RG         184.42
DW         78.200 usec
DE         6.50 usec
TE         298.2 K
D1         1.00000000 sec
TD0        1
SFO1      400.1328009 MHz
NUC1       1H
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F2 - Processing parameters
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¹H-NMR spectrum of compound 6

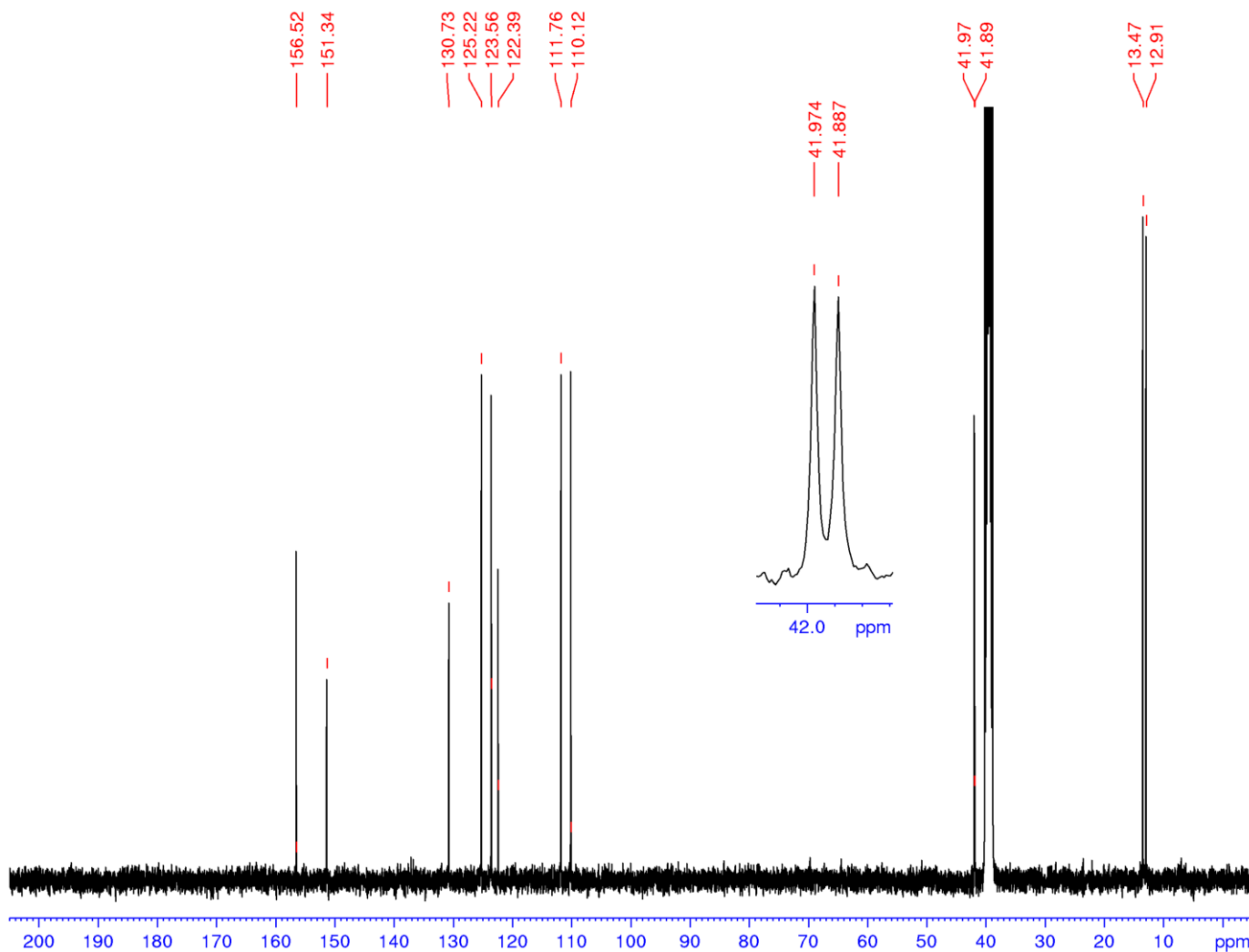


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PROCNO    1

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FIDRES    0.390250 Hz
AQ        2.5624576 sec
RG        184.42
DW        78.200 usec
DE        6.50 usec
TE        298.1 K
D1        1.00000000 sec
TD0       1
SFO1      400.1328009 MHz
NUC1      1H
P1        17.50 usec
PLW1      20.00000000 W

F2 - Processing parameters
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¹³C-NMR spectrum of compound 6



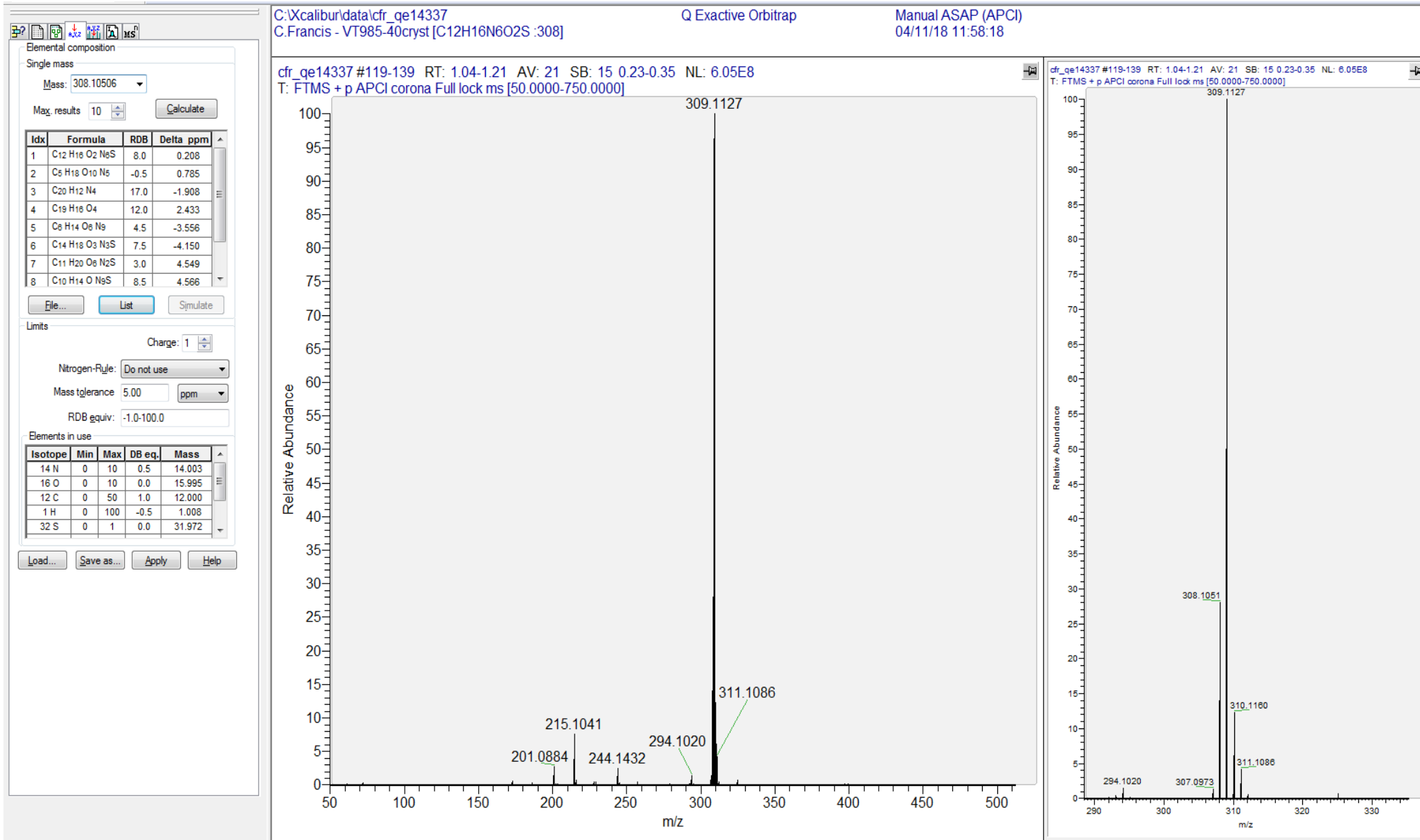
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DE 6.50 usec
TE 298.1 K
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D11 0.03000000 sec
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NUC1 13C
P1 10.00 usec
PLW1 76.21399689 W
SFO2 400.1316005 MHz
NUC2 1H
CPDPRG2 waltz65
PCPD2 90.00 usec
PLW2 16.33499908 W
PLW12 0.16700000 W
PLW13 0.08400000 W

F2 - Processing parameters
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WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40



High resolution mass spectrum of compound 6



[M]⁺

m/z	Theo. Mass	Delta (ppm)	Composition
308.1051	308.1050	0.21	C₁₂ H₁₆ O₂ N₆ S
	308.1048	0.78	C ₅ H ₁₈ O ₁₀ N ₅
	308.1056	-1.91	C ₂₀ H ₁₂ N ₄
	308.1043	2.43	C ₁₉ H ₁₆ O ₄
	308.1062	-3.56	C ₆ H ₁₄ O ₆ N ₉
	308.1063	-4.15	C ₁₄ H ₁₈ O ₃ N ₃ S
	308.1037	4.55	C ₁₁ H ₂₀ O ₆ N ₂ S
	308.1037	4.57	C ₁₀ H ₁₄ O N ₉ S

[M+H]⁺

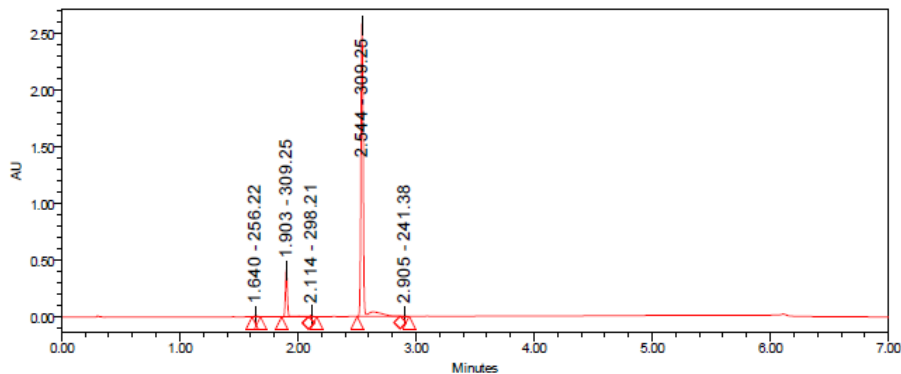
m/z	Theo. Mass	Delta (ppm)	Composition
309.1127	309.1126	0.05	C ₅ H ₁₉ O ₁₀ N ₅
	309.1128	-0.52	C₁₂ H₁₇ O₂ N₆ S
	309.1121	1.70	C ₁₉ H ₁₇ O ₄
	309.1135	-2.63	C ₂₀ H ₁₃ N ₄
	309.1115	3.81	C ₁₁ H ₂₁ O ₆ N ₂ S
	309.1115	3.82	C ₁₀ H ₁₅ O N ₉ S
	309.1140	-4.27	C ₆ H ₁₅ O ₆ N ₉
	309.1113	4.40	C ₃ H ₁₇ O ₉ N ₈
	309.1142	-4.86	C ₁₄ H ₁₉ O ₃ N ₃ S

LC-MS data for crude product (precipitate)

SAMPLE INFORMATION

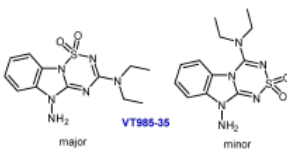
Sample Name: VT985-35 Instrument: Waters Acquity iClass
 Vial: 1:A,5 Acquired By: PDA and QDa detectors
 Injection #: 1 System
 Injection Volume: 1.00 ul Sample Set Name: MK_11_April2018
 Run Time: 7.0 Minutes Acquisition Method: 95% A1 to 100% B1 POSNEG
 Mobile Phase: A1: 100% H2O / 0.1% FA
 B1: 100% ACN / 0.1% FA
 Date Acquired: 11/04/2018 9:08:58 AM EST
 Date Processed: 11/04/2018 9:20:07 AM EST
 Extracted Chromatogram: PDA Spectrum PDA 254.0 nm

Auto-Scaled Chromatogram

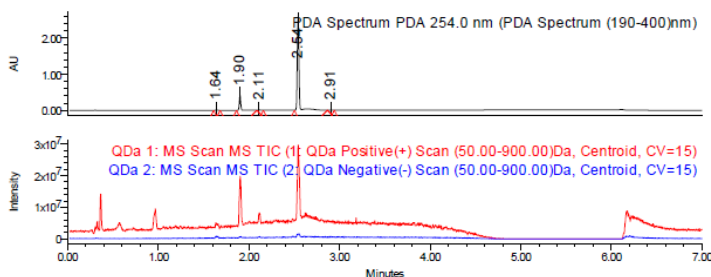
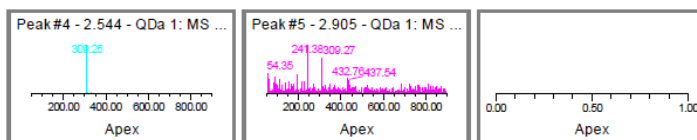
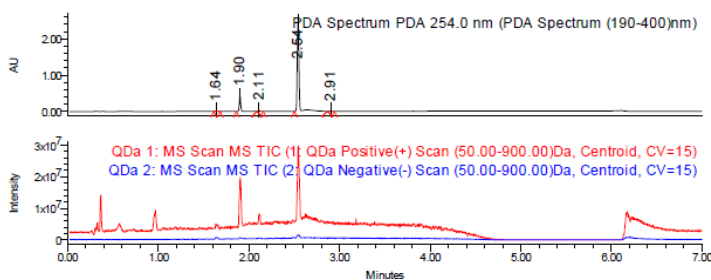
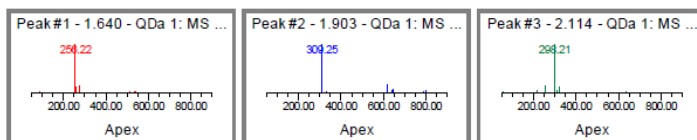


Peak Results

RT	Area	% Area	Height	Base Peak (m/z)
1	18881	0.46	9635	256.22
2	494175	12.02	406297	309.25
3	15900	0.39	12401	298.21
4	3576078	86.98	2577062	309.25
5	6247	0.15	3331	241.38



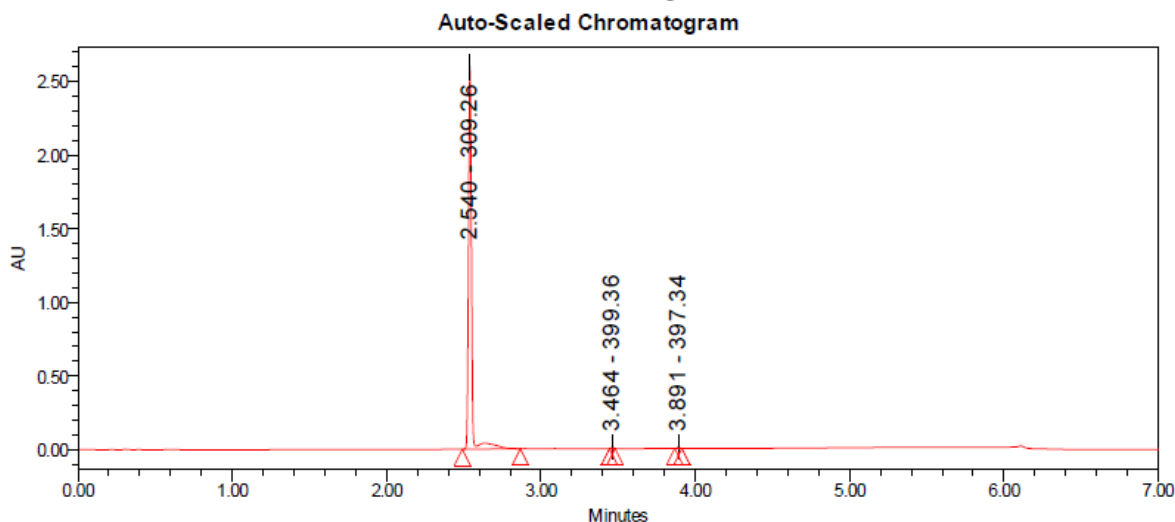
Chemical Formula: C₁₂H₁₃N₃O₂S
 Exact Mass: 308.11
 Molecular Weight: 308.36
 m/z: 308.11 (100.0%), 309.11 (13.0%),
 310.10 (4.5%), 309.10 (2.2%)



LC-MS data for compound 6

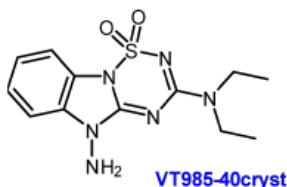
SAMPLE INFORMATION

Sample Name: VT985-40cryst **Instrument:** Waters Acquity iClass
Vial: 1:A,4 **Acquired By:** System
Injection #: 1 **Sample Set Name:** MK_11_April2018
Injection Volume: 0.50 ul
Run Time: 7.0 Minutes **Acquisition Method:** 95% A1 to 100% B1 POSNEG
Date Acquired: 11/04/2018 9:00:28 AM EST **Mobile Phase:** A1: 100% H2O / 0.1% FA
Date Processed: 11/04/2018 9:10:01 AM EST **Extracted Chromatogram:** PDA Spectrum PDA 254.0 nm

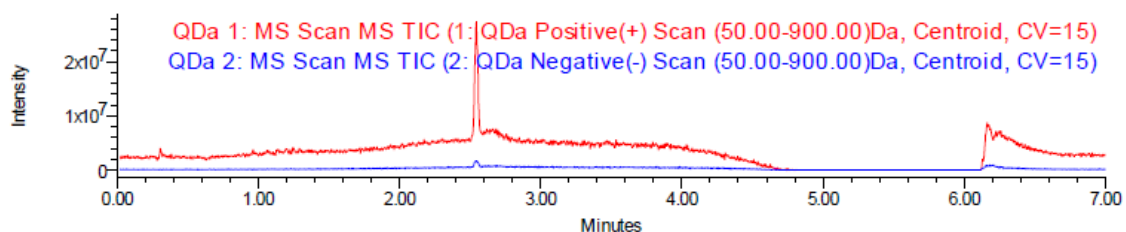
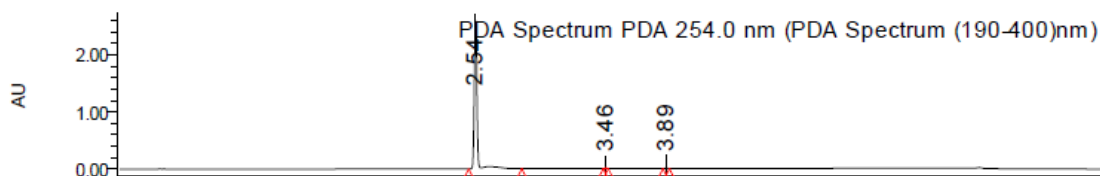
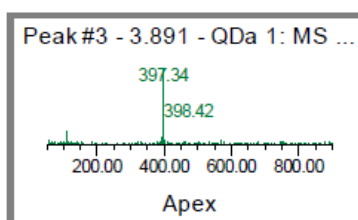
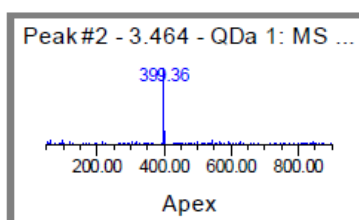
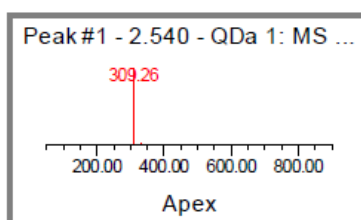


Peak Results

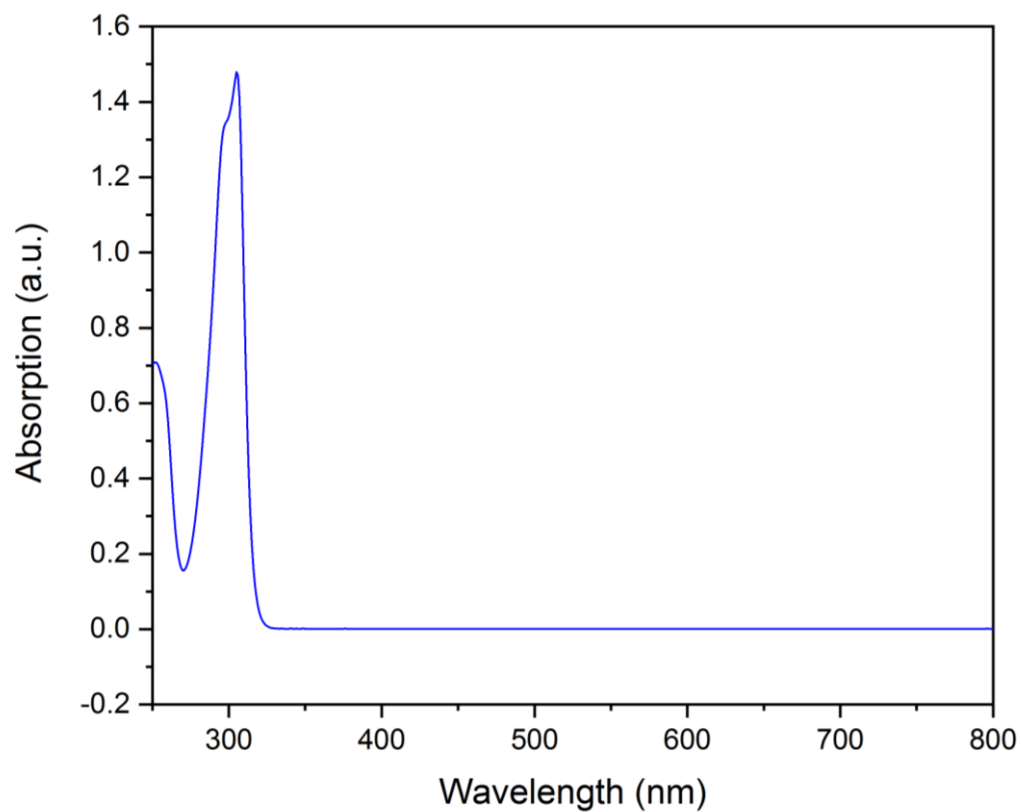
RT	Area	% Area	Height	Base Peak (m/z)
1 2.540	3624941	99.46	2586768	309.26
2 3.464	9399	0.26	8874	399.36
3 3.891	10423	0.29	9162	397.34



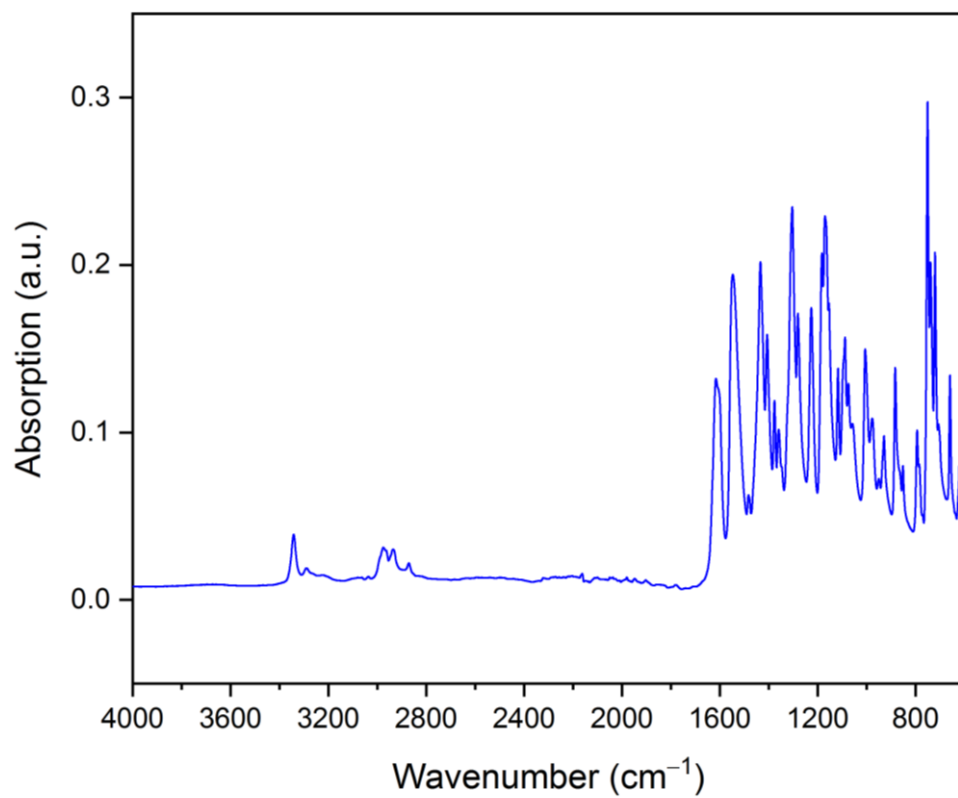
Chemical Formula: C₁₂H₁₆N₆O₂S
Exact Mass: 308.11
Molecular Weight: 308.36
m/z: 308.11 (100.0%), 309.11 (13.0%),
 310.10 (4.5%), 309.10 (2.2%)



UV-vis spectrum of compound **6** (MeOH solution).



IR spectrum of compound **6** (solid sample on laminated diamond).



Single crystal and geometric data for compound **6**.

Table 1. Crystal data and structure refinement.

Identification code	K1_08ABA
Empirical formula	C ₁₂ H ₁₆ N ₆ O ₂ S
Formula weight	308.37
Temperature	123(2) K
Wavelength	0.71073 Å
Crystal system, space group	Monoclinic, <i>P2(1)/c</i>
Unit cell dimensions	a = 15.3907(2) Å alpha = 90 deg. b = 14.9210(2) Å beta = 114.4240(10) deg. c = 13.23680(10) Å gamma = 90 deg.
Volume	2767.73(6) Å ³
Z, Calculated density	8, 1.480 Mg/m ³
Absorption coefficient	0.249 mm ⁻¹
F(000)	1296
Crystal size	0.300 x 0.300 x 0.150 mm
Theta range for data collection	1.453 to 27.494 deg.
Limiting indices	-19<=h<=19, -19<=k<=19, -14<=l<=16
Reflections collected / unique	25274 / 6221 [R(int) = 0.0459]
Completeness to theta = 25.242	99.0 %
Absorption correction	Semi-empirical from equivalents
Max. and min. transmission	0.96 and 0.95
Refinement method	Full-matrix least-squares on F ²
Data / restraints / parameters	6221 / 0 / 395
Goodness-of-fit on F ²	1.058
Final R indices [I>2sigma(I)]	R1 = 0.0431, wR2 = 0.1080
R indices (all data)	R1 = 0.0698, wR2 = 0.1220
Largest diff. peak and hole	0.319 and -0.503 e.Å ⁻³

Table 2. Atomic coordinates ($\times 10^4$) and equivalent isotropic displacement parameters ($\text{\AA}^2 \times 10^3$).

U(eq) is defined as one third of the trace of the orthogonalized Uij tensor.

	x	y	z	U (eq)
S (1)	1433 (1)	5918 (1)	4486 (1)	18 (1)
S (1A)	-3531 (1)	5760 (1)	-360 (1)	18 (1)
O (1)	1572 (1)	6735 (1)	4002 (1)	25 (1)
O (2A)	-2886 (1)	5638 (1)	779 (1)	24 (1)
O (2)	2152 (1)	5726 (1)	5571 (1)	24 (1)
O (1A)	-3288 (1)	6462 (1)	-931 (1)	28 (1)
N (2)	1220 (1)	5094 (1)	3713 (1)	23 (1)
N (2A)	-3784 (1)	4854 (1)	-985 (1)	21 (1)
N (3)	268 (1)	4267 (1)	2204 (1)	20 (1)
N (3A)	-4705 (1)	4050 (1)	-2527 (1)	19 (1)
N (4)	-507 (1)	5115 (1)	3038 (1)	18 (1)
N (4A)	-5482 (1)	5134 (1)	-1964 (1)	18 (1)
N (5)	-1173 (1)	6119 (1)	3902 (1)	18 (1)
N (5A)	-6144 (1)	6246 (1)	-1218 (1)	18 (1)
N (6)	-2144 (1)	5993 (1)	3228 (1)	22 (1)
N (6A)	-7111 (1)	6158 (1)	-1934 (1)	24 (1)
N (10)	398 (1)	6044 (1)	4628 (1)	18 (1)
N (10A)	-4590 (1)	6044 (1)	-354 (1)	18 (1)
C (3)	331 (1)	4843 (1)	3009 (1)	18 (1)
C (3A)	-4650 (1)	4705 (1)	-1815 (1)	17 (1)
C (4)	-428 (1)	5702 (1)	3804 (1)	16 (1)
C (4A)	-5409 (1)	5753 (1)	-1231 (1)	16 (1)
C (5)	-841 (1)	6780 (1)	4725 (1)	18 (1)
C (5A)	-5806 (1)	6873 (1)	-351 (1)	18 (1)
C (6)	-1330 (1)	7404 (1)	5064 (2)	22 (1)
C (6A)	-6287 (1)	7510 (1)	-16 (2)	22 (1)
C (7)	-780 (1)	7998 (1)	5878 (2)	24 (1)
C (7A)	-5726 (1)	8041 (1)	877 (2)	24 (1)
C (8)	213 (1)	7966 (1)	6341 (2)	26 (1)
C (8A)	-4740 (1)	7940 (1)	1407 (2)	25 (1)
C (9)	704 (1)	7330 (1)	6009 (1)	23 (1)
C (9A)	-4264 (1)	7292 (1)	1072 (2)	23 (1)
C (10)	152 (1)	6745 (1)	5184 (1)	18 (1)
C (10A)	-4823 (1)	6766 (1)	185 (1)	17 (1)
C (31)	-635 (1)	3826 (1)	1502 (2)	23 (1)
C (31A)	-5630 (1)	3758 (1)	-3386 (1)	23 (1)
C (32)	-1167 (2)	4312 (1)	420 (2)	33 (1)
C (32A)	-5928 (2)	4284 (1)	-4450 (2)	32 (1)
C (33)	1093 (1)	4105 (1)	1937 (2)	24 (1)
C (33A)	-3821 (1)	3634 (1)	-2478 (2)	26 (1)
C (34)	1726 (1)	3341 (1)	2584 (2)	32 (1)
C (34A)	-3283 (2)	4225 (1)	-2959 (2)	34 (1)

Table 3. Bond lengths [Å] and angles [deg].

S (1) -O (2)	1.4336 (12)
S (1) -O (1)	1.4337 (13)
S (1) -N (2)	1.5458 (15)
S (1) -N (10)	1.6899 (14)
S (1A) -O (1A)	1.4278 (13)
S (1A) -O (2A)	1.4334 (12)
S (1A) -N (2A)	1.5485 (15)
S (1A) -N (10A)	1.6871 (15)
N (2) -C (3)	1.352 (2)
N (2A) -C (3A)	1.350 (2)
N (3) -C (3)	1.341 (2)
N (3) -C (31)	1.470 (2)
N (3) -C (33)	1.472 (2)
N (3A) -C (3A)	1.335 (2)
N (3A) -C (33A)	1.472 (2)
N (3A) -C (31A)	1.473 (2)
N (4) -C (4)	1.307 (2)
N (4) -C (3)	1.367 (2)
N (4A) -C (4A)	1.309 (2)
N (4A) -C (3A)	1.371 (2)
N (5) -C (4)	1.357 (2)
N (5) -C (5)	1.400 (2)
N (5) -N (6)	1.401 (2)
N (5A) -C (4A)	1.356 (2)
N (5A) -C (5A)	1.402 (2)
N (5A) -N (6A)	1.4023 (19)
N (6) -H (6N)	0.88 (2)
N (6) -H (7N)	0.89 (2)
N (6A) -H (6AN)	0.89 (2)
N (6A) -H (7AN)	0.91 (2)
N (10) -C (4)	1.385 (2)
N (10) -C (10)	1.417 (2)
N (10A) -C (4A)	1.384 (2)
N (10A) -C (10A)	1.418 (2)
C (5) -C (6)	1.384 (2)
C (5) -C (10)	1.392 (2)
C (5A) -C (6A)	1.386 (2)
C (5A) -C (10A)	1.390 (2)
C (6) -C (7)	1.382 (3)
C (6) -H (6)	0.9500
C (6A) -C (7A)	1.387 (3)
C (6A) -H (6A)	0.9500
C (7) -C (8)	1.392 (3)
C (7) -H (7)	0.9500
C (7A) -C (8A)	1.392 (3)
C (7A) -H (7A)	0.9500
C (8) -C (9)	1.393 (3)
C (8) -H (8)	0.9500
C (8A) -C (9A)	1.392 (3)
C (8A) -H (8A)	0.9500
C (9) -C (10)	1.382 (2)
C (9) -H (9)	0.9500
C (9A) -C (10A)	1.379 (2)
C (9A) -H (9A)	0.9500
C (31) -C (32)	1.508 (3)
C (31) -H (31A)	0.9900
C (31) -H (31B)	0.9900
C (31A) -C (32A)	1.509 (3)
C (31A) -H (31C)	0.9900
C (31A) -H (31D)	0.9900
C (32) -H (32A)	0.9800
C (32) -H (32B)	0.9800
C (32) -H (32C)	0.9800
C (32A) -H (32D)	0.9800
C (32A) -H (32E)	0.9800
C (32A) -H (32F)	0.9800
C (33) -C (34)	1.514 (3)

C (33) -H (33A)	0.9900
C (33) -H (33B)	0.9900
C (33A) -C (34A)	1.518 (3)
C (33A) -H (33C)	0.9900
C (33A) -H (33D)	0.9900
C (34) -H (34A)	0.9800
C (34) -H (34B)	0.9800
C (34) -H (34C)	0.9800
C (34A) -H (34D)	0.9800
C (34A) -H (34E)	0.9800
C (34A) -H (34F)	0.9800
O (2) -S (1) -O (1)	114.94 (8)
O (2) -S (1) -N (2)	111.64 (8)
O (1) -S (1) -N (2)	114.28 (8)
O (2) -S (1) -N (10)	106.44 (7)
O (1) -S (1) -N (10)	106.05 (7)
N (2) -S (1) -N (10)	102.16 (8)
O (1A) -S (1A) -O (2A)	115.53 (8)
O (1A) -S (1A) -N (2A)	114.91 (8)
O (2A) -S (1A) -N (2A)	111.23 (8)
O (1A) -S (1A) -N (10A)	106.44 (8)
O (2A) -S (1A) -N (10A)	106.09 (7)
N (2A) -S (1A) -N (10A)	101.04 (8)
C (3) -N (2) -S (1)	123.59 (13)
C (3A) -N (2A) -S (1A)	121.59 (13)
C (3) -N (3) -C (31)	121.87 (15)
C (3) -N (3) -C (33)	120.67 (15)
C (31) -N (3) -C (33)	117.30 (14)
C (3A) -N (3A) -C (33A)	119.32 (15)
C (3A) -N (3A) -C (31A)	121.37 (14)
C (33A) -N (3A) -C (31A)	119.28 (14)
C (4) -N (4) -C (3)	115.74 (15)
C (4A) -N (4A) -C (3A)	115.69 (14)
C (4) -N (5) -C (5)	110.30 (14)
C (4) -N (5) -N (6)	126.75 (14)
C (5) -N (5) -N (6)	122.70 (14)
C (4A) -N (5A) -C (5A)	110.11 (14)
C (4A) -N (5A) -N (6A)	126.76 (14)
C (5A) -N (5A) -N (6A)	123.12 (14)
N (5) -N (6) -H (6N)	109.9 (14)
N (5) -N (6) -H (7N)	108.4 (13)
H (6N) -N (6) -H (7N)	111.5 (19)
N (5A) -N (6A) -H (6AN)	108.9 (13)
N (5A) -N (6A) -H (7AN)	107.5 (14)
H (6AN) -N (6A) -H (7AN)	111.7 (19)
C (4) -N (10) -C (10)	109.01 (14)
C (4) -N (10) -S (1)	118.14 (12)
C (10) -N (10) -S (1)	127.35 (12)
C (4A) -N (10A) -C (10A)	109.22 (14)
C (4A) -N (10A) -S (1A)	117.61 (12)
C (10A) -N (10A) -S (1A)	129.71 (12)
N (3) -C (3) -N (2)	116.41 (15)
N (3) -C (3) -N (4)	116.97 (15)
N (2) -C (3) -N (4)	126.62 (16)
N (3A) -C (3A) -N (2A)	116.60 (15)
N (3A) -C (3A) -N (4A)	117.23 (15)
N (2A) -C (3A) -N (4A)	126.09 (16)
N (4) -C (4) -N (5)	124.78 (15)
N (4) -C (4) -N (10)	128.22 (16)
N (5) -C (4) -N (10)	106.96 (15)
N (4A) -C (4A) -N (5A)	125.13 (15)
N (4A) -C (4A) -N (10A)	127.78 (15)
N (5A) -C (4A) -N (10A)	107.08 (14)
C (6) -C (5) -C (10)	122.01 (16)
C (6) -C (5) -N (5)	130.83 (16)
C (10) -C (5) -N (5)	107.12 (15)
C (6A) -C (5A) -C (10A)	121.82 (16)
C (6A) -C (5A) -N (5A)	130.81 (16)
C (10A) -C (5A) -N (5A)	107.37 (15)
C (7) -C (6) -C (5)	116.34 (17)
C (7) -C (6) -H (6)	121.8

C (5) -C (6) -H (6)	121.8
C (5A) -C (6A) -C (7A)	116.00 (17)
C (5A) -C (6A) -H (6A)	122.0
C (7A) -C (6A) -H (6A)	122.0
C (6) -C (7) -C (8)	121.94 (17)
C (6) -C (7) -H (7)	119.0
C (8) -C (7) -H (7)	119.0
C (6A) -C (7A) -C (8A)	122.19 (17)
C (6A) -C (7A) -H (7A)	118.9
C (8A) -C (7A) -H (7A)	118.9
C (7) -C (8) -C (9)	121.63 (17)
C (7) -C (8) -H (8)	119.2
C (9) -C (8) -H (8)	119.2
C (9A) -C (8A) -C (7A)	121.44 (17)
C (9A) -C (8A) -H (8A)	119.3
C (7A) -C (8A) -H (8A)	119.3
C (10) -C (9) -C (8)	116.29 (17)
C (10) -C (9) -H (9)	121.9
C (8) -C (9) -H (9)	121.9
C (10A) -C (9A) -C (8A)	116.25 (17)
C (10A) -C (9A) -H (9A)	121.9
C (8A) -C (9A) -H (9A)	121.9
C (9) -C (10) -C (5)	121.77 (17)
C (9) -C (10) -N (10)	131.85 (16)
C (5) -C (10) -N (10)	106.37 (14)
C (9A) -C (10A) -C (5A)	122.29 (17)
C (9A) -C (10A) -N (10A)	131.55 (16)
C (5A) -C (10A) -N (10A)	106.15 (14)
N (3) -C (31) -C (32)	112.69 (16)
N (3) -C (31) -H (31A)	109.1
C (32) -C (31) -H (31A)	109.1
N (3) -C (31) -H (31B)	109.1
C (32) -C (31) -H (31B)	109.1
H (31A) -C (31) -H (31B)	107.8
N (3A) -C (31A) -C (32A)	112.96 (15)
N (3A) -C (31A) -H (31C)	109.0
C (32A) -C (31A) -H (31C)	109.0
N (3A) -C (31A) -H (31D)	109.0
C (32A) -C (31A) -H (31D)	109.0
H (31C) -C (31A) -H (31D)	107.8
C (31) -C (32) -H (32A)	109.5
C (31) -C (32) -H (32B)	109.5
H (32A) -C (32) -H (32B)	109.5
C (31) -C (32) -H (32C)	109.5
H (32A) -C (32) -H (32C)	109.5
H (32B) -C (32) -H (32C)	109.5
C (31A) -C (32A) -H (32D)	109.5
C (31A) -C (32A) -H (32E)	109.5
H (32D) -C (32A) -H (32E)	109.5
C (31A) -C (32A) -H (32F)	109.5
H (32D) -C (32A) -H (32F)	109.5
H (32E) -C (32A) -H (32F)	109.5
N (3) -C (33) -C (34)	113.84 (16)
N (3) -C (33) -H (33A)	108.8
C (34) -C (33) -H (33A)	108.8
N (3) -C (33) -H (33B)	108.8
C (34) -C (33) -H (33B)	108.8
H (33A) -C (33) -H (33B)	107.7
N (3A) -C (33A) -C (34A)	113.03 (16)
N (3A) -C (33A) -H (33C)	109.0
C (34A) -C (33A) -H (33C)	109.0
N (3A) -C (33A) -H (33D)	109.0
C (34A) -C (33A) -H (33D)	109.0
H (33C) -C (33A) -H (33D)	107.8
C (33) -C (34) -H (34A)	109.5
C (33) -C (34) -H (34B)	109.5
H (34A) -C (34) -H (34B)	109.5
C (33) -C (34) -H (34C)	109.5
H (34A) -C (34) -H (34C)	109.5
H (34B) -C (34) -H (34C)	109.5
C (33A) -C (34A) -H (34D)	109.5
C (33A) -C (34A) -H (34E)	109.5

H (34D) -C (34A) -H (34E)	109.5
C (33A) -C (34A) -H (34F)	109.5
H (34D) -C (34A) -H (34F)	109.5
H (34E) -C (34A) -H (34F)	109.5

Table 4. Anisotropic displacement parameters ($\text{\AA}^2 \times 10^3$).

The anisotropic displacement factor exponent takes the form:

$$-2 \pi^2 [h^2 a^{*2} U_{11} + \dots + 2 h k a^* b^* U_{12}]$$

	U11	U22	U33	U23	U13	U12
S (1)	14 (1)	21 (1)	15 (1)	-2 (1)	4 (1)	0 (1)
S (1A)	14 (1)	23 (1)	15 (1)	-1 (1)	4 (1)	-1 (1)
O (1)	26 (1)	25 (1)	26 (1)	3 (1)	11 (1)	-3 (1)
O (2A)	19 (1)	33 (1)	16 (1)	-2 (1)	2 (1)	4 (1)
O (2)	18 (1)	32 (1)	16 (1)	-1 (1)	1 (1)	4 (1)
O (1A)	27 (1)	31 (1)	26 (1)	1 (1)	12 (1)	-9 (1)
N (2)	18 (1)	27 (1)	23 (1)	-9 (1)	7 (1)	1 (1)
N (2A)	18 (1)	23 (1)	19 (1)	-4 (1)	6 (1)	2 (1)
N (3)	18 (1)	22 (1)	20 (1)	-5 (1)	8 (1)	-1 (1)
N (3A)	16 (1)	21 (1)	20 (1)	-4 (1)	8 (1)	-1 (1)
N (4)	18 (1)	18 (1)	17 (1)	-2 (1)	7 (1)	-1 (1)
N (4A)	17 (1)	20 (1)	15 (1)	-2 (1)	6 (1)	0 (1)
N (5)	15 (1)	19 (1)	17 (1)	-3 (1)	5 (1)	0 (1)
N (5A)	15 (1)	21 (1)	15 (1)	-2 (1)	3 (1)	2 (1)
N (6)	15 (1)	27 (1)	21 (1)	-3 (1)	4 (1)	-1 (1)
N (6A)	15 (1)	32 (1)	20 (1)	-5 (1)	2 (1)	2 (1)
N (10)	15 (1)	20 (1)	17 (1)	-3 (1)	6 (1)	0 (1)
N (10A)	16 (1)	20 (1)	17 (1)	-3 (1)	6 (1)	0 (1)
C (3)	19 (1)	17 (1)	17 (1)	0 (1)	7 (1)	0 (1)
C (3A)	19 (1)	19 (1)	15 (1)	1 (1)	8 (1)	-2 (1)
C (4)	15 (1)	19 (1)	15 (1)	2 (1)	5 (1)	0 (1)
C (4A)	15 (1)	17 (1)	13 (1)	3 (1)	4 (1)	1 (1)
C (5)	21 (1)	19 (1)	14 (1)	1 (1)	7 (1)	-1 (1)
C (5A)	21 (1)	17 (1)	15 (1)	1 (1)	7 (1)	-1 (1)
C (6)	25 (1)	20 (1)	22 (1)	3 (1)	12 (1)	5 (1)
C (6A)	24 (1)	21 (1)	22 (1)	4 (1)	9 (1)	5 (1)
C (7)	36 (1)	20 (1)	19 (1)	1 (1)	15 (1)	6 (1)
C (7A)	35 (1)	19 (1)	21 (1)	-1 (1)	15 (1)	2 (1)
C (8)	37 (1)	22 (1)	18 (1)	-5 (1)	11 (1)	-3 (1)
C (8A)	33 (1)	23 (1)	20 (1)	-5 (1)	11 (1)	-5 (1)
C (9)	27 (1)	24 (1)	17 (1)	-2 (1)	7 (1)	-1 (1)
C (9A)	25 (1)	23 (1)	20 (1)	-1 (1)	6 (1)	-2 (1)
C (10)	23 (1)	17 (1)	15 (1)	1 (1)	9 (1)	2 (1)
C (10A)	21 (1)	15 (1)	16 (1)	1 (1)	8 (1)	2 (1)
C (31)	22 (1)	22 (1)	26 (1)	-9 (1)	10 (1)	-4 (1)
C (31A)	20 (1)	24 (1)	24 (1)	-8 (1)	8 (1)	-4 (1)
C (32)	29 (1)	35 (1)	29 (1)	-6 (1)	6 (1)	4 (1)
C (32A)	34 (1)	35 (1)	22 (1)	-4 (1)	6 (1)	1 (1)
C (33)	25 (1)	27 (1)	23 (1)	-4 (1)	12 (1)	2 (1)
C (33A)	24 (1)	27 (1)	29 (1)	-7 (1)	15 (1)	1 (1)
C (34)	32 (1)	38 (1)	25 (1)	0 (1)	12 (1)	9 (1)
C (34A)	30 (1)	41 (1)	37 (1)	-5 (1)	21 (1)	-4 (1)

Table 5. Hydrogen coordinates ($\times 10^4$) and isotropic displacement parameters ($\text{\AA}^2 \times 10^3$).

	x	y	z	U (eq)
H (6)	-2008	7423	4754	26
H (6A)	-6960	7579	-375	26
H (7)	-1088	8442	6128	29
H (7A)	-6025	8488	1135	28
H (8)	564	8388	6898	31
H (8A)	-4384	8323	2011	30
H (9)	1381	7300	6331	28
H (9A)	-3592	7216	1435	28
H (31A)	-1046	3793	1912	28
H (31B)	-501	3206	1343	28
H (31C)	-6126	3822	-3097	28
H (31D)	-5588	3115	-3547	28
H (32A)	-1761	3992	-16	49
H (32B)	-1315	4923	572	49
H (32C)	-770	4336	2	49
H (32D)	-6545	4062	-4990	48
H (32E)	-5985	4920	-4301	48
H (32F)	-5447	4212	-4751	48
H (33A)	1480	4659	2087	29
H (33B)	858	3974	1134	29
H (33C)	-3982	3061	-2890	31
H (33D)	-3401	3497	-1695	31
H (34A)	2258	3271	2366	47
H (34B)	1976	3472	3380	47
H (34C)	1354	2786	2426	47
H (34D)	-2704	3916	-2904	50
H (34E)	-3690	4352	-3739	50
H (34F)	-3109	4789	-2543	50
H (6AN)	-7164 (14)	6114 (13)	-2628 (18)	27 (6)
H (6N)	-2348 (16)	5500 (15)	3429 (17)	38 (6)
H (7AN)	-7335 (16)	5661 (14)	-1726 (17)	33 (6)
H (7N)	-2220 (14)	5964 (13)	2521 (18)	24 (6)

Table 6. Hydrogen bonds [\AA and deg.].

D-H...A	d(D-H)	d(H...A)	d(D...A)	<(DHA)
N(6)-H(7N)...O(2A)	0.89(2)	2.16(2)	3.005(2)	158.2(17)
N(6)-H(6N)...O(2)#1	0.88(2)	2.20(2)	3.020(2)	153.4(19)
N(6A)-H(6AN)...O(2)#2	0.89(2)	2.25(2)	3.083(2)	156.4(17)
N(6A)-H(7AN)...O(2A)#3	0.91(2)	2.26(2)	3.086(2)	151.9(19)

Symmetry transformations used to generate equivalent atoms:

#1 $-x, -y+1, -z+1$ #2 $x-1, y, z-1$ #3 $-x-1, -y+1, -z$