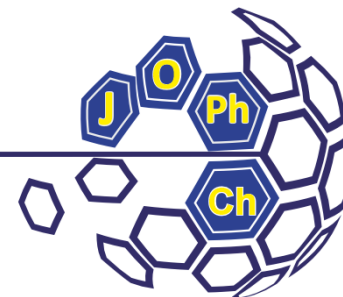


Supporting Information

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An Efficient Method for the Synthesis of Benzofused Five-Membered Cyclic Sulfamates

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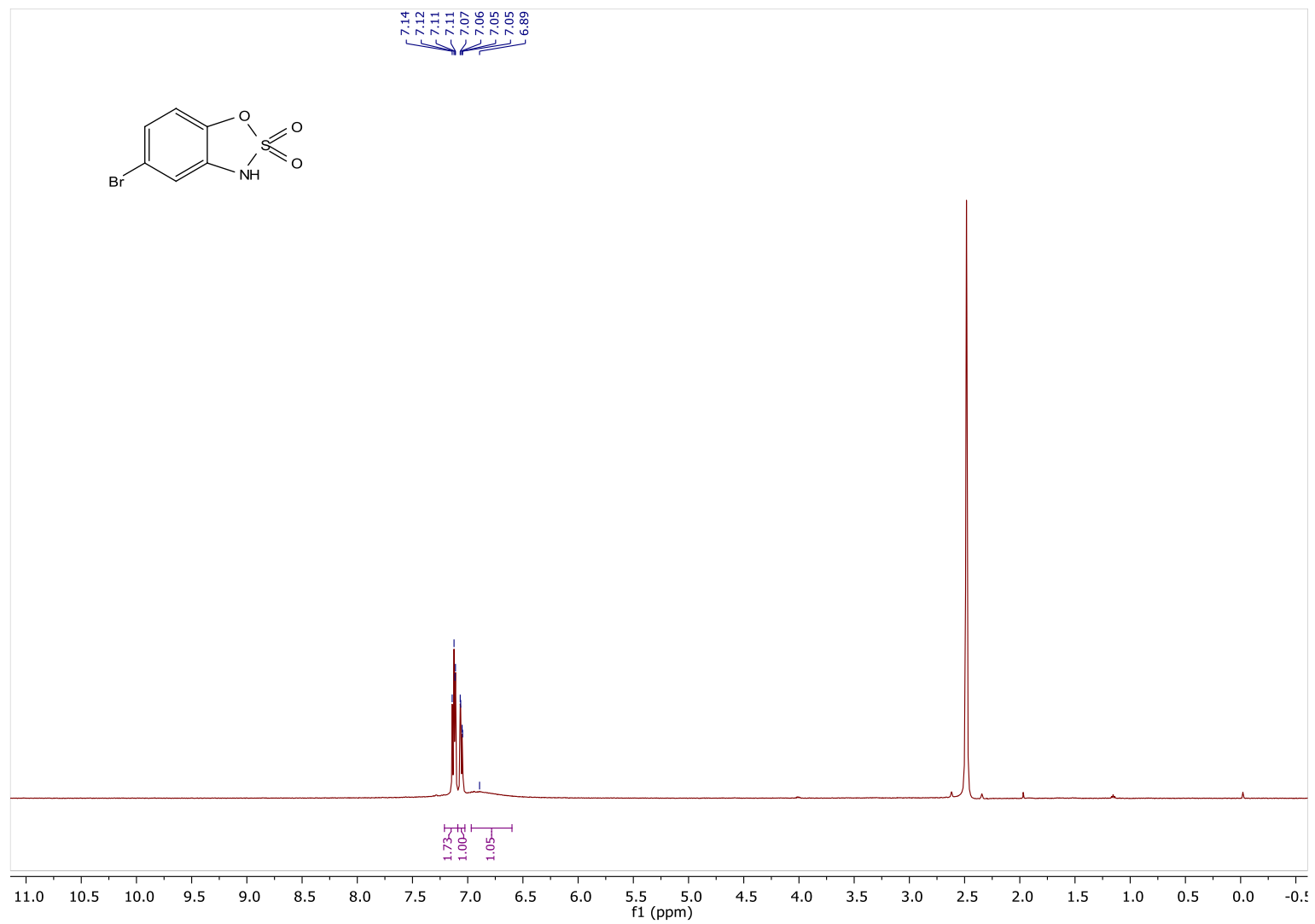
Virtual library	S2
5-Bromo-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazole 2,2-dioxide (3a) ¹ H NMR (500 MHz, DMSO- <i>d</i> ₆)	S4
5-Bromo-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazole 2,2-dioxide (3a) ¹³ C NMR (126 MHz, DMSO- <i>d</i> ₆)	S5
6-Bromo-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazole 2,2-dioxide (3b) ¹ H NMR (500 MHz, DMSO- <i>d</i> ₆)	S6
6-Bromo-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazole 2,2-dioxide (3b) ¹³ C NMR (126 MHz, DMSO- <i>d</i> ₆)	S7
7-Bromo-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazole 2,2-dioxide (3c) ¹ H NMR (500 MHz, DMSO- <i>d</i> ₆)	S8
7-Bromo-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazole 2,2-dioxide (3c) ¹³ C NMR (126 MHz, DMSO- <i>d</i> ₆)	S9
6-Nitro-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazole 2,2-dioxide (3d) ¹ H NMR (400 MHz, DMSO- <i>d</i> ₆)	S10
6-Nitro-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazole 2,2-dioxide (3d) ¹³ C NMR (101 MHz, DMSO- <i>d</i> ₆)	S11
Methyl 3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazole-5-carboxylate 2,2-dioxide (3e) ¹ H NMR (400 MHz, DMSO- <i>d</i> ₆)	S12
6-Amino-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazole 2,2-dioxide (3f) ¹ H NMR (500 MHz, DMSO- <i>d</i> ₆)	S13
6-Amino-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazole 2,2-dioxide (3f) ¹³ C NMR (126 MHz, DMSO- <i>d</i> ₆)	S14
3 <i>H</i> -Benzo[<i>d</i>][1,2,3]oxathiazole-5-carboxylic acid 2,2-dioxide (3g) ¹ H NMR (500 MHz, DMSO- <i>d</i> ₆)	S15
3 <i>H</i> -Benzo[<i>d</i>][1,2,3]oxathiazole-5-carboxylic acid 2,2-dioxide (3g) ¹³ C NMR (126 MHz, DMSO- <i>d</i> ₆)	S16
Cyclopropyl(2,2-dioxido-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazol-3-yl)methanone (5a) ¹ H NMR (400 MHz, DMSO- <i>d</i> ₆)	S17
Cyclopropyl(2,2-dioxido-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazol-3-yl)methanone (5a) ¹³ C NMR (126 MHz, DMSO- <i>d</i> ₆)	S18
2-(2,2-Dioxido-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazol-3-yl)nicotinonitrile (5b) ¹ H NMR (400 MHz, DMSO- <i>d</i> ₆)	S19
2-(2,2-Dioxido-3 <i>H</i> -benzo[<i>d</i>][1,2,3]oxathiazol-3-yl)nicotinonitrile (5b) ¹³ C NMR (126 MHz, DMSO- <i>d</i> ₆)	S20

Virtual library

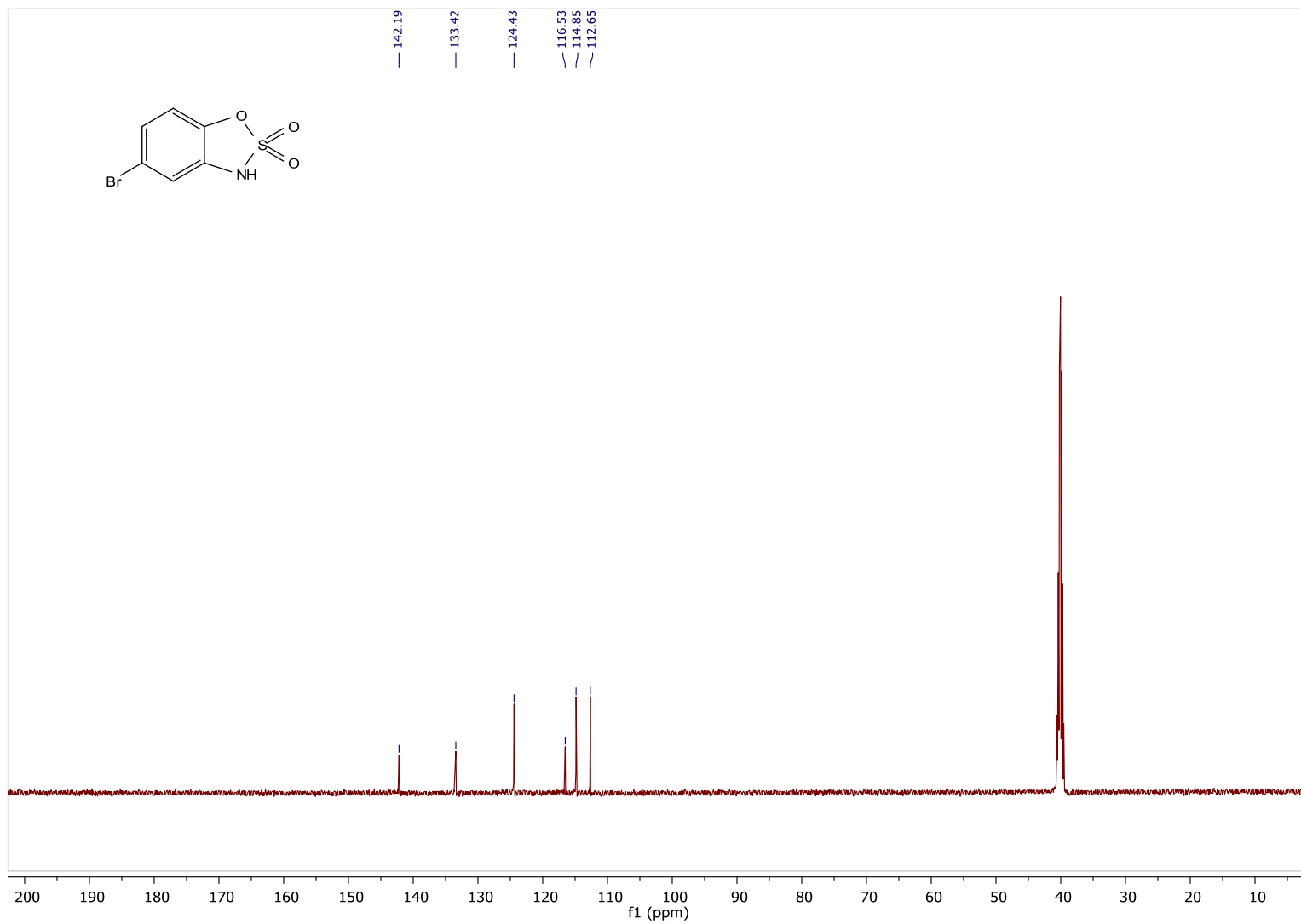
Table S1. Virtual library data table.

Entry No.	Smiles	MW	LogP	TPSA
1	<chem>O=C(Nc1ccc2NS(=O)(=O)Oc2c1)c1ccnc1</chem>	291.28	-0.13	97.39
2	<chem>COCC(=O)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	258.25	-0.41	93.73
3	<chem>Cc1cc(no1)C(=O)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	295.27	0.57	110.53
4	<chem>CC(C)C(=O)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	256.28	1.01	84.50
5	<chem>O=C(Cc1c[nH]c2ccccc12)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	343.36	1.70	100.29
6	<chem>Fc1ccccc1CC(=O)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	322.31	1.74	84.50
7	<chem>COc1ccc(cc1)N1c2cc(ccc2OS1(=O)=O)C(O)=O</chem>	321.30	1.91	93.14
8	<chem>Cc1ccc(nc1)N1c2cc(ccc2OS1(=O)=O)C(O)=O</chem>	306.29	1.96	96.80
9	<chem>OC(=O)c1ccc2OS(=O)(=O)N(Cc3cnoc3)c2c1</chem>	296.25	0.50	109.94
10	<chem>CC(C)N1c2cc(ccc2OS1(=O)=O)C(O)=O</chem>	257.26	1.18	83.91
11	<chem>OC(=O)c1ccc2OS(=O)(=O)N(Cc3ccc(cc3)C#N)c2c1</chem>	330.31	1.99	107.70
12	<chem>Cc1ncsc1CN1c2cc(ccc2OS1(=O)=O)C(O)=O</chem>	326.34	0.87	96.80
13	<chem>OC(=O)c1ccc2OS(=O)(=O)N(c3cn[nH]c3)c2c1</chem>	281.24	0.37	112.59
14	<chem>OC(=O)c1ccc2OS(=O)(=O)N(c2c1)c1cnnc1</chem>	293.25	0.14	109.69
15	<chem>COc1ccc(Nc2ccc3NS(=O)(=O)Oc3c2)cc1</chem>	292.31	1.81	76.66
16	<chem>Cc1ccc(Nc2ccc3NS(=O)(=O)Oc3c2)nc1</chem>	277.30	0.00	80.32
17	<chem>O=S1(=O)Nc2ccc(NCc3cnoc3)cc2O1</chem>	267.26	-0.32	93.46
18	<chem>CC(C)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	228.27	0.18	67.43
19	<chem>O=S1(=O)Nc2ccc(NCc3ccc(cc3)C#N)cc2O1</chem>	301.32	1.16	91.22
20	<chem>Cc1ncsc1CNc1ccc2NS(=O)(=O)Oc2c1</chem>	297.35	0.24	80.32
21	<chem>O=S1(=O)Nc2ccc(Nc3cn[nH]c3)cc2O1</chem>	252.25	-0.42	96.11
22	<chem>O=S1(=O)Nc2ccc(Nc3cnnc3)cc2O1</chem>	264.26	0.04	93.21
23	<chem>COCCS(=O)(=O)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	308.32	-0.99	110.80

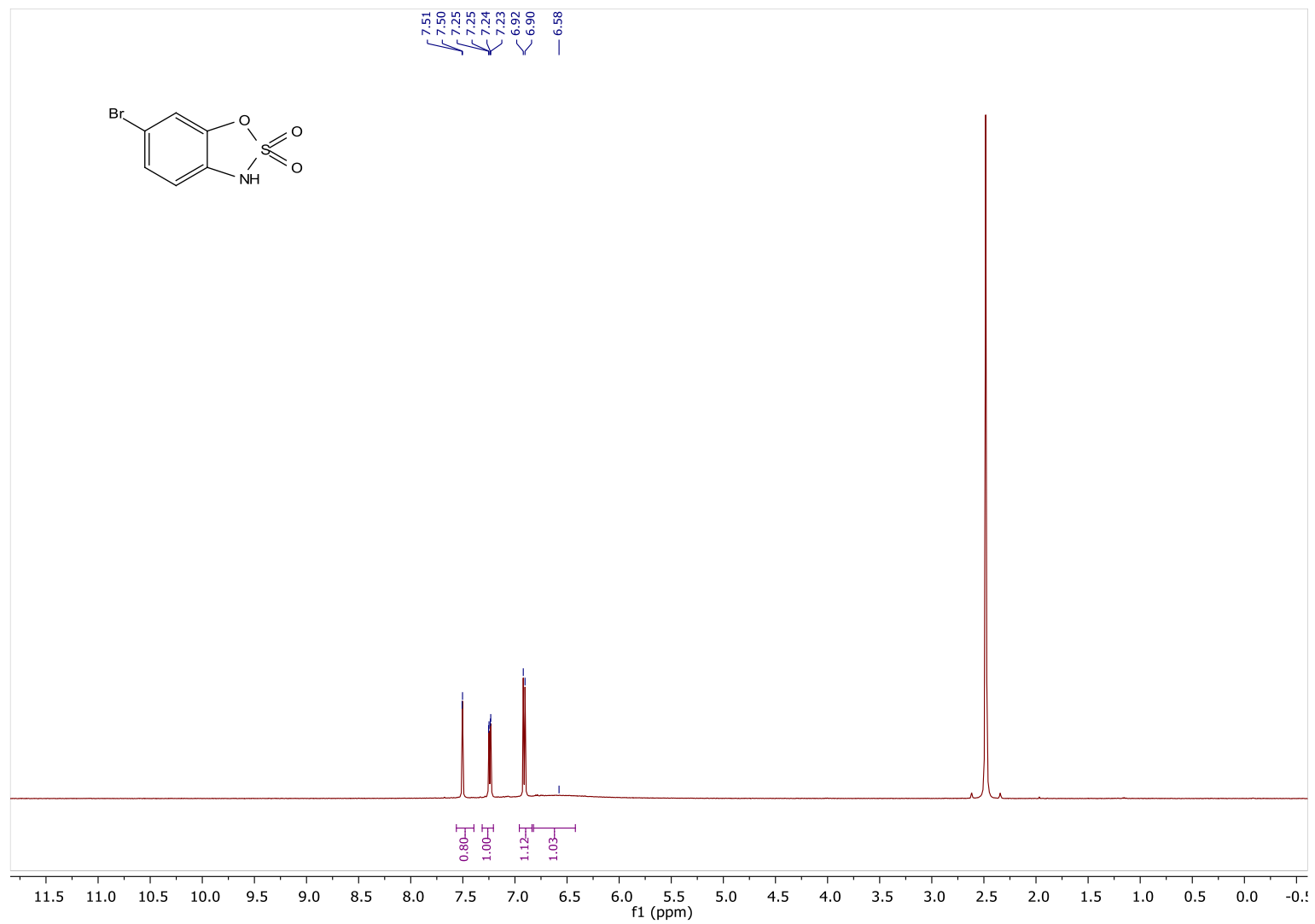
24	<chem>CC(C)S(=O)(=O)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	292.32	-0.02	101.57
25	<chem>O=S(=O)(Nc1ccc2NS(=O)(=O)Oc2c1)c1ccnc1</chem>	327.33	-0.20	114.46
26	<chem>FC(F)(F)S(=O)(=O)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	318.24	1.01	101.57
27	<chem>Cc1cc(no1)S(=O)(=O)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	331.32	0.17	127.60
28	<chem>CN1CCC(CC1)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	283.35	-1.31	70.67
29	<chem>Fc1ccc(CNc2ccc3NS(=O)(=O)Oc3c2)cc1</chem>	294.30	1.45	67.43
30	<chem>O=S1(=O)Nc2ccc(NC3COC3)cc2O1</chem>	242.25	-0.61	76.66
31	<chem>O=S1(=O)Nc2ccc(NCc3cncc3)cc2O1</chem>	277.30	-0.25	80.32
32	<chem>O=S1(=O)Nc2ccc(NCc3c[nH]cn3)cc2O1</chem>	266.28	-1.85	96.11
33	<chem>FC(F)(F)CCNc1ccc2NS(=O)(=O)Oc2c1</chem>	282.24	0.49	67.43
34	<chem>O=S1(=O)Nc2ccc(NCCc3ccccc3)cc2O1</chem>	290.34	1.29	67.43
35	<chem>Fc1ccc(CNc2ccc3NS(=O)(=O)Oc3c2)cc1</chem>	294.30	1.45	67.43
36	<chem>Fc1cccc(CNC(=O)Nc2ccc3NS(=O)(=O)Oc3c2)c1</chem>	337.33	1.52	96.53
37	<chem>Cc1noc(C)c1NC(=O)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	324.31	0.37	122.56
38	<chem>O=C(NC1CCCC1)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	297.33	1.01	96.53
39	<chem>O=C(Nc1ccncc1)Nc1ccc2NS(=O)(=O)Oc2c1</chem>	306.30	-0.59	109.42
40	<chem>O=C(Nc1ccc2NS(=O)(=O)Oc2c1)Nc1cccc(c1)C#N</chem>	330.32	1.53	120.32
41	<chem>O=C(N1CCOCC1)c1ccc2OS(=O)(=O)Nc2c1</chem>	284.29	-0.39	84.94
42	<chem>O=C(Nc1ncccn1)c1ccc2OS(=O)(=O)Nc2c1</chem>	292.27	0.38	110.28
43	<chem>CN(C)C(=O)c1ccc2OS(=O)(=O)Nc2c1</chem>	242.25	-0.17	75.71
44	<chem>O=C(NCC1CC1)c1ccc2OS(=O)(=O)Nc2c1</chem>	268.29	0.38	84.50
45	<chem>O=C(Nc1cc[nH]n1)c1ccc2OS(=O)(=O)Nc2c1</chem>	280.26	0.34	113.18
46	<chem>O=C(Nc1cccc2[nH]ccc12)c1ccc2OS(=O)(=O)Nc2c1</chem>	329.33	1.72	100.29
47	<chem>O=S1(=O)Nc2ccc(Nc3cc[nH]n3)cc2O1</chem>	252.25	0.20	96.11
48	<chem>O=S1(=O)Nc2ccc(Nc3cnccn3)cc2O1</chem>	264.26	0.04	93.21
49	<chem>O=S1(=O)Nc2ccc(Nc3cncc3)cc2O1</chem>	263.27	-1.10	80.32



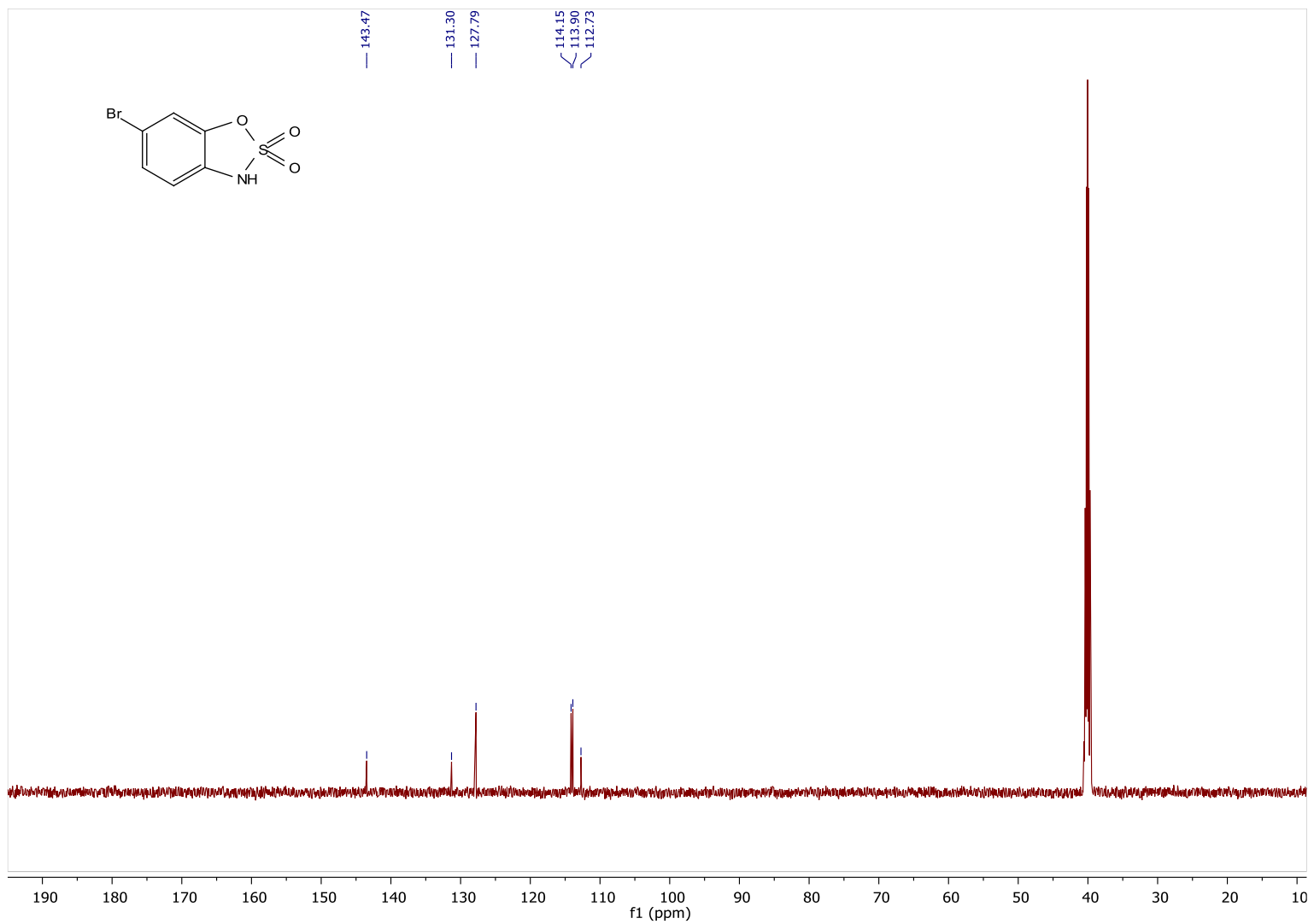
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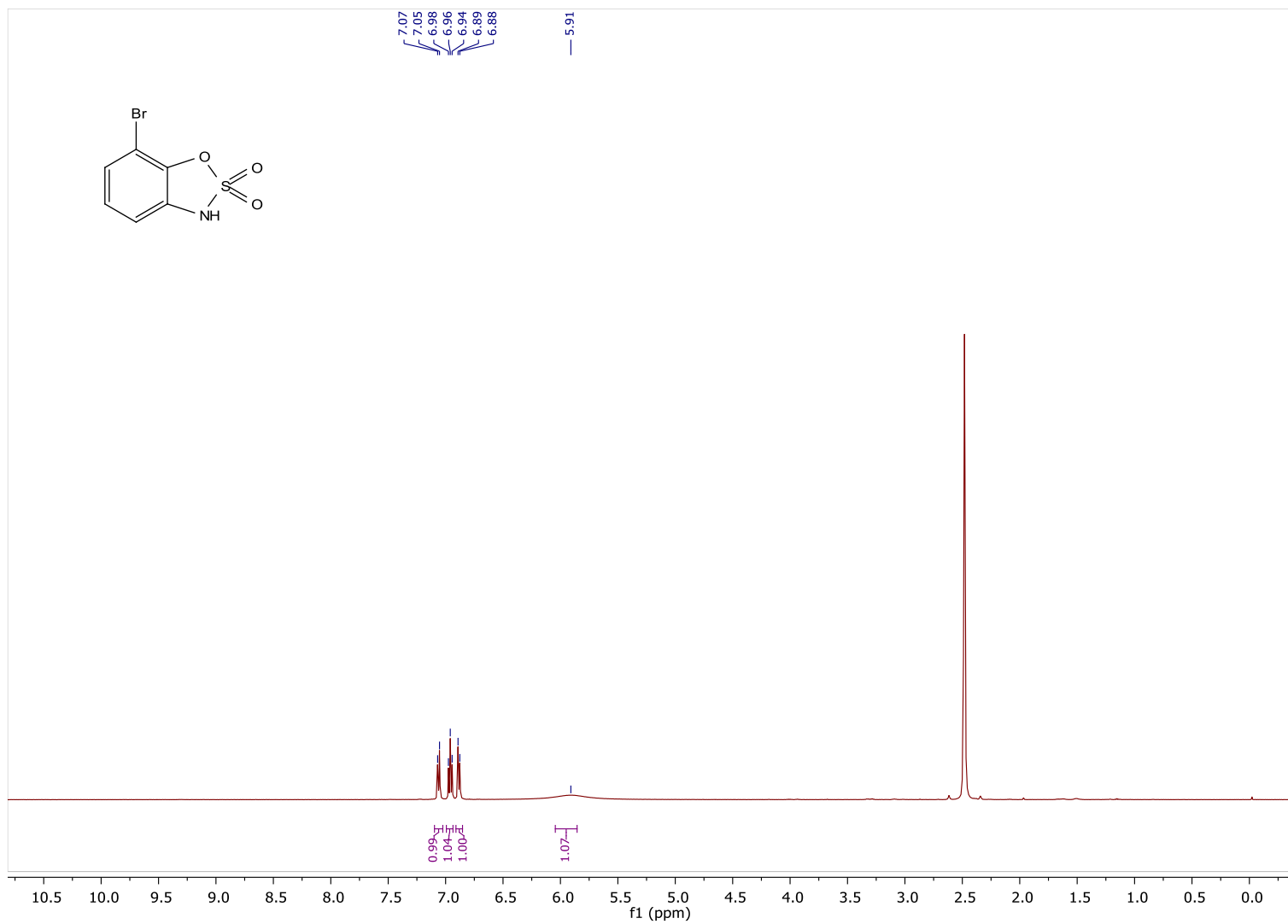
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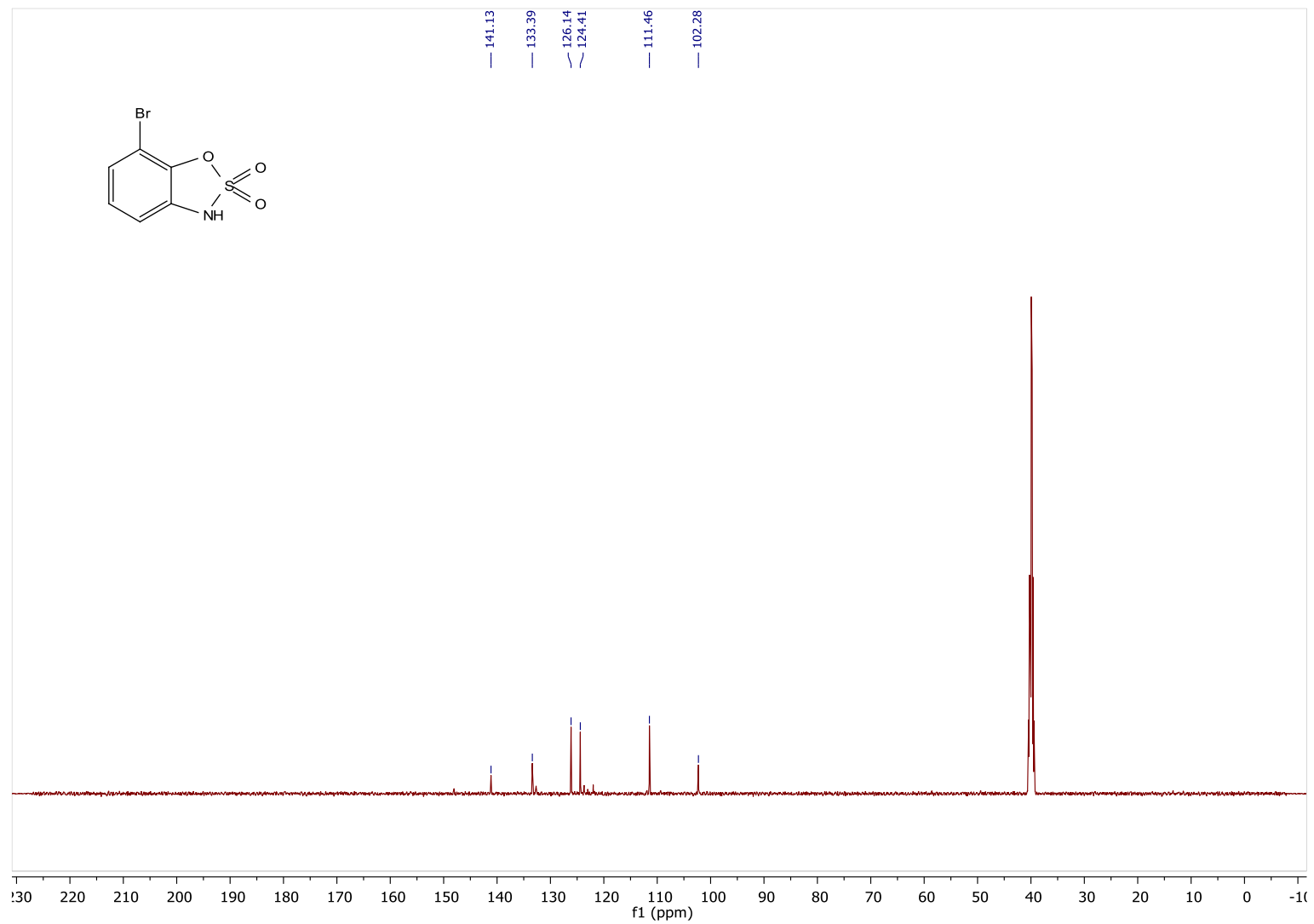
6-Bromo-3H-benzo[d][1,2,3]oxathiazole 2,2-dioxide (3b) ¹H NMR (500 MHz, DMSO-d₆)



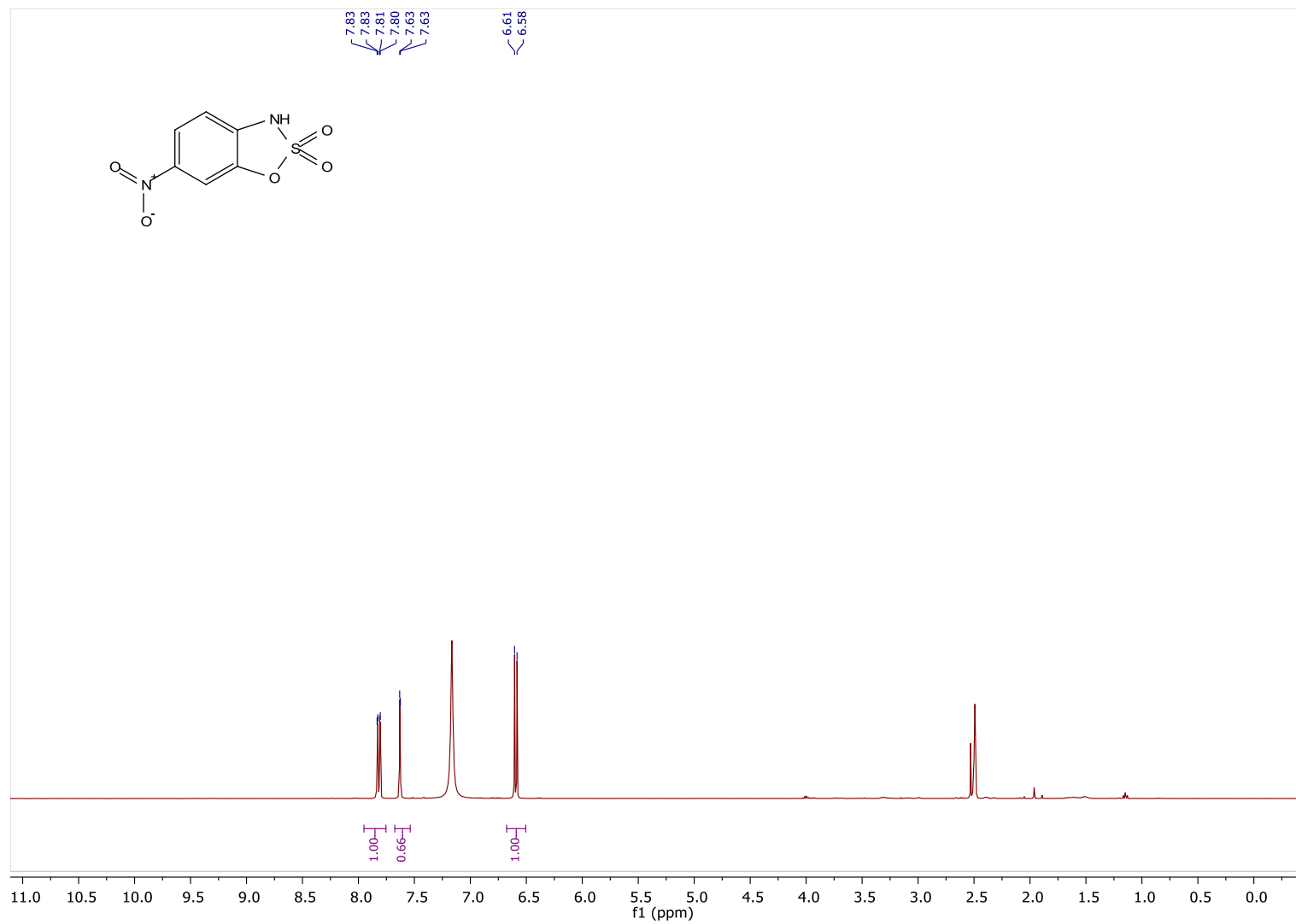
6-Bromo-3H-benzo[d][1,2,3]oxathiazole 2,2-dioxide (3b) ¹³C NMR (126 MHz, DMSO-*d*₆)



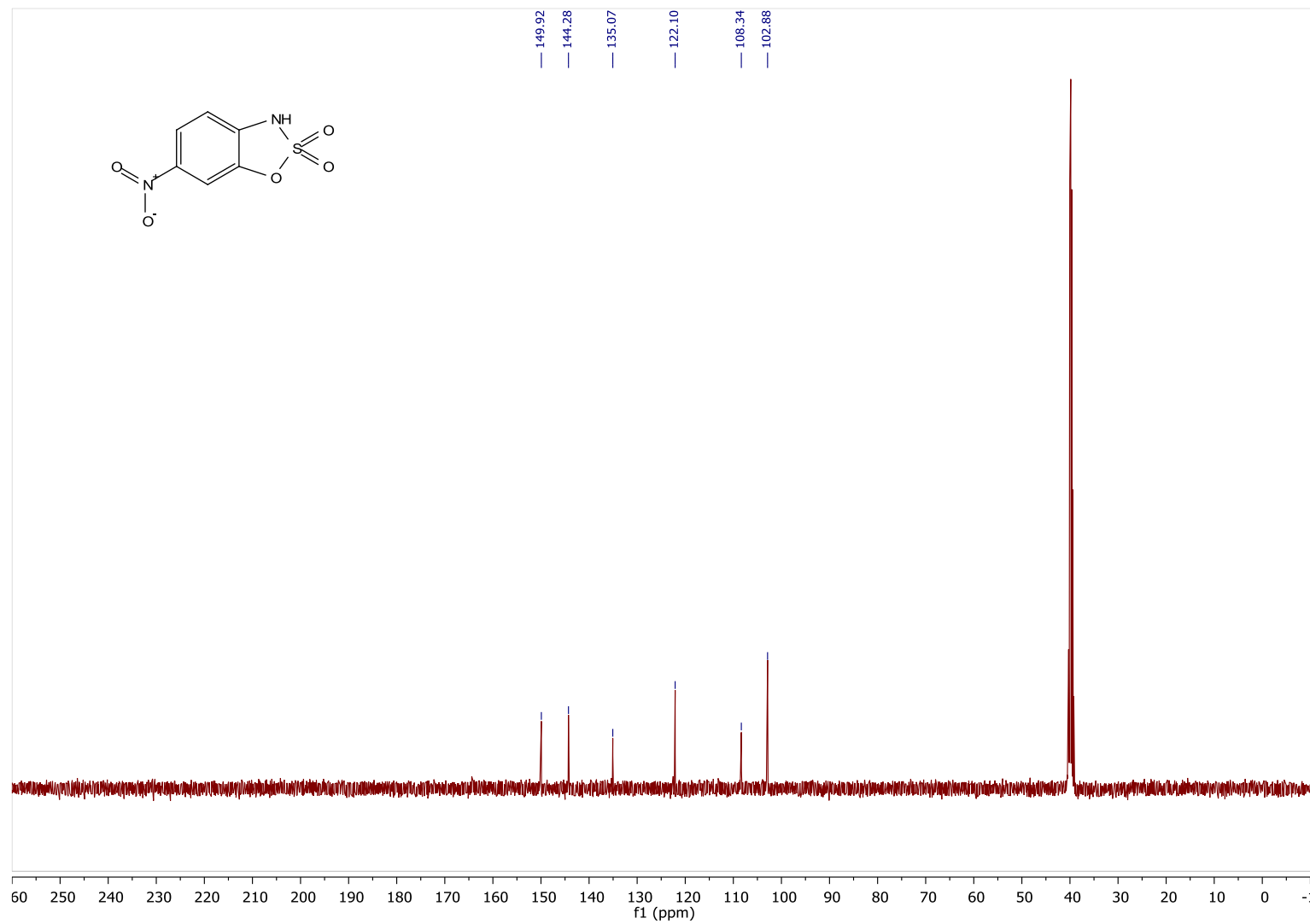
7-Bromo-3H-benzo[d][1,2,3]oxathiazole 2,2-dioxide (3c) ¹H NMR (500 MHz, DMSO-*d*₆)



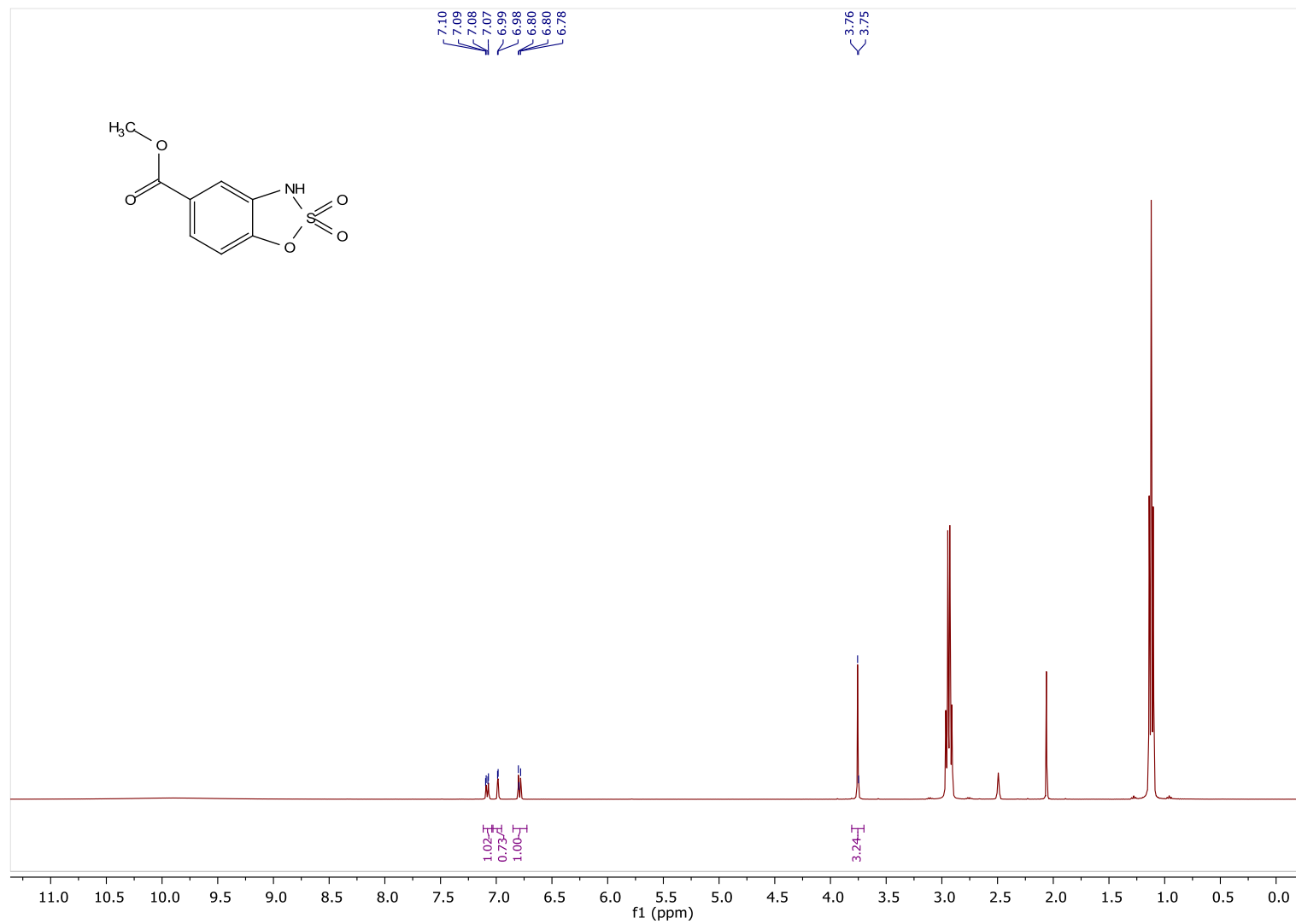
7-Bromo-3H-benzo[d][1,2,3]oxathiazole 2,2-dioxide (3c) ^{13}C NMR (126 MHz, DMSO- d_6)



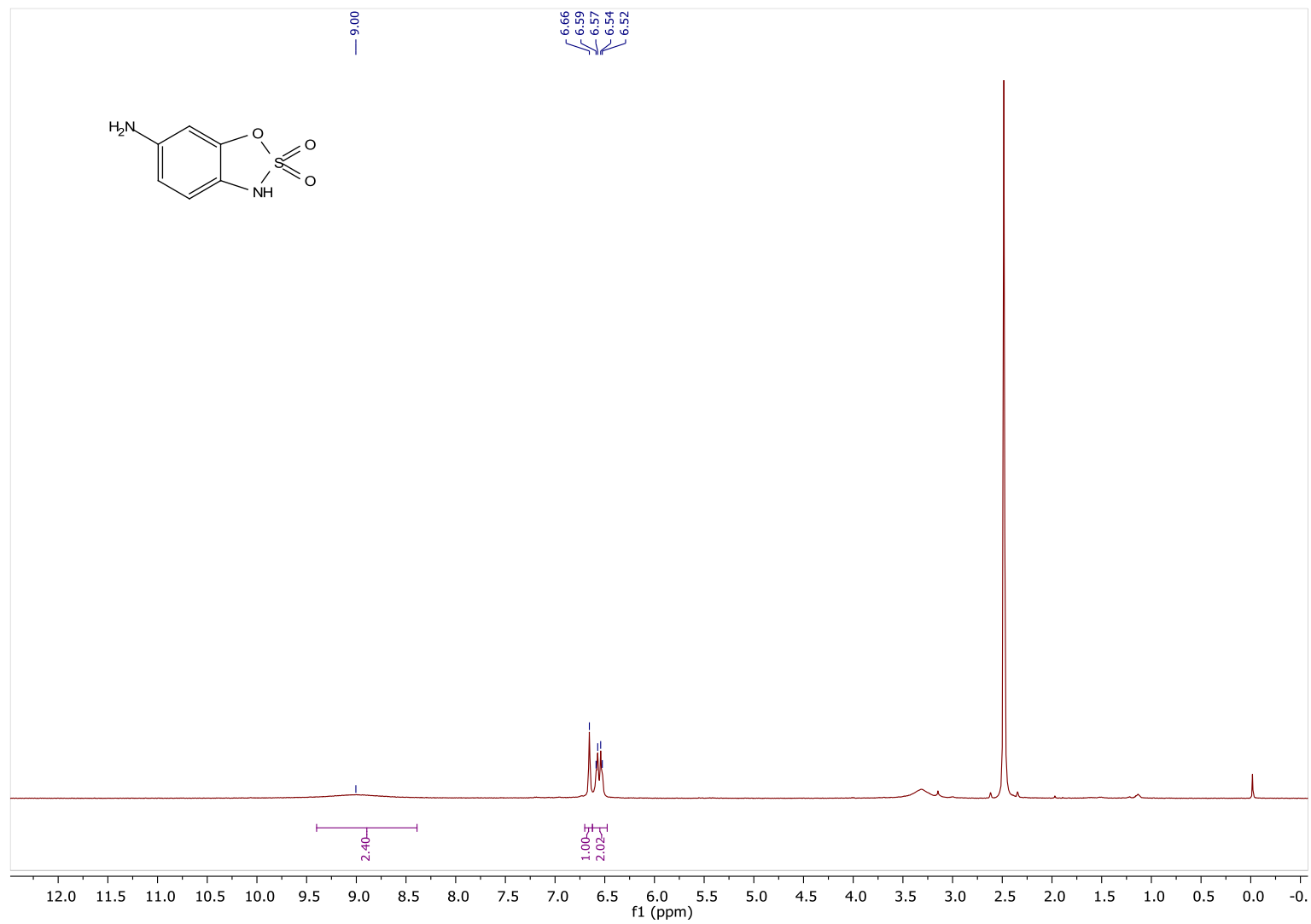
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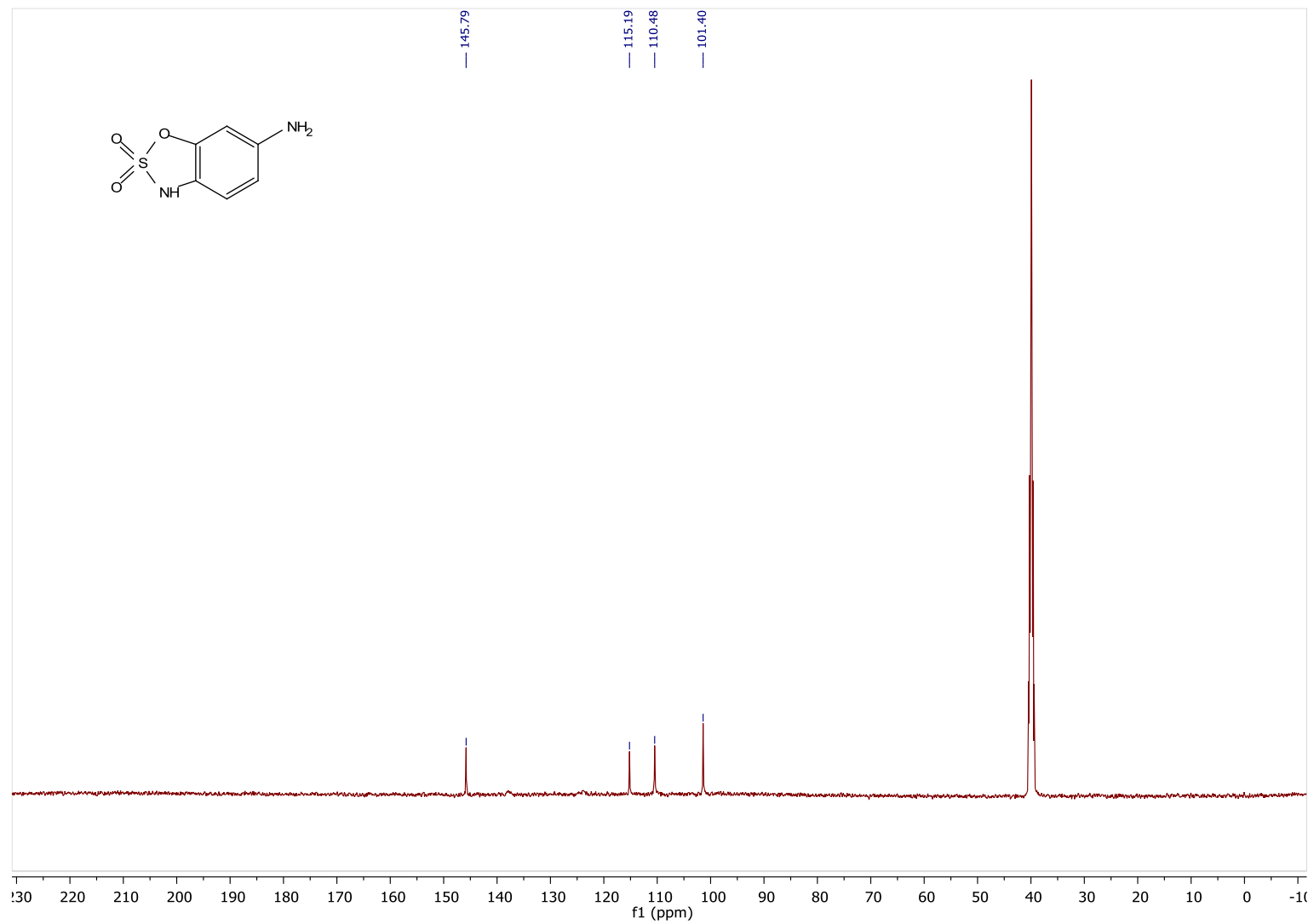
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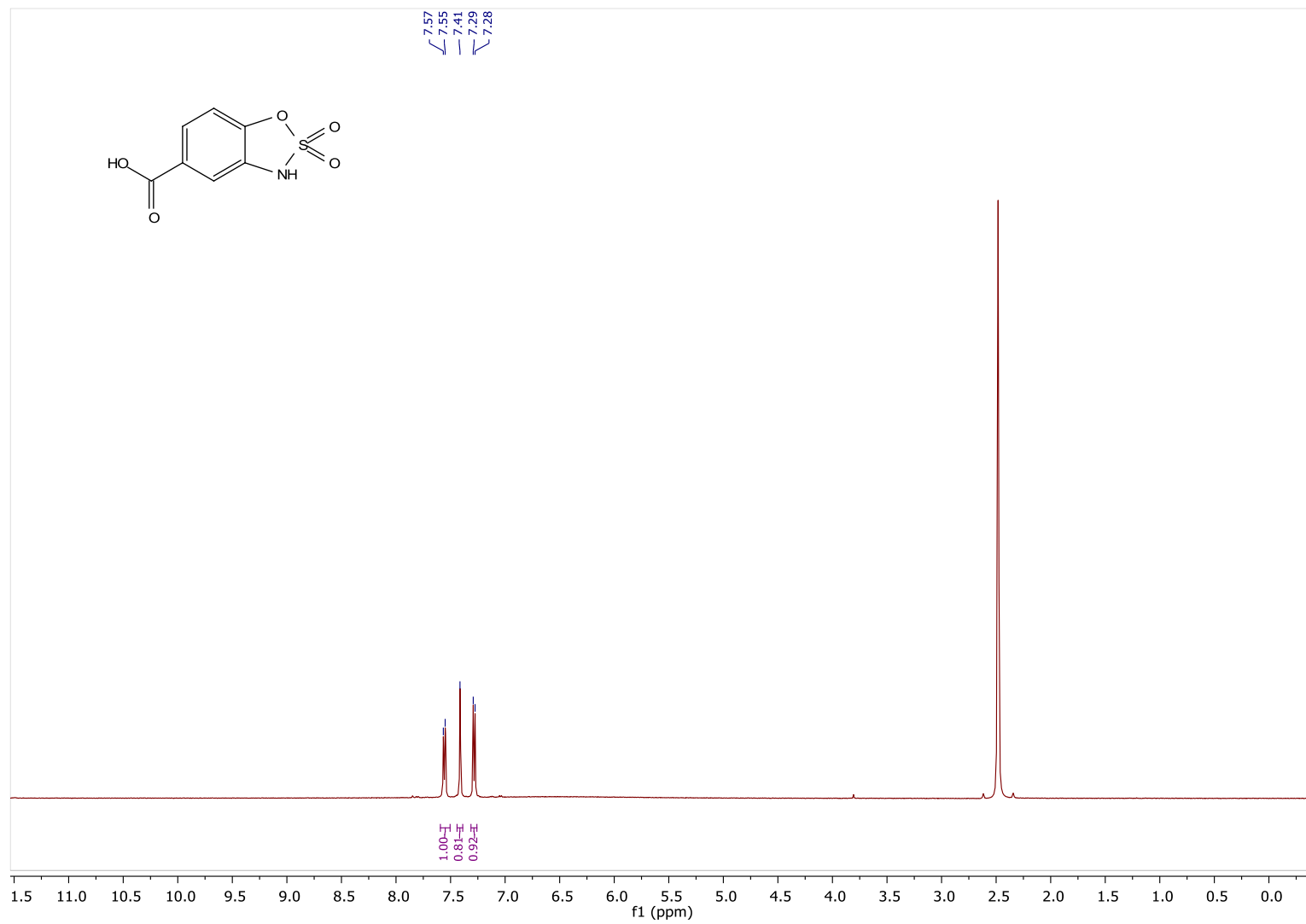
Methyl 3H-benzo[d][1,2,3]oxathiazole-5-carboxylate 2,2-dioxide (3e) ¹H NMR (400 MHz, DMSO-d₆)



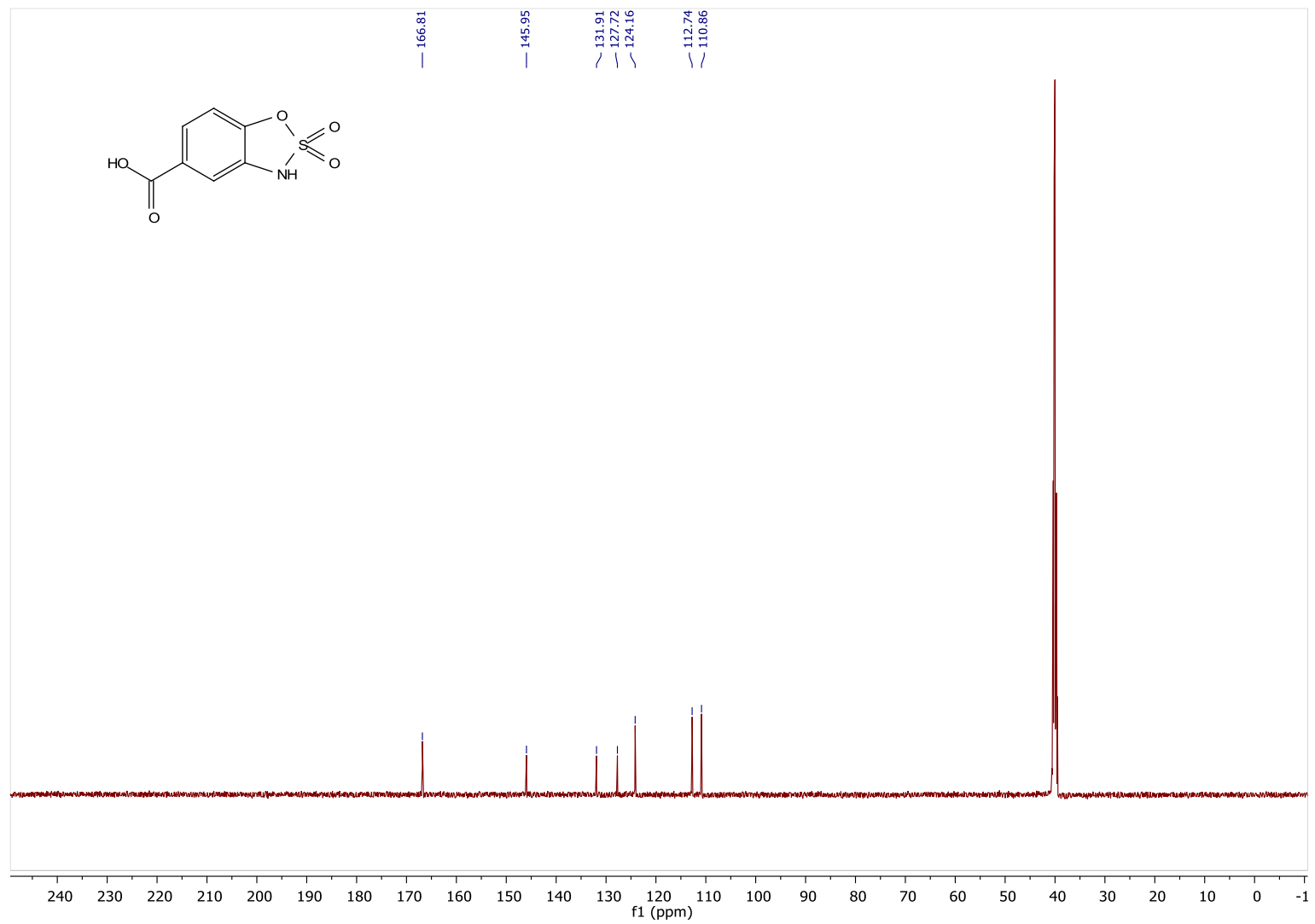
6-Amino-3H-benzo[d][1,2,3]oxathiazole 2,2-dioxide (3f) ¹H NMR (500 MHz, DMSO-*d*₆)



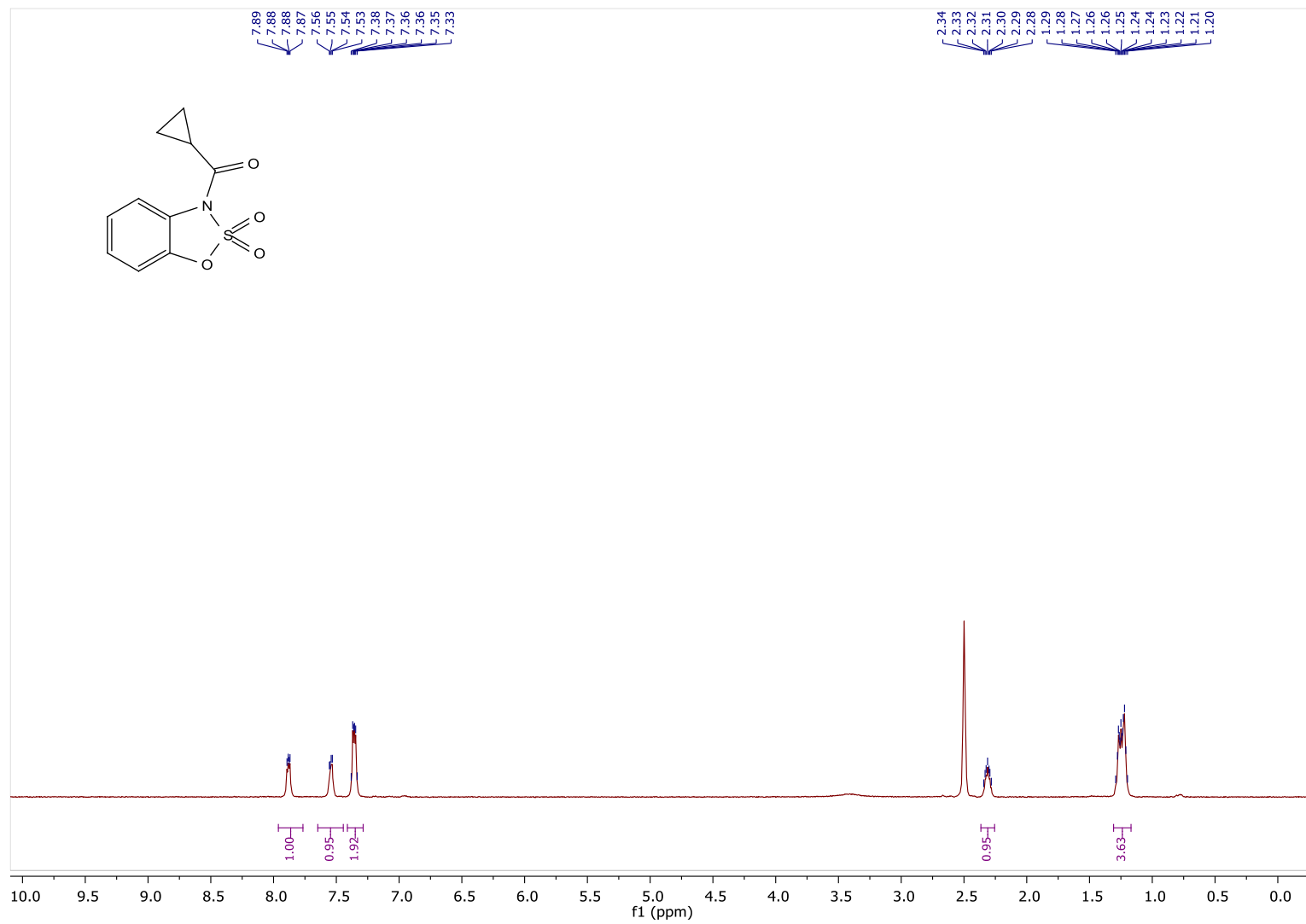
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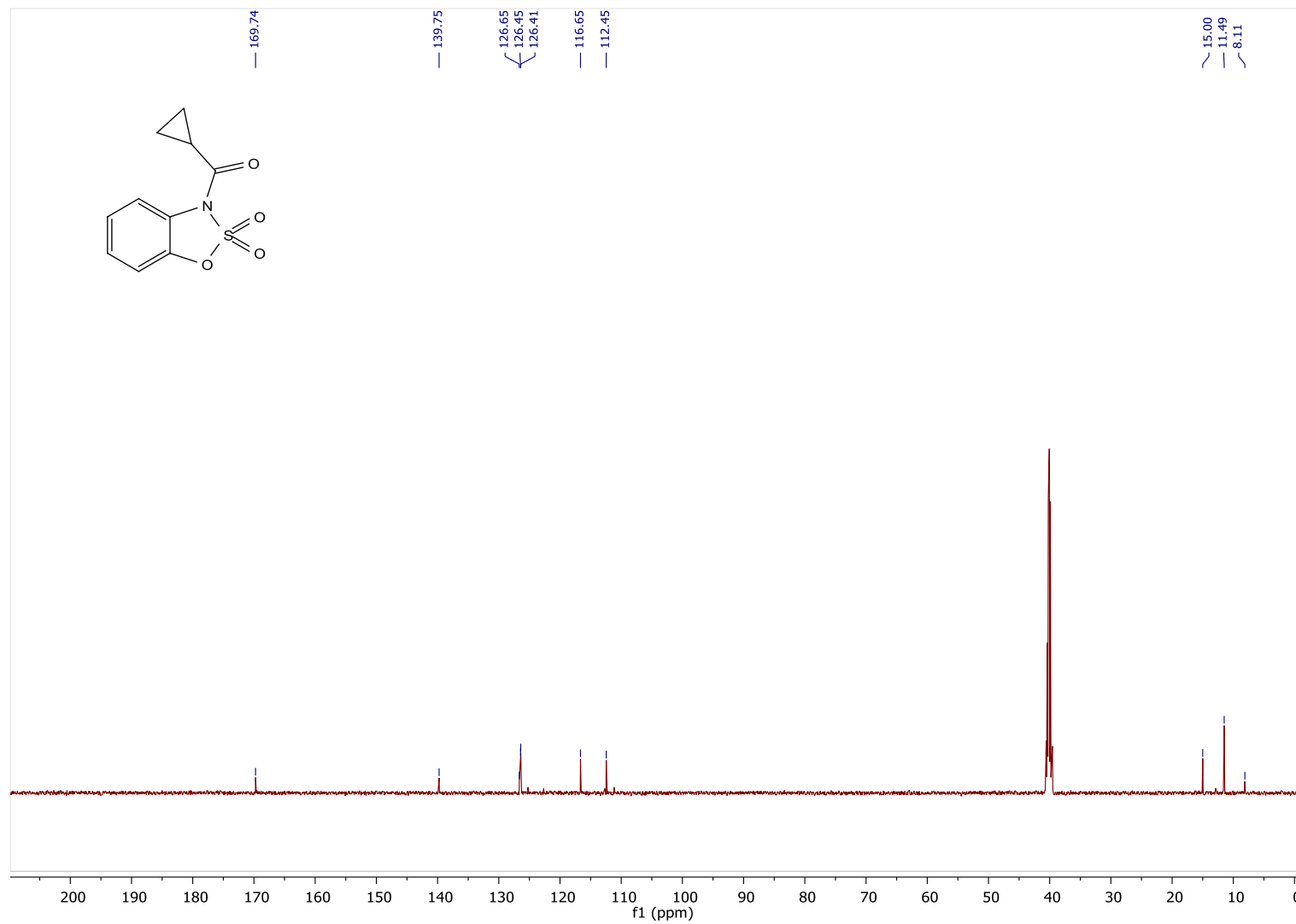
3H-Benzo[d][1,2,3]oxathiazole-5-carboxylic acid 2,2-dioxide (3g) ¹H NMR (500 MHz, DMSO-*d*₆)



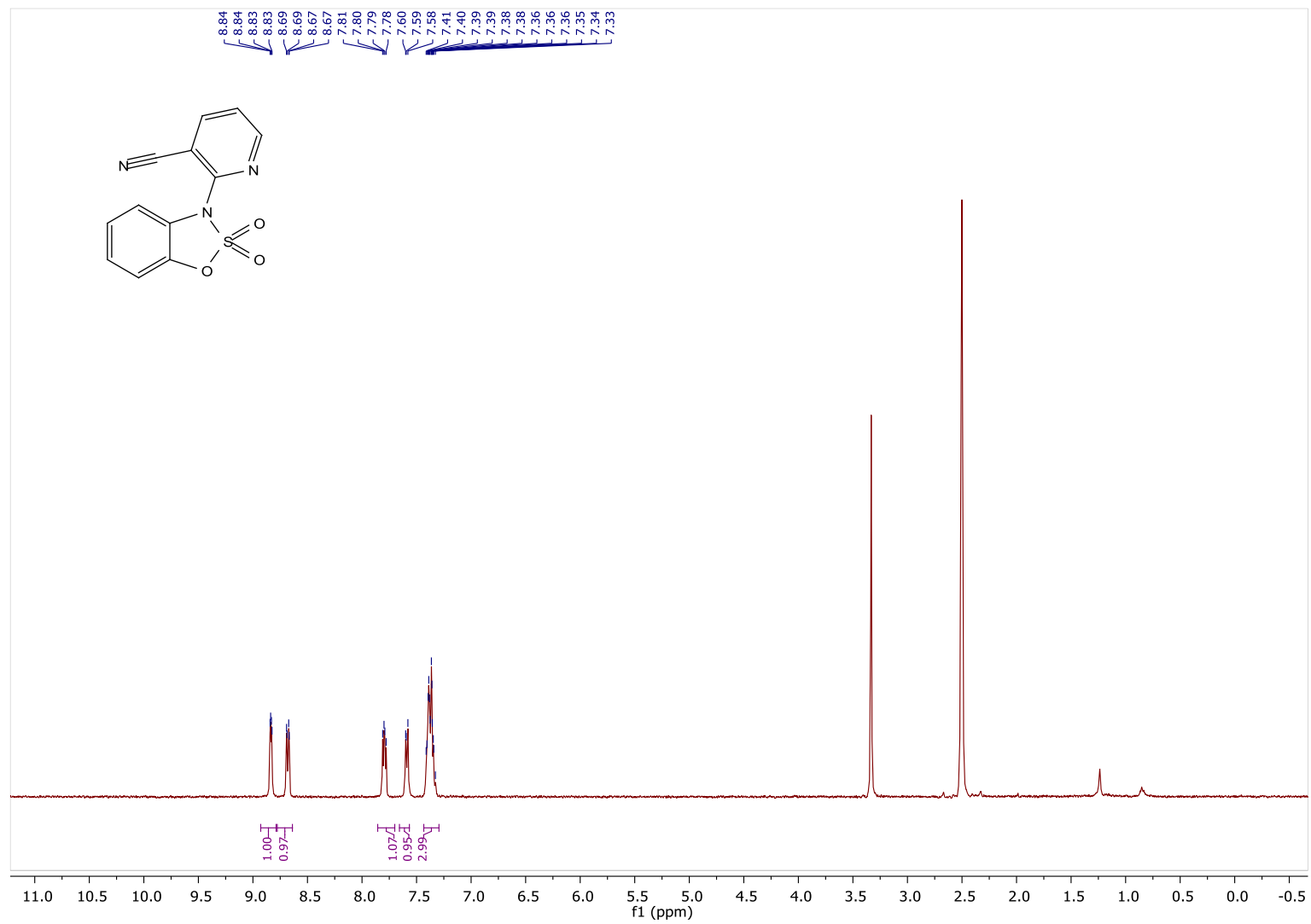
3H-Benzo[d][1,2,3]oxathiazole-5-carboxylic acid 2,2-dioxide (3g) ^{13}C NMR (126 MHz, DMSO- d_6)



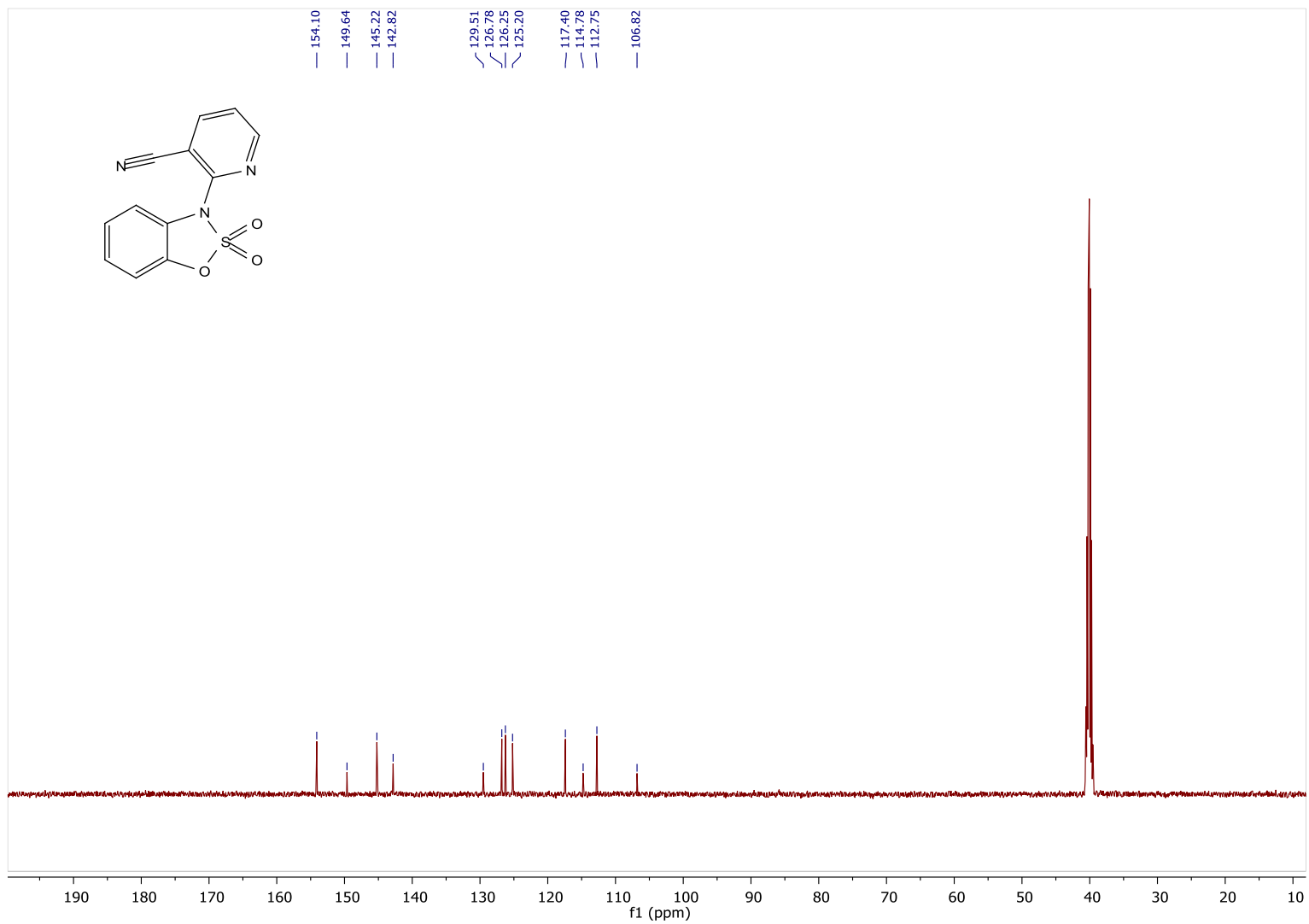
Cyclopropyl(2,2-dioxido-3H-benzo[d][1,2,3]oxathiazol-3-yl)methanone (5a) ¹H NMR (400 MHz, DMSO-*d*₆)



Cyclopropyl(2,2-dioxido-3H-benzo[d][1,2,3]oxathiazol-3-yl)methanone (5a) ¹³C NMR (126 MHz, DMSO-*d*₆)



2-(2,2-Dioxido-3H-benzo[d][1,2,3]oxathiazol-3-yl)nicotinonitrile (5b) ¹H NMR (400 MHz, DMSO-*d*₆)



2-(2,2-Dioxido-3H-benzo[d][1,2,3]oxathiazol-3-yl)nicotinonitrile (5b) ¹³C NMR (126 MHz, DMSO-*d*₆)