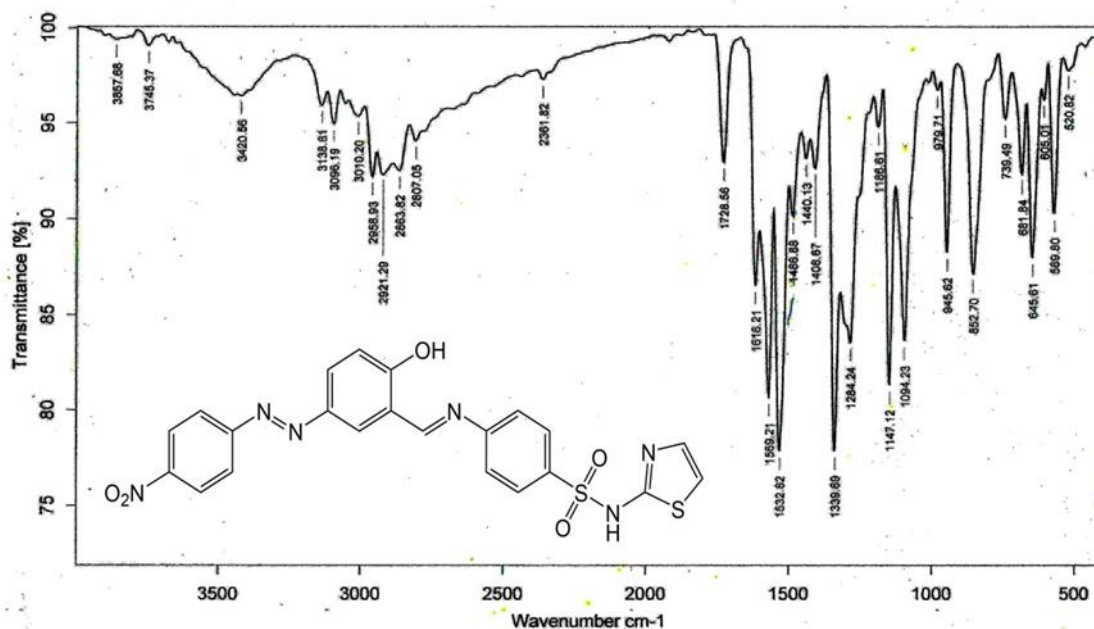
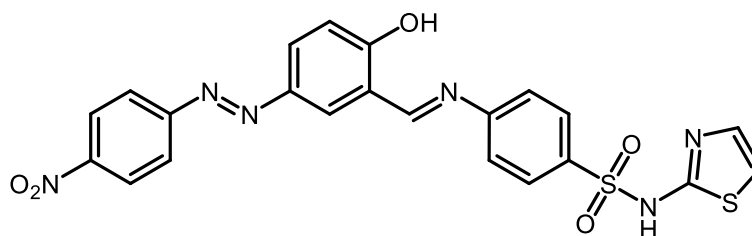


Supplementary data

Efficient Synthesis of New Azoimino-sulfathiazole and Considering Their Antibacterial, Antioxidant and Cytotoxic Activities

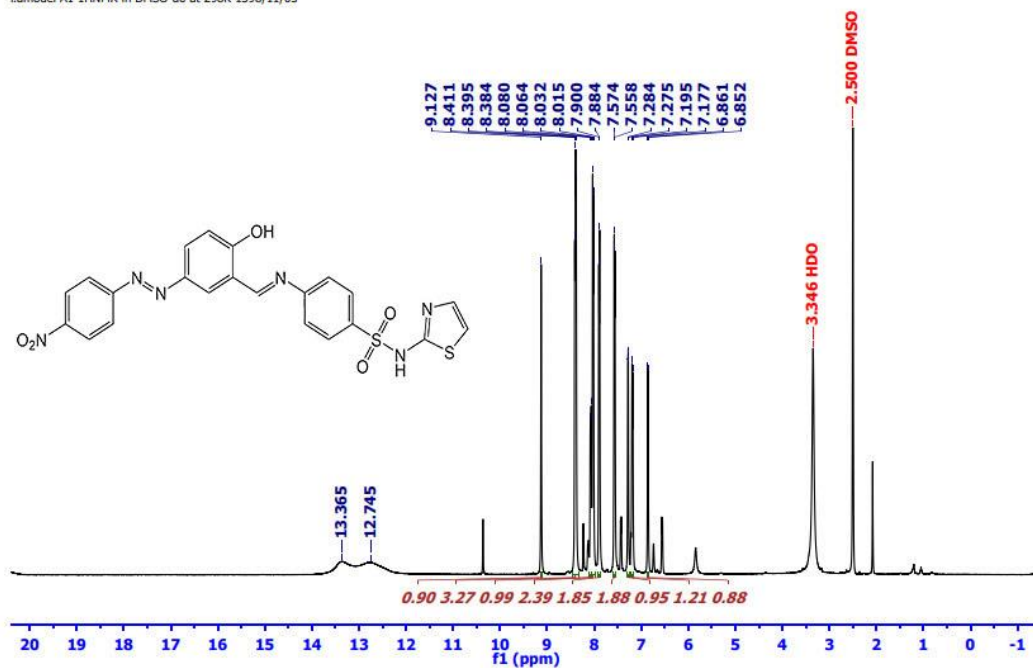
Fatemeh Amouee, Nosrat O. Mahmoodi*, Hadiseh Yazdani Nyaki, Ali Ahmadi

4-(((E)-2-hydroxy-5-((E)-(4-nitrophenyl) diazenyl) benzylidene) amino)-N-(thiazol-2yl) benzenesulfonamide **5a**



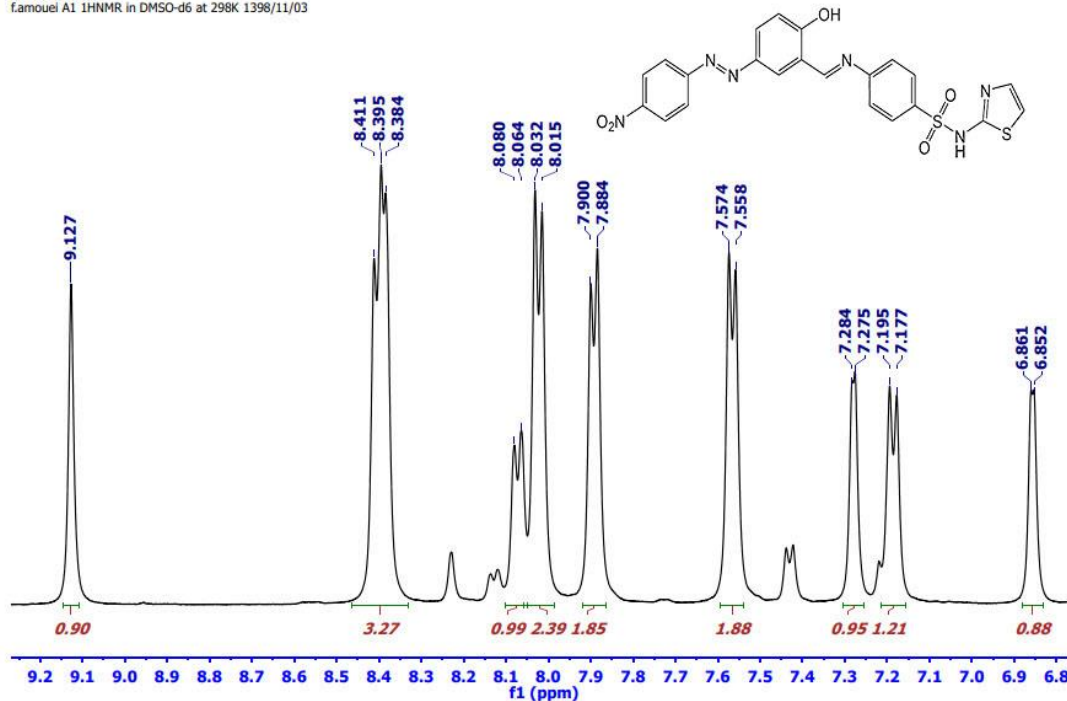
FT-IR (KBr) **5a**

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f.amoei A1 1HNMR in DMSO-d6 at 298K 1398/11/03



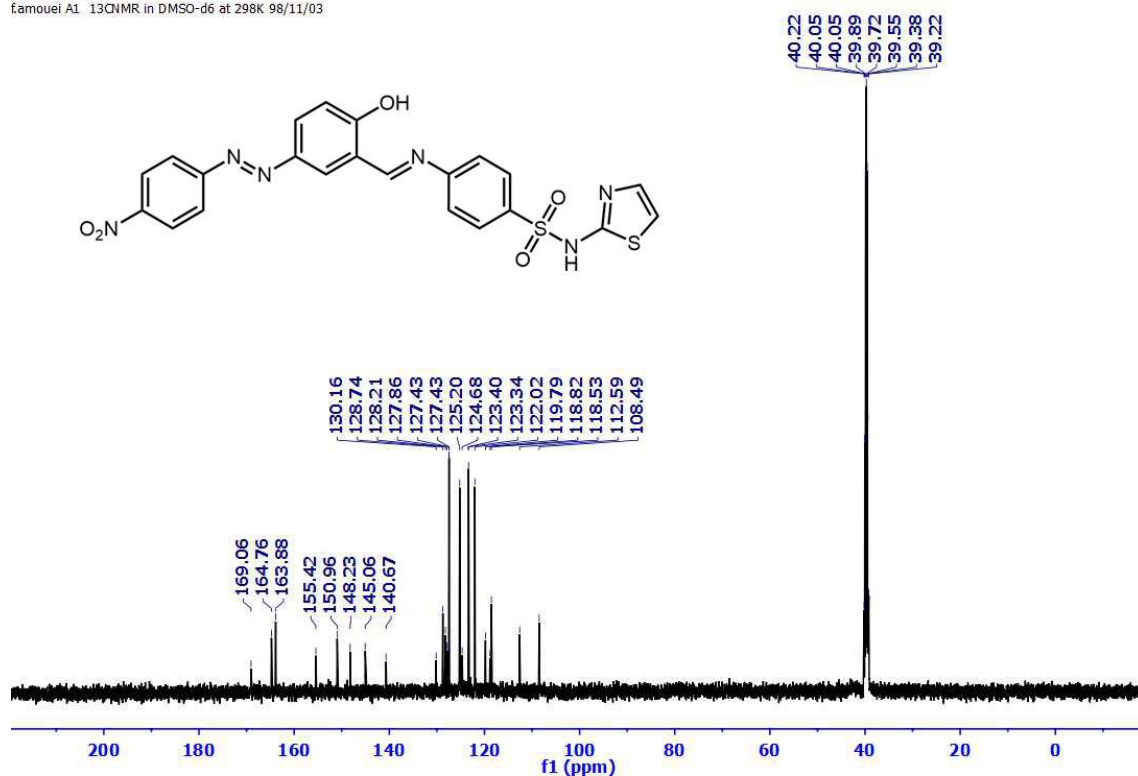
^1H NMR (DMSO- d_6 500 MHz) 5a

f.amoei.8207.fid
f.amoei A1 1HNMR in DMSO-d6 at 298K 1398/11/03

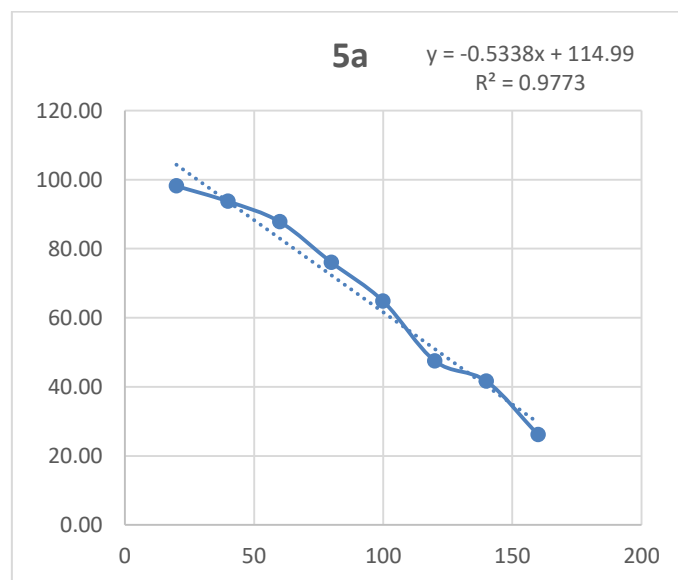


^1H NMR (DMSO- d_6 500 MHz) extend 5a

Guest.7952.fid
famouei A1 13CNMR in DMSO-d6 at 298K 98/11/03

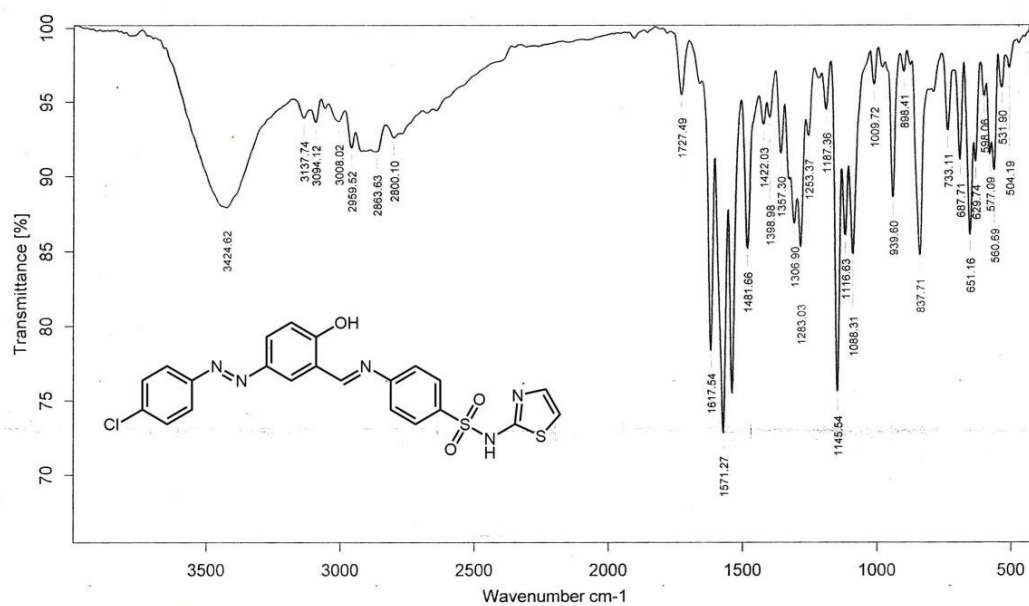
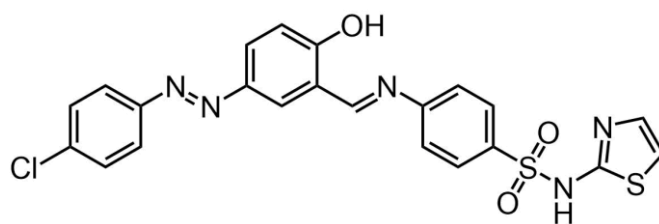


¹³C NMR (DMSO-*d*₆ 125 MHz) 5a



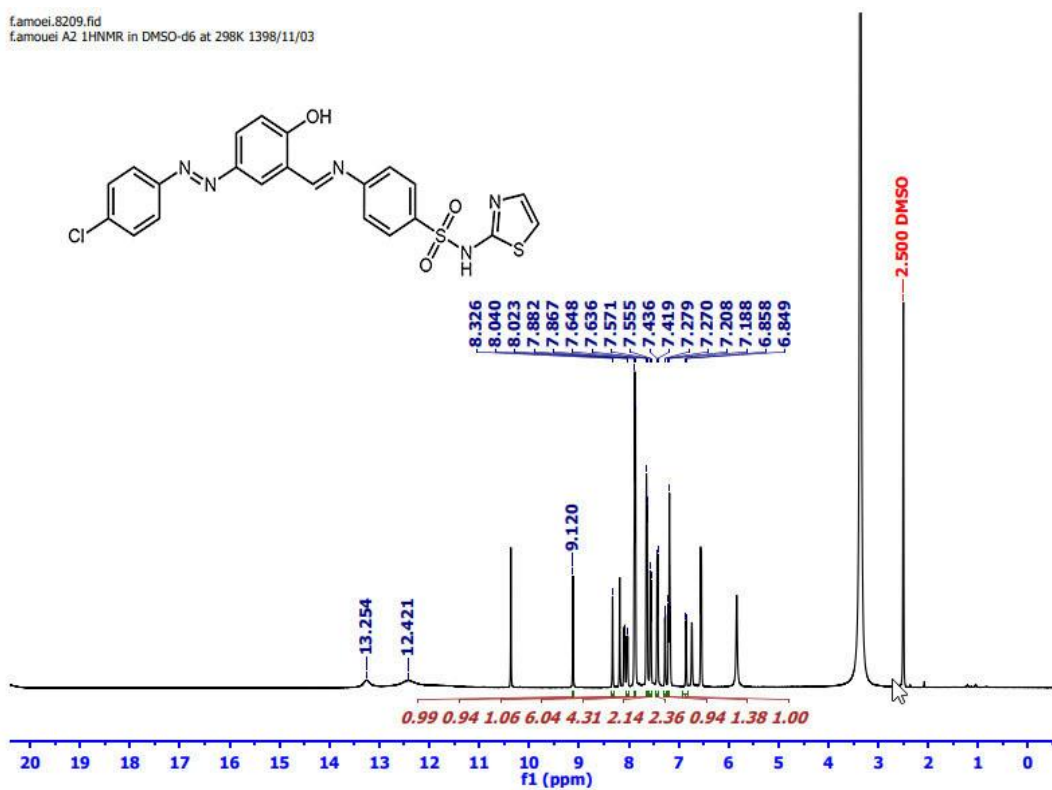
MTT assay data 5a

4-(((*E*)-5-((*E*)-(4-chlorophenyl) diazenyl)-2-hydroxybenzylidene) amino)-*N*-(thiazol-2-yl) benzenesulfonamide **5b**



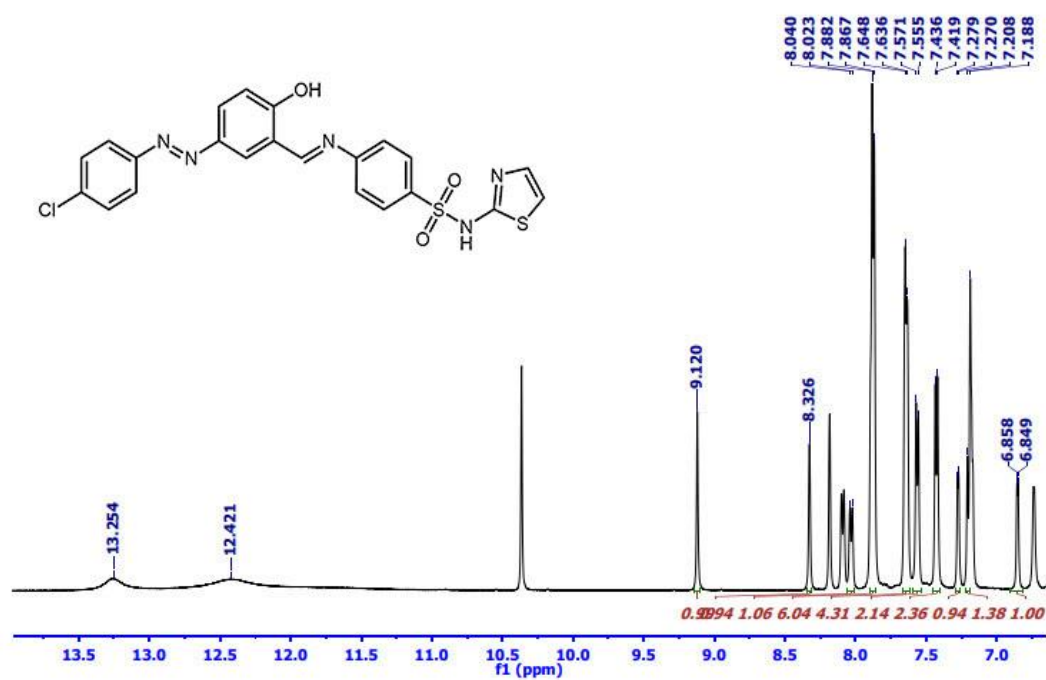
FT-IR (KBr) **5b**

f.amoei.8209.fid
f.amoei A2 1HNMR in DMSO-d6 at 298K 1398/11/03



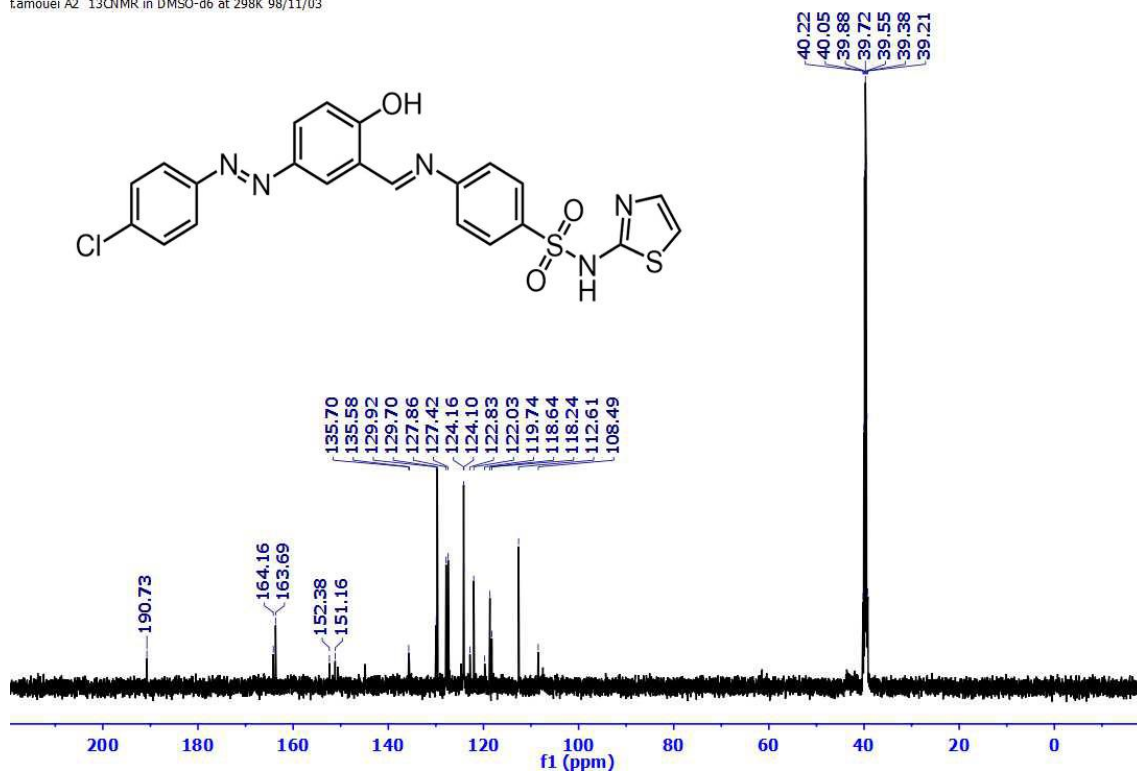
^1H NMR (DMSO- d_6 500 MHz) 5b

f.amoei.8209.fid
f.amoei A2 1HNMR in DMSO-d6 at 298K 1398/11/03

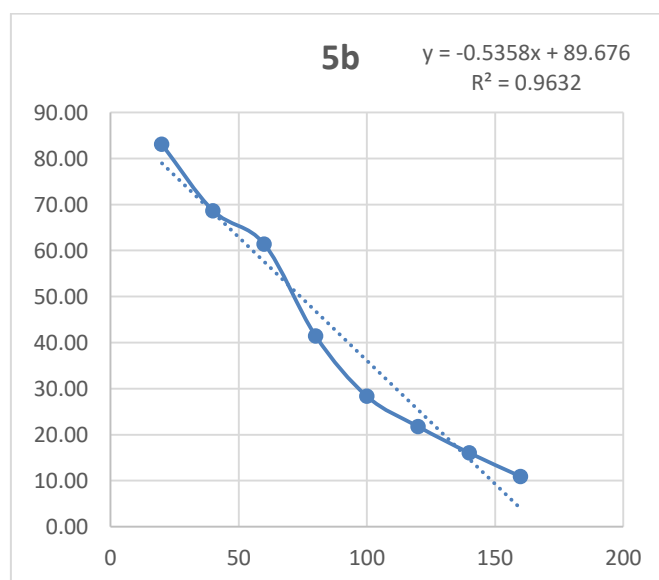


^1H NMR (DMSO- d_6 500 MHz) extend 5b

Guest.7952.fid
famouei A2 13C NMR in DMSO-d6 at 298K 98/11/03



¹³C NMR (DMSO-*d*₆ 125 MHz) **5b**

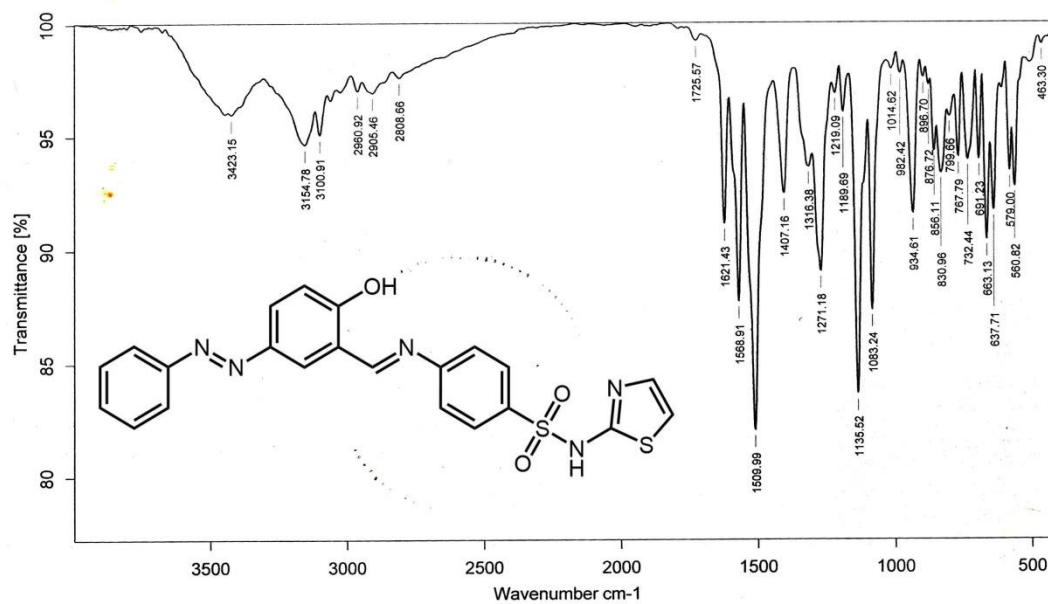
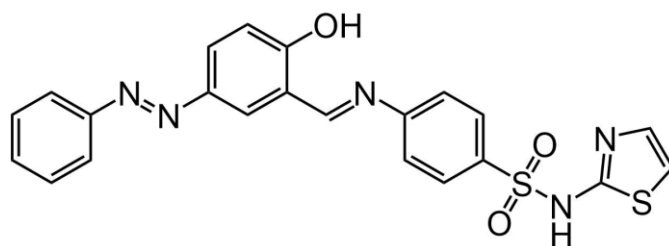


MTT assay data **5b**

4-(((*E*)-2-hydroxy-5-((*E*)-phenyldiazenyl)
benzenesulfonamide **5c**

benzylidene)

amino)-*N*-(thiazol-2-yl)



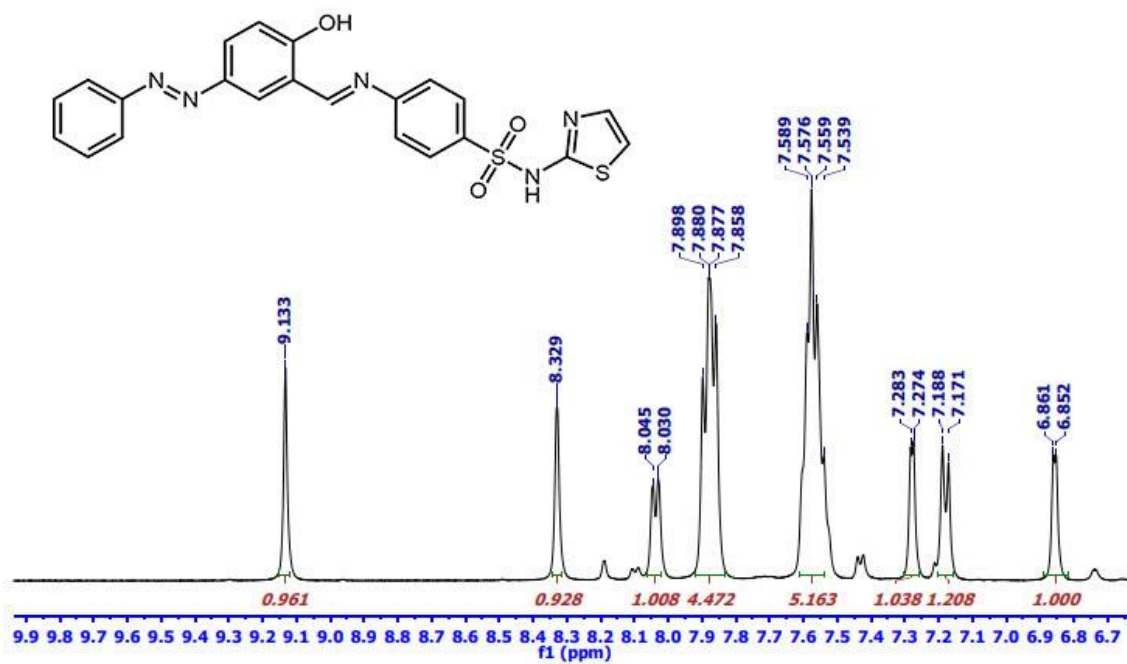
FT-IR (KBr) 5c

Oc1ccc(cc1)/C=N/c2ccc(cc2)S(=O)(=O)Nc3ccsc3

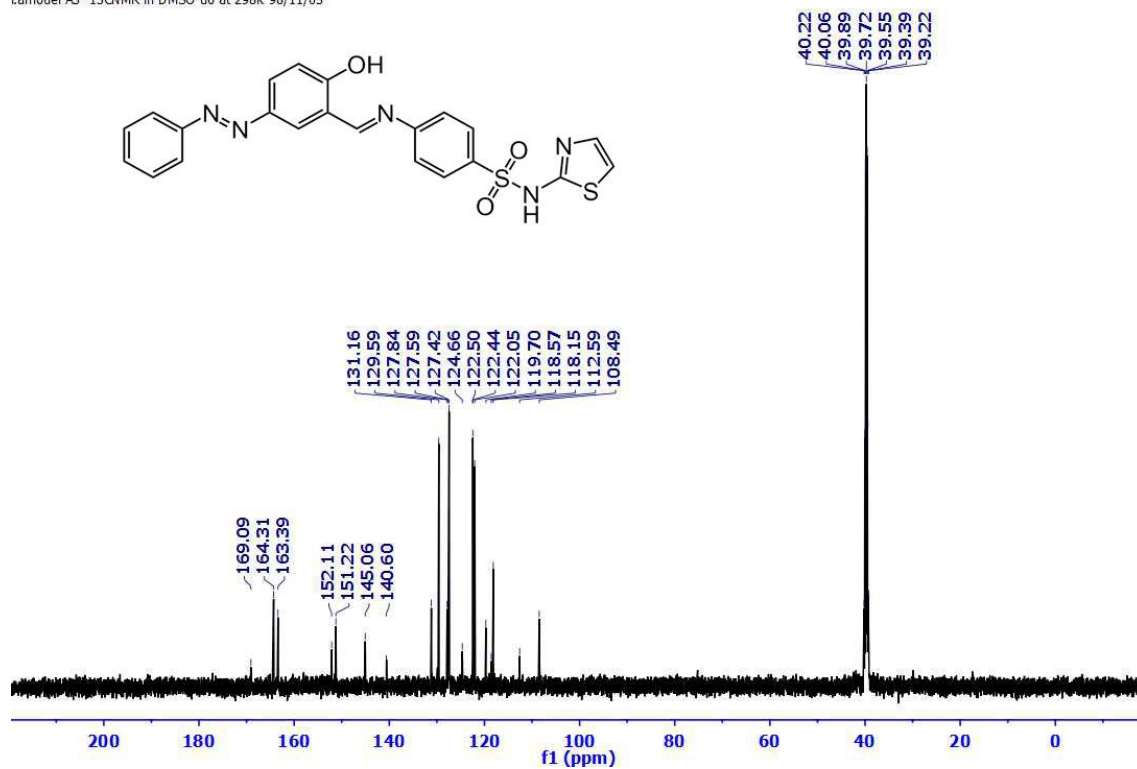
¹H NMR (DMSO-*d*₆)

Chemical Shift (ppm)	Integration
8.329	1.039
8.045	0.819
8.030	0.896
7.898	0.928
7.880	1.008
7.877	4.472
7.858	5.163
7.589	5.163
7.576	1.038
7.559	1.208
7.539	1.000
7.283	
7.274	
7.188	
7.171	
6.861	
6.852	
9.133	
13.214	
12.779	
3.337	
2.500	

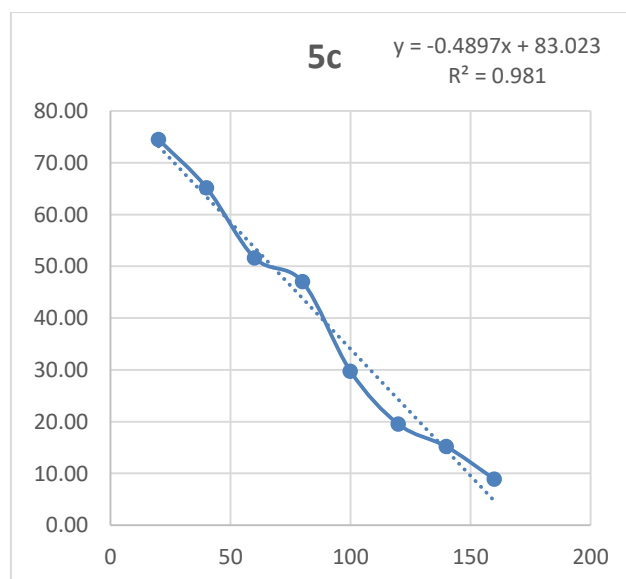
f.amoei.8211.fid
f.amoei A3 1H NMR in DMSO-d6 at 298K 1398/11/03

¹H NMR (DMSO- *d*₆ 500MHz) extend 5c

Guest.7952.fid
famouei A3 ¹³CNMR in DMSO-d₆ at 298K 98/11/03

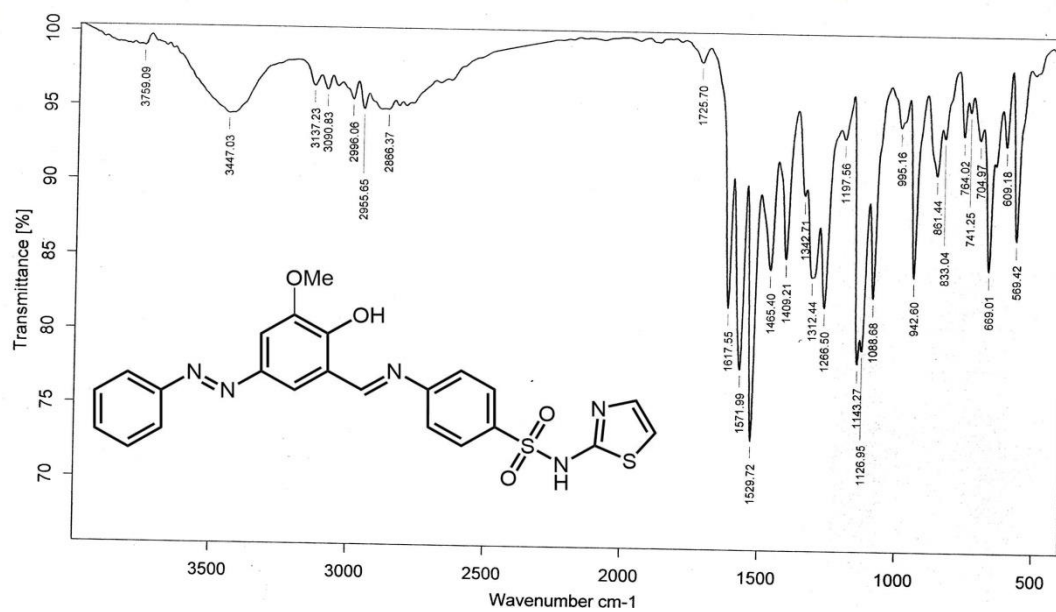
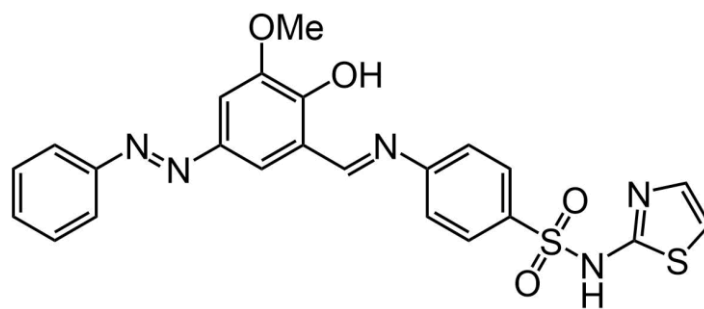


¹³C NMR (DMSO-d₆ 125 MHz) 5c



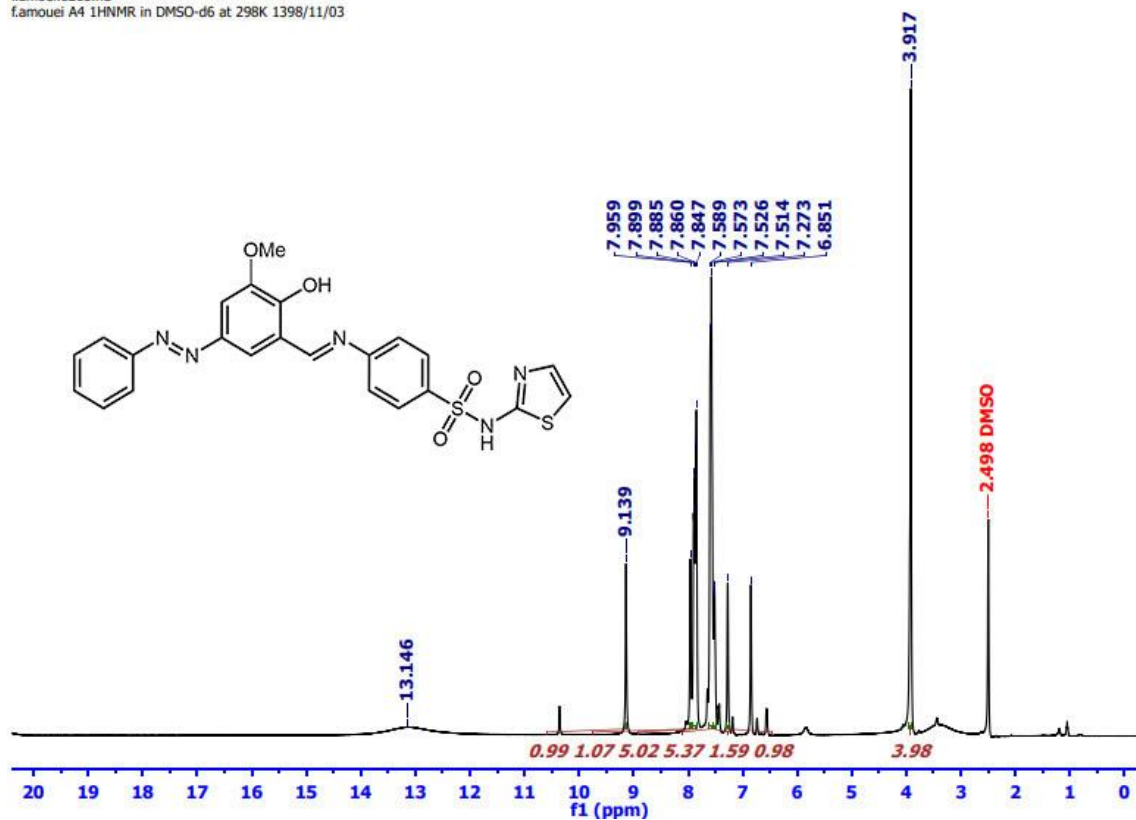
MTT assay data 5c

4-(((E)-2-hydroxy-3-methoxy-5-((E)-phenyldiazenyl) benzylidene) amino)-N-(thiazol-2-yl) benzenesulfonamide **5d**



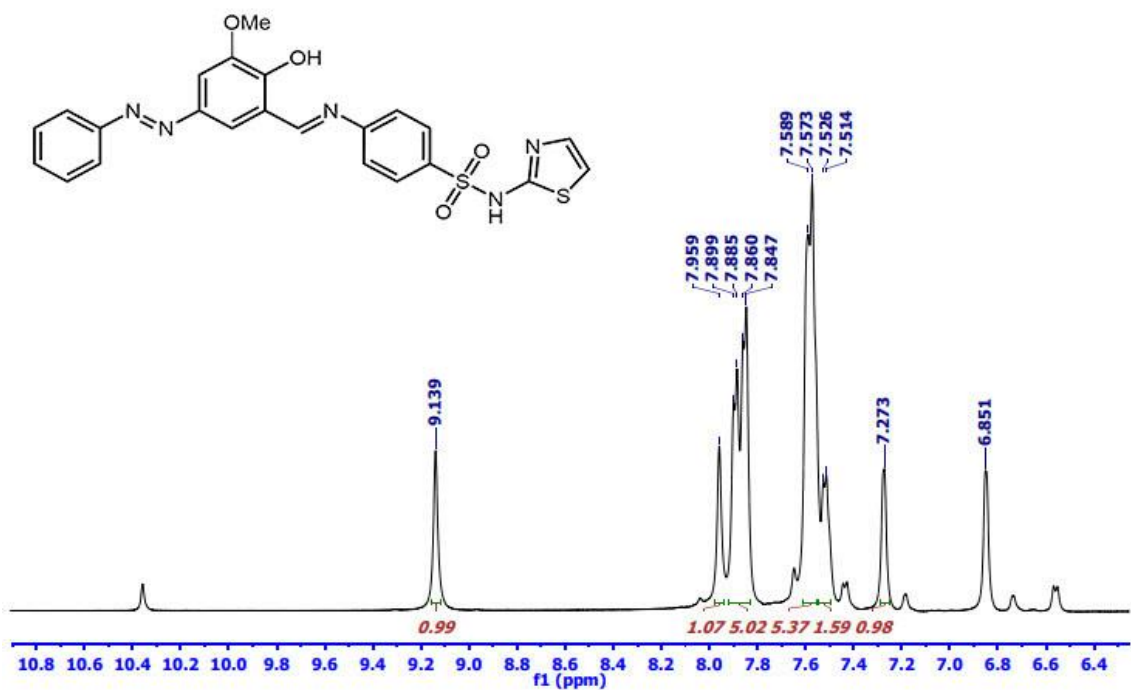
FT-IR (KBr) 5d

f.amoei.8213.fid
f.amoei A4 1HNMR in DMSO-d6 at 298K 1398/11/03



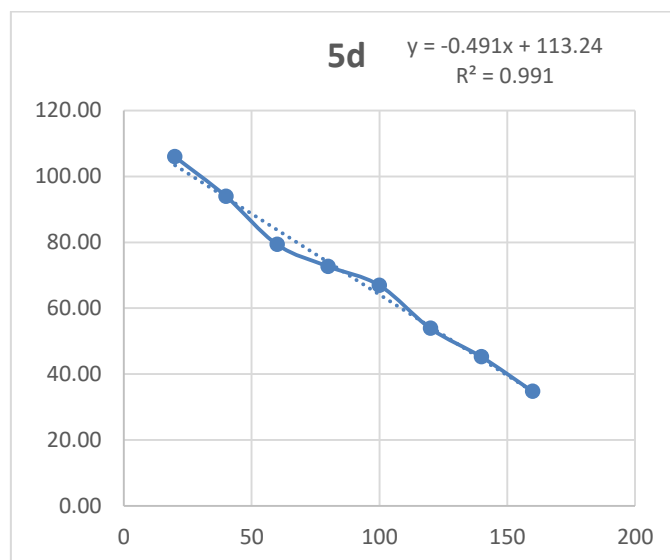
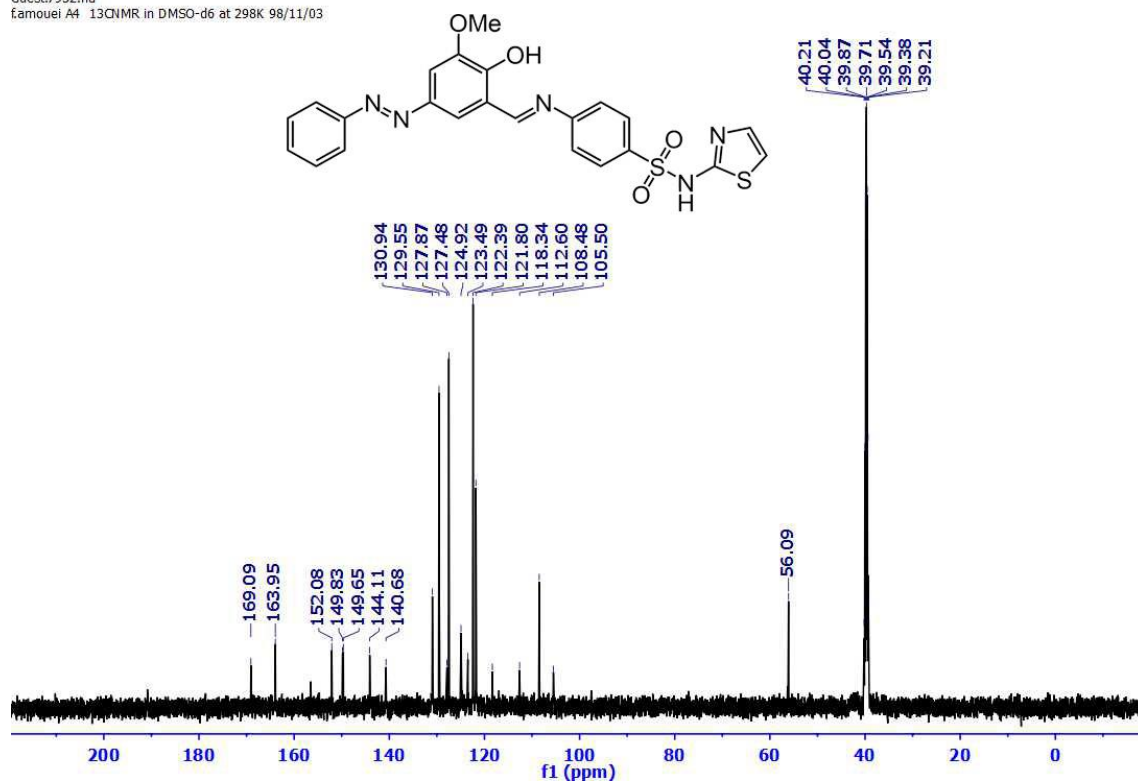
¹H NMR (DMSO-*d*₆ 500 MHz) 5d

f.amoei.8213.fid
f.amoei A4 1HNMR in DMSO-d6 at 298K 1398/11/03



¹H NMR (DMSO-*d*₆ 500 MHz) extend 5d

Guest.7952.fid
famouei A4 13QNMN in DMSO-d6 at 298K 98/11/03



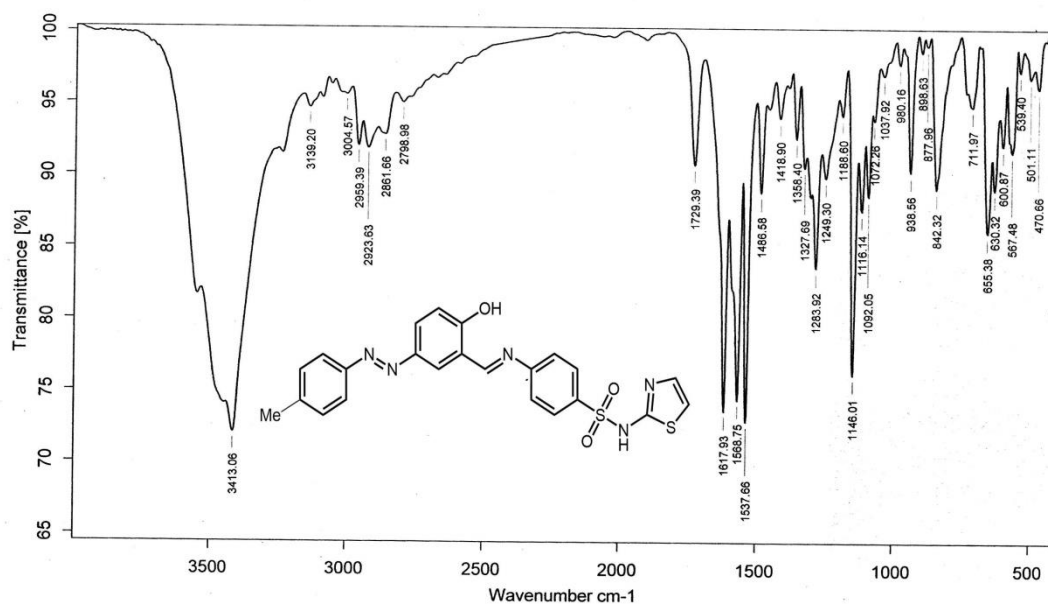
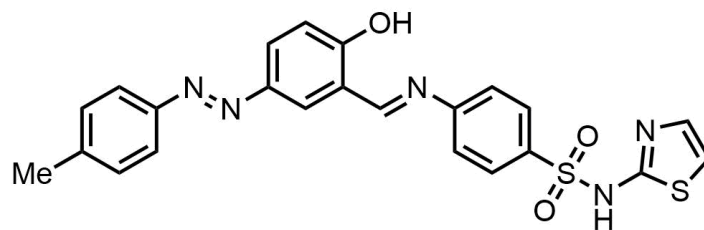
MTT assay data **5d**

4-(((*E*)-2-hydroxy-5-((*E*)-*p*-tolyl-diazenyl)
benzenesulfonyl)amino)-*N*-(thiazol-2-yl)

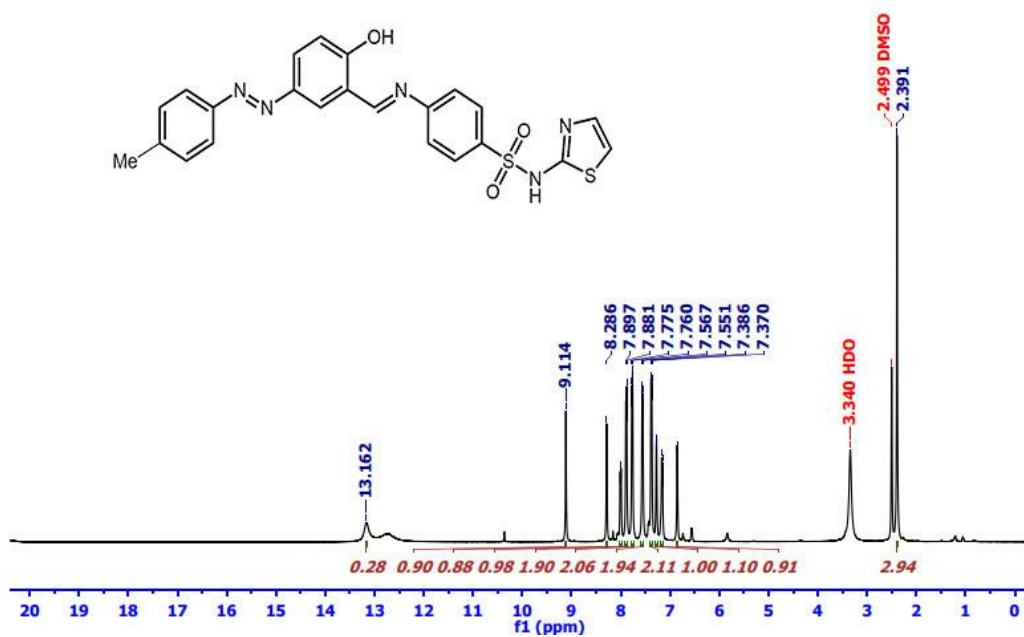
benzylidene)

benzenesulfonyl)amino)-*N*-(thiazol-2-yl)

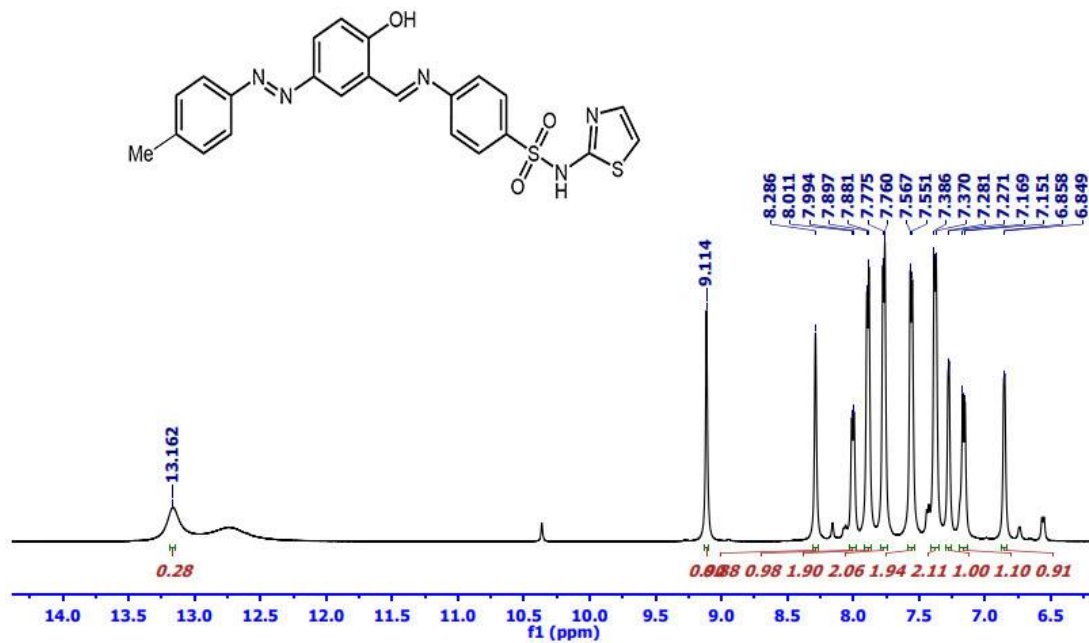
benzenesulfonyl)amino)-*N*-(thiazol-2-yl)



famoei.8215.fid
famoei AS 1HNMR in DMSO-d6 at 298K 1398/11/03

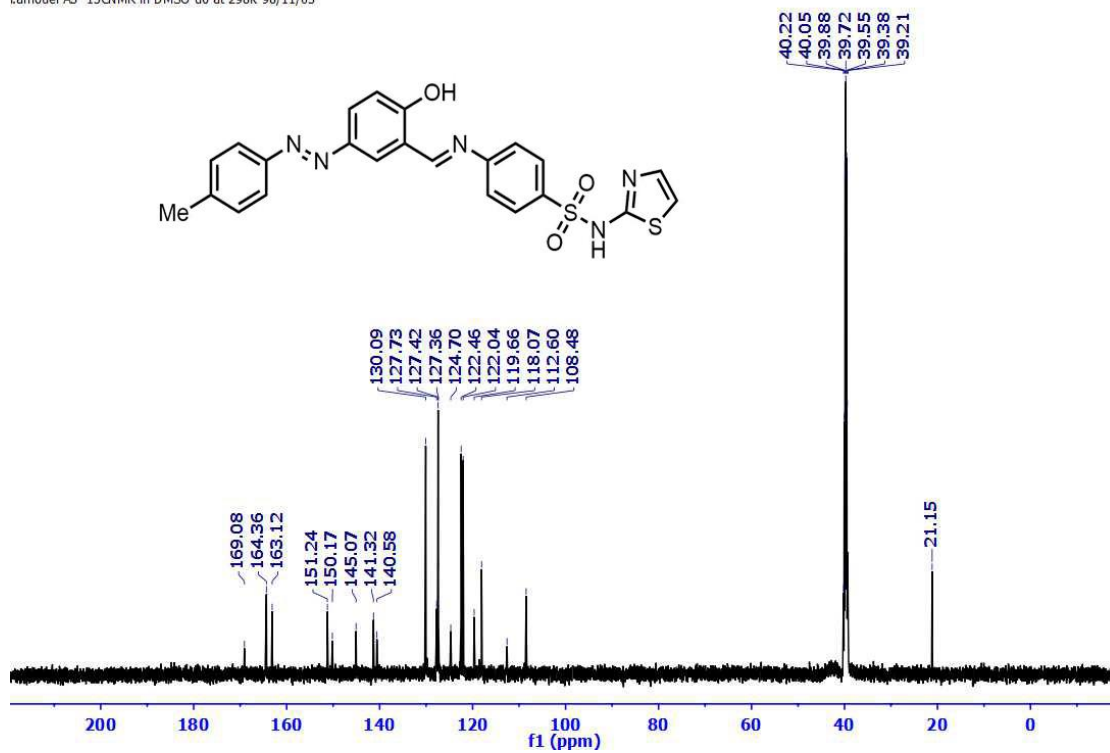


famoei.8215.fid
famoei A5 1HNMR in DMSO-d6 at 298K 1398/11/03

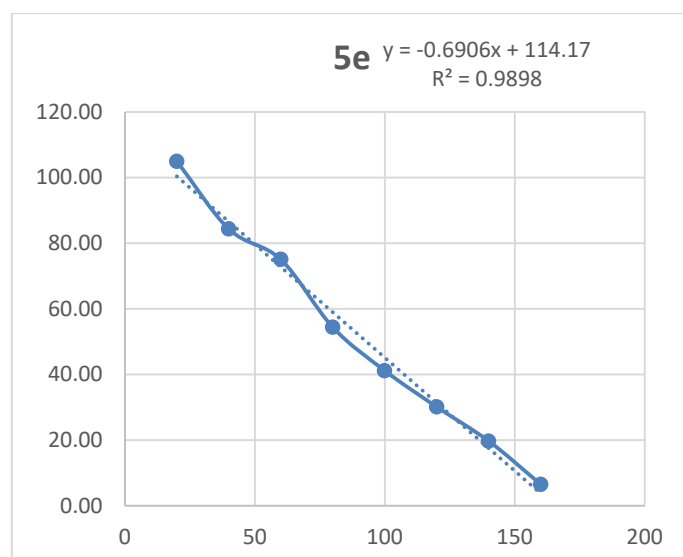


¹H NMR (DMSO-d₆ 500 MHz) extend 5e

Cuest.7952.fid
famoei A5 13CNMR in DMSO-d6 at 298K 98/11/03

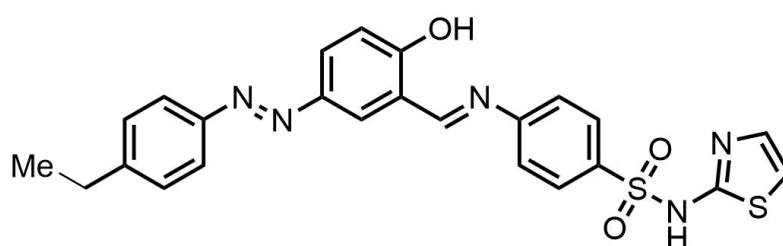


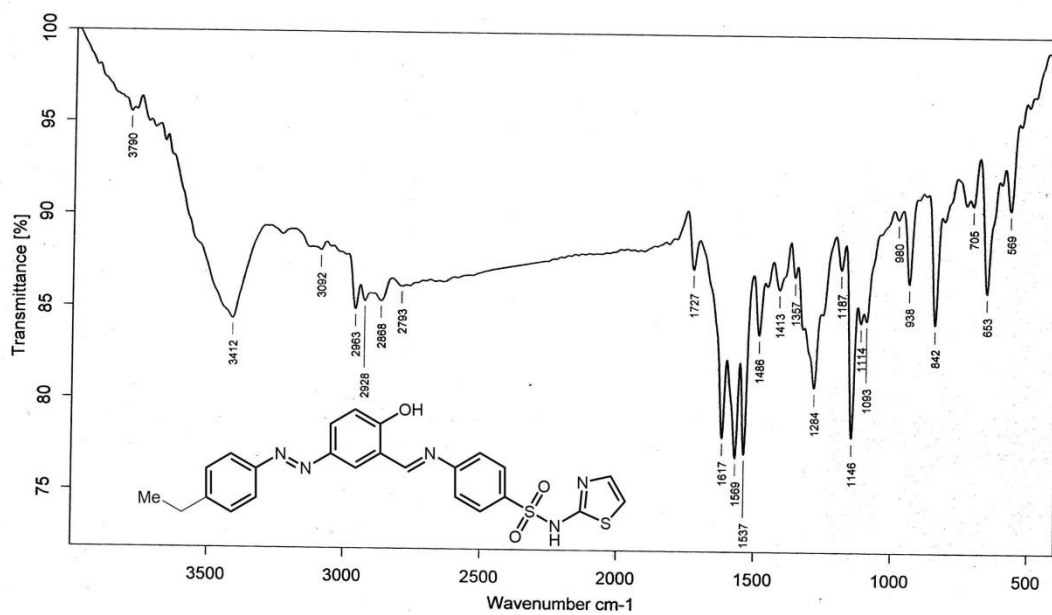
¹³C NMR (DMSO-d₆ 125 MHz) 5e



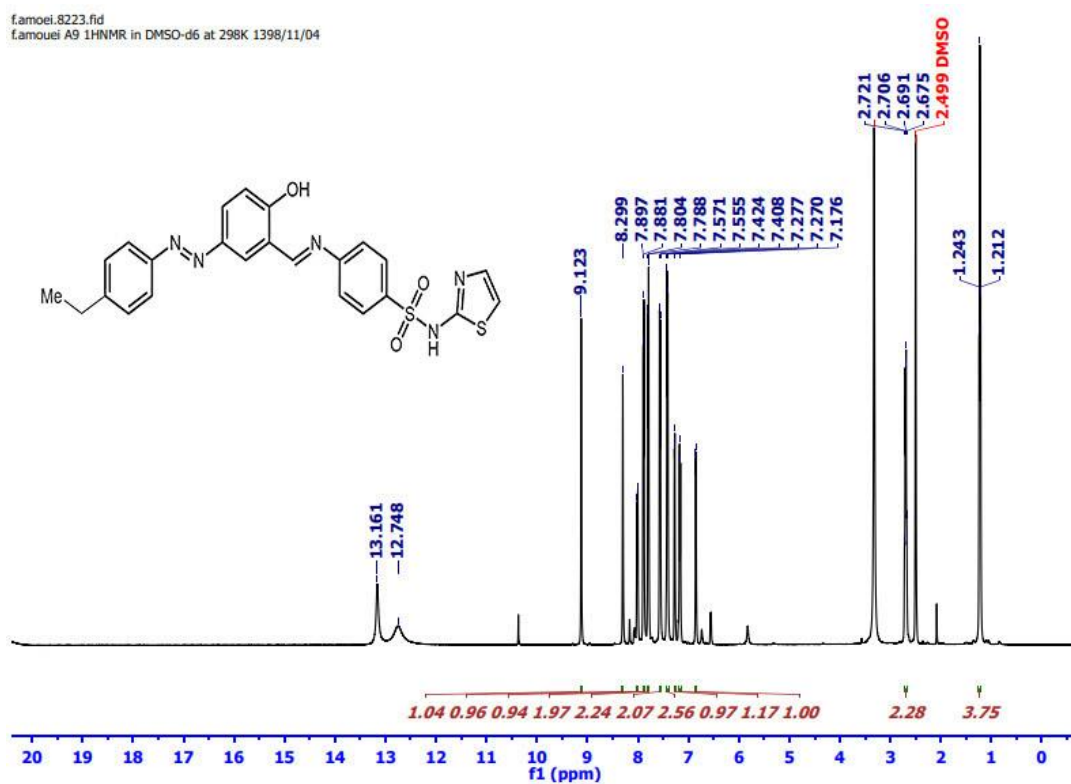
MTT assay data **5e**

4-(((*E*)-5-((*E*)-(4-ethylphenyl) diazenyl)-2-hydroxybenzylidene) amino)-*N*-(thiazol-2-yl) benzenesulfonamide **5f**



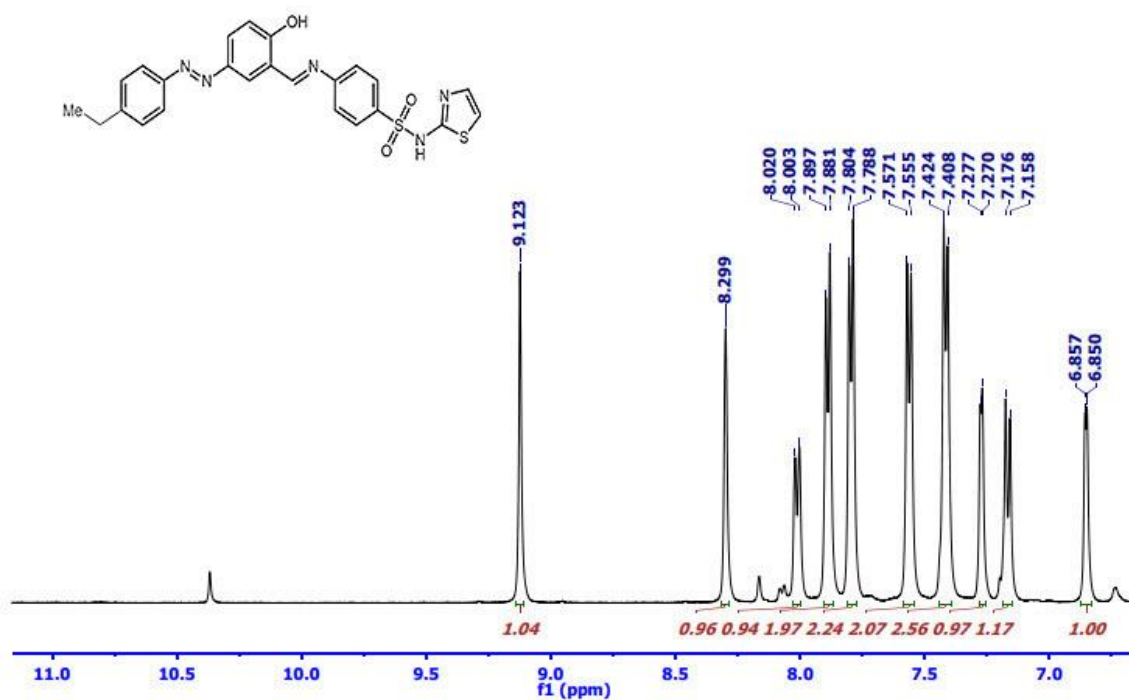


FT-IR (KBr) 5f



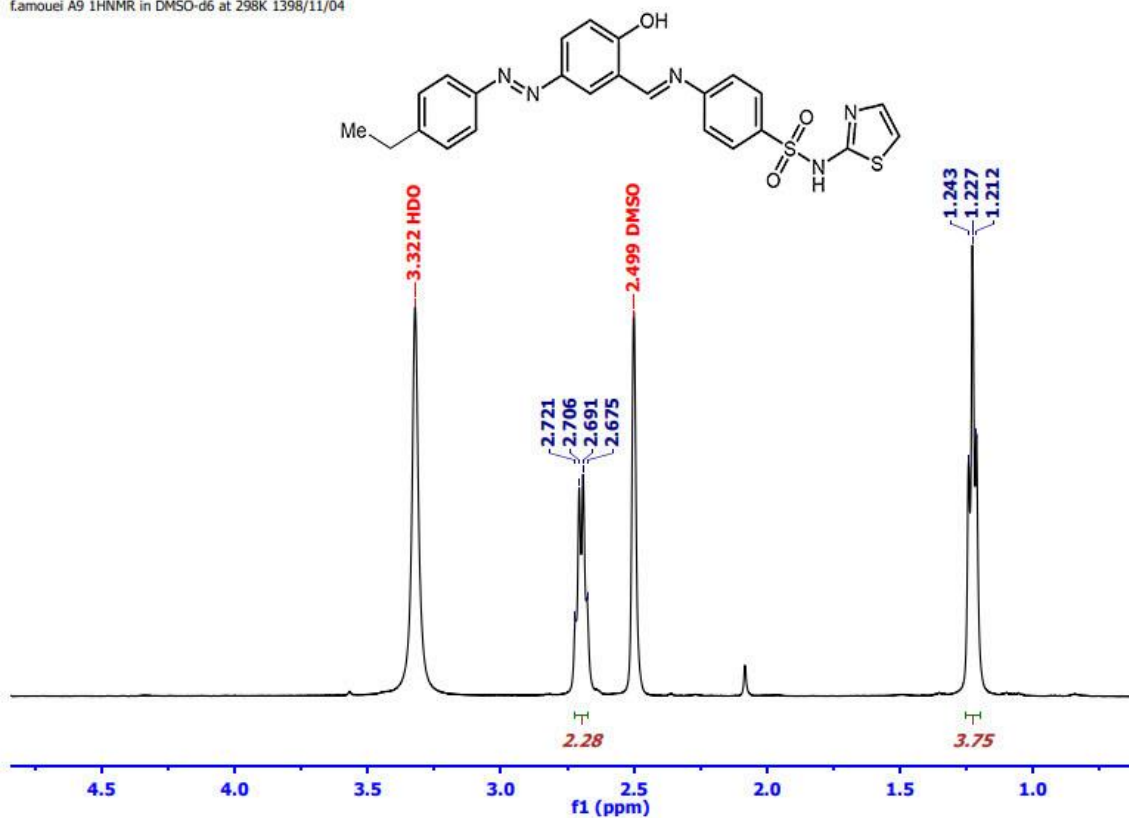
¹H NMR (DMSO-d₆ 500 MHz) 5f

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f:\amoei A9 1HNMR in DMSO-d6 at 298K 1398/11/04



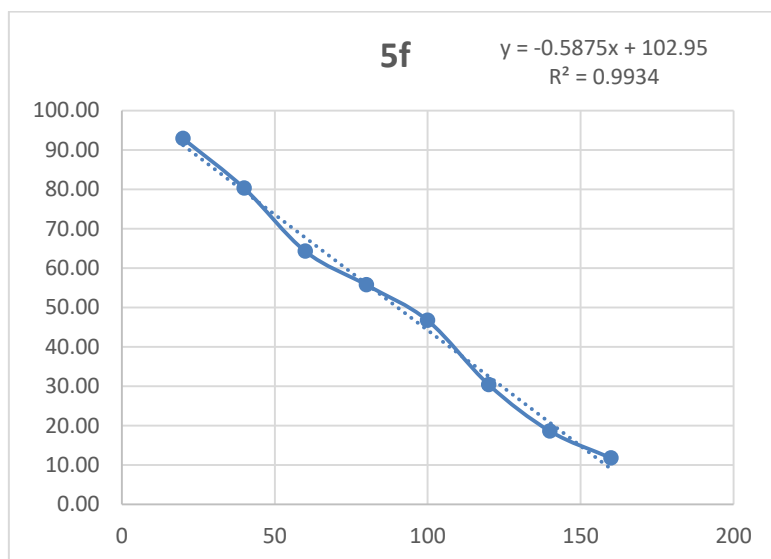
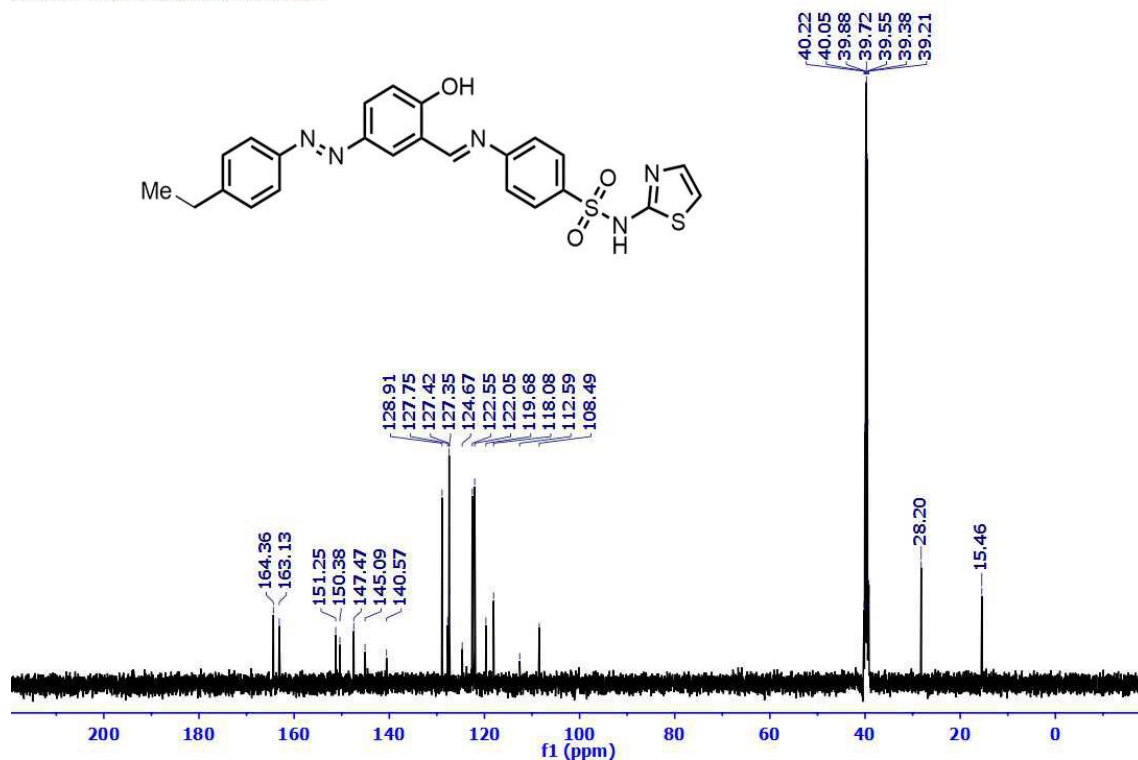
¹H NMR (DMSO-d₆, 500 MHz) extend 5f

f:\amoei.8223.fid
f:\amoei A9 1HNMR in DMSO-d6 at 298K 1398/11/04

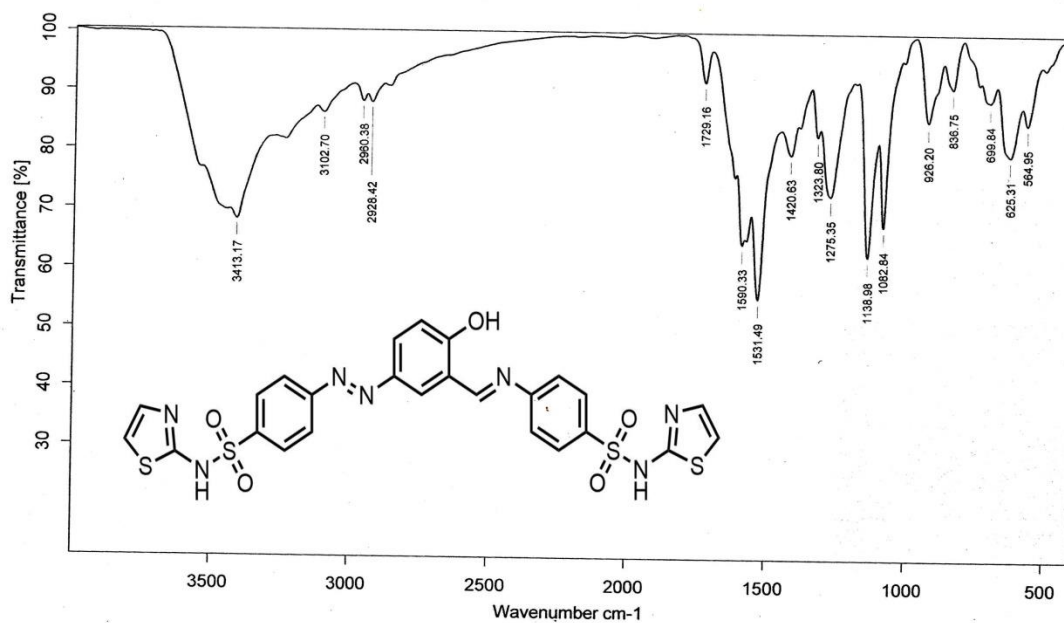
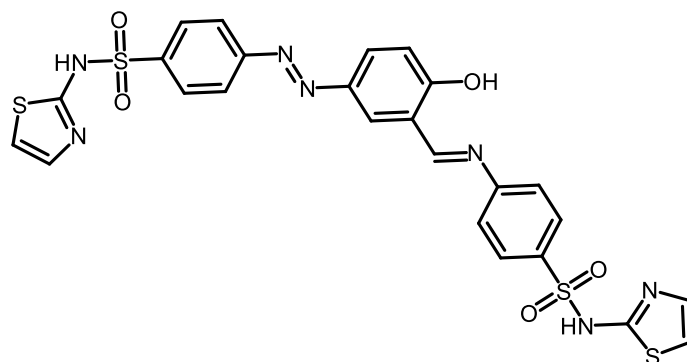


¹H NMR (DMSO-d₆, 500 MHz) extend 5f

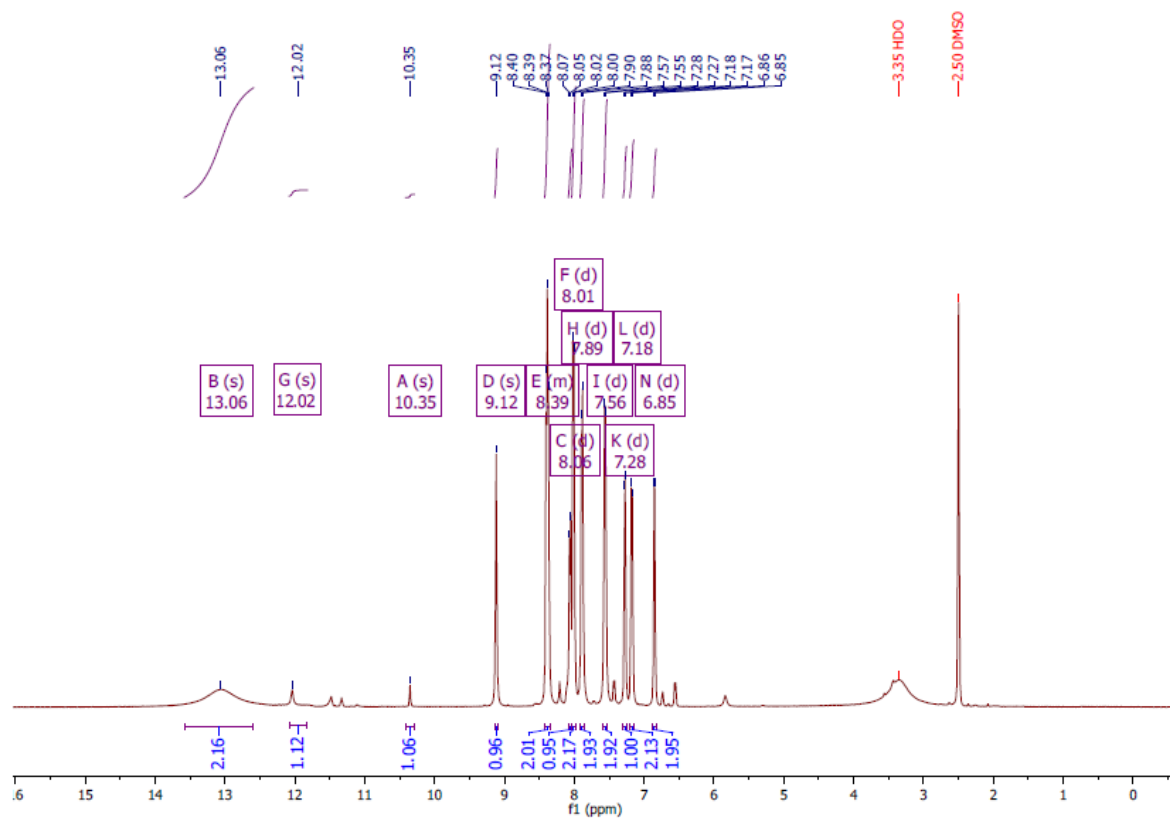
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f.amoei A9 13CNMR in DMSO-d6 at 298K 98/11/04



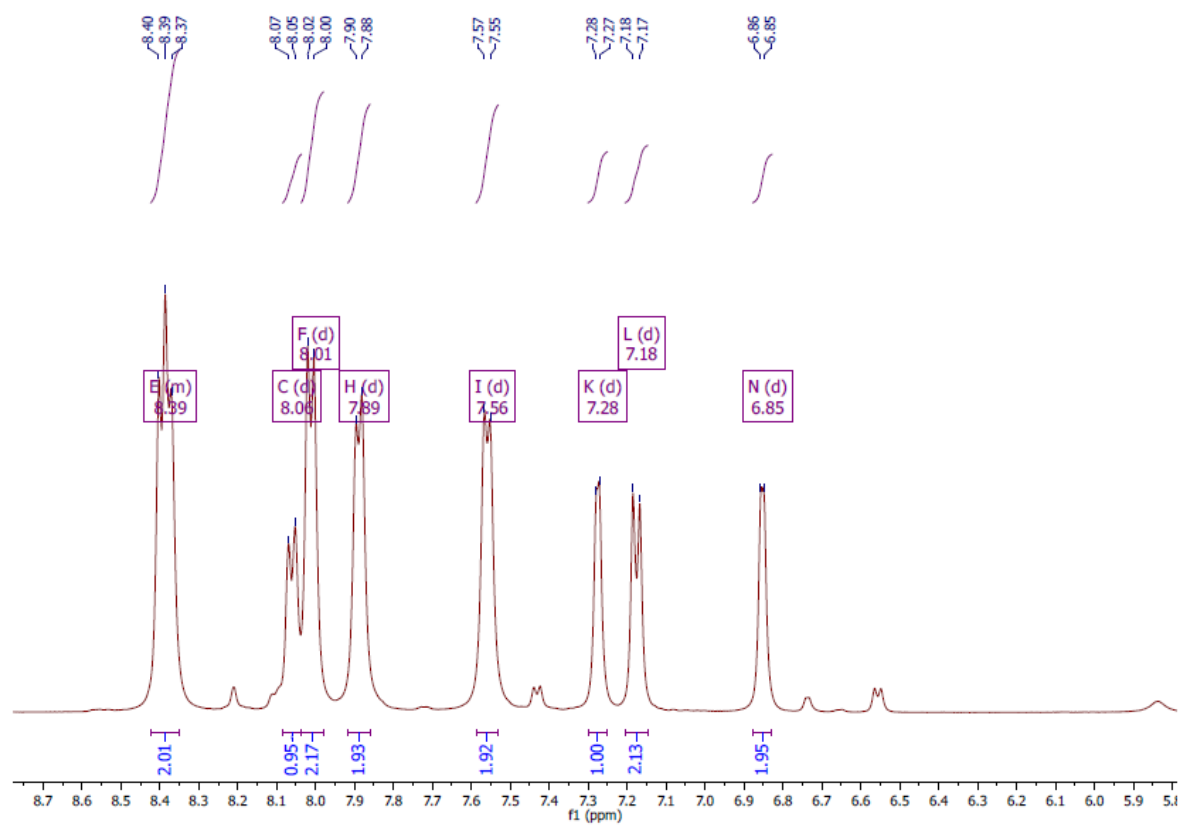
4-((E)-(4-hydroxy-3-((E)-((4-(N-(thiazol-2-yl) sulfamoyl) phenyl) imino) methyl) phenyl) diazenyl)-N-(thiazol-2-yl) benzenesulfonamide 5g



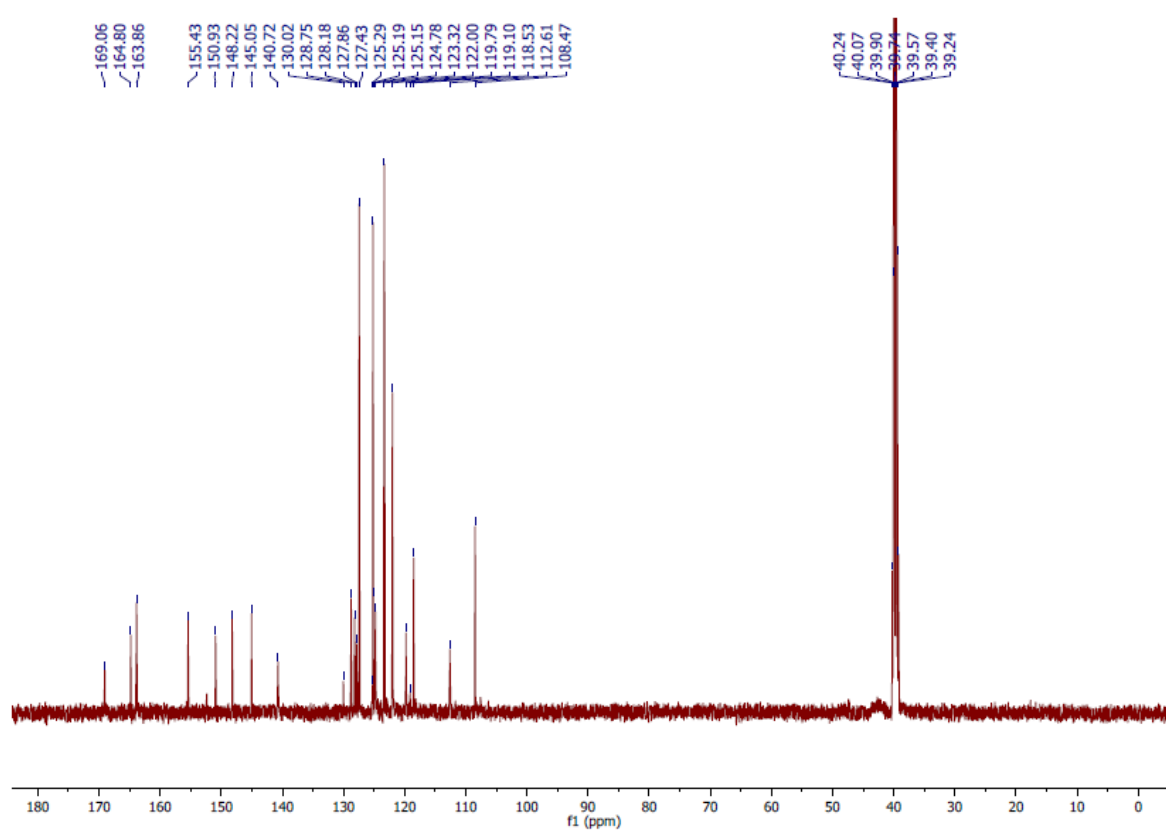
FT-IR (KBr) 5g



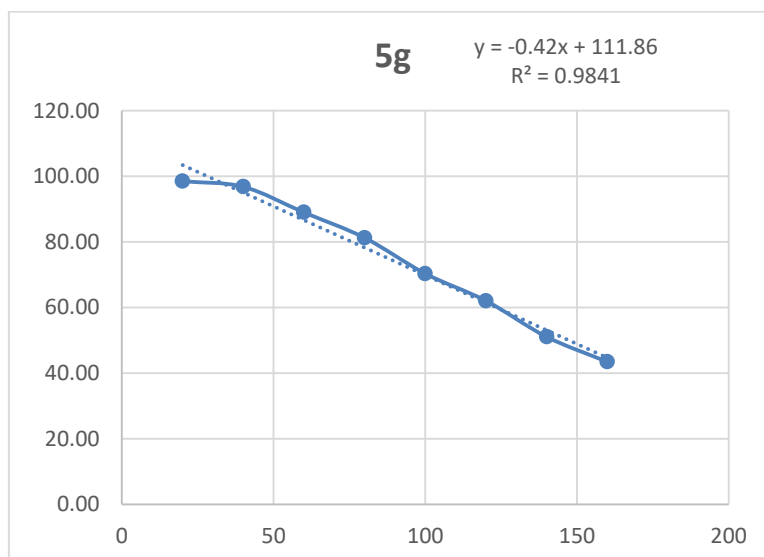
^1H NMR (DMSO- d_6 500 MHz) **5g**



^1H NMR (DMSO- d_6 500 MHz) extend **5g**

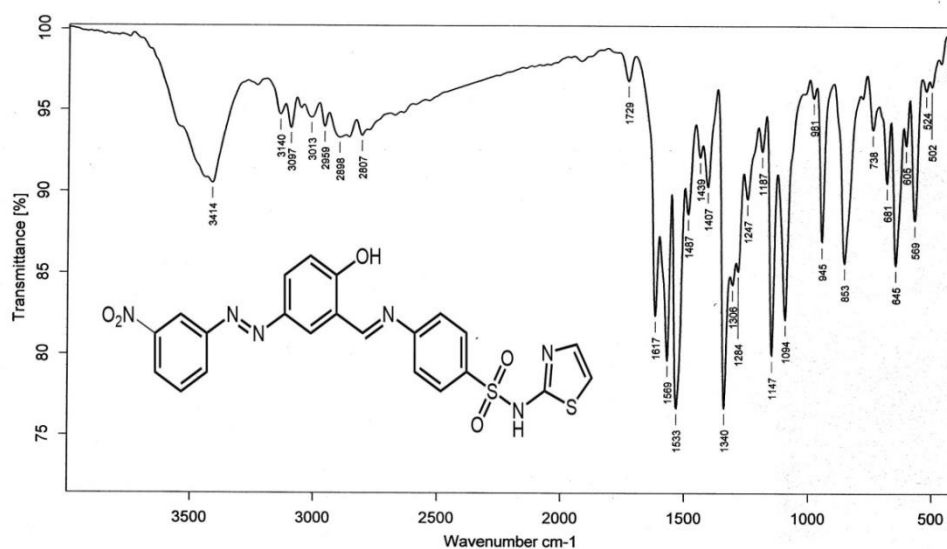
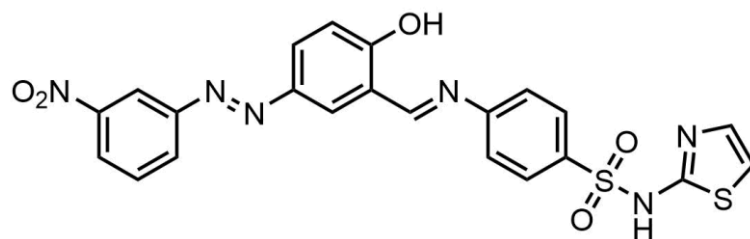


^{13}C NMR (DMSO- d_6 125 MHz) **5g**



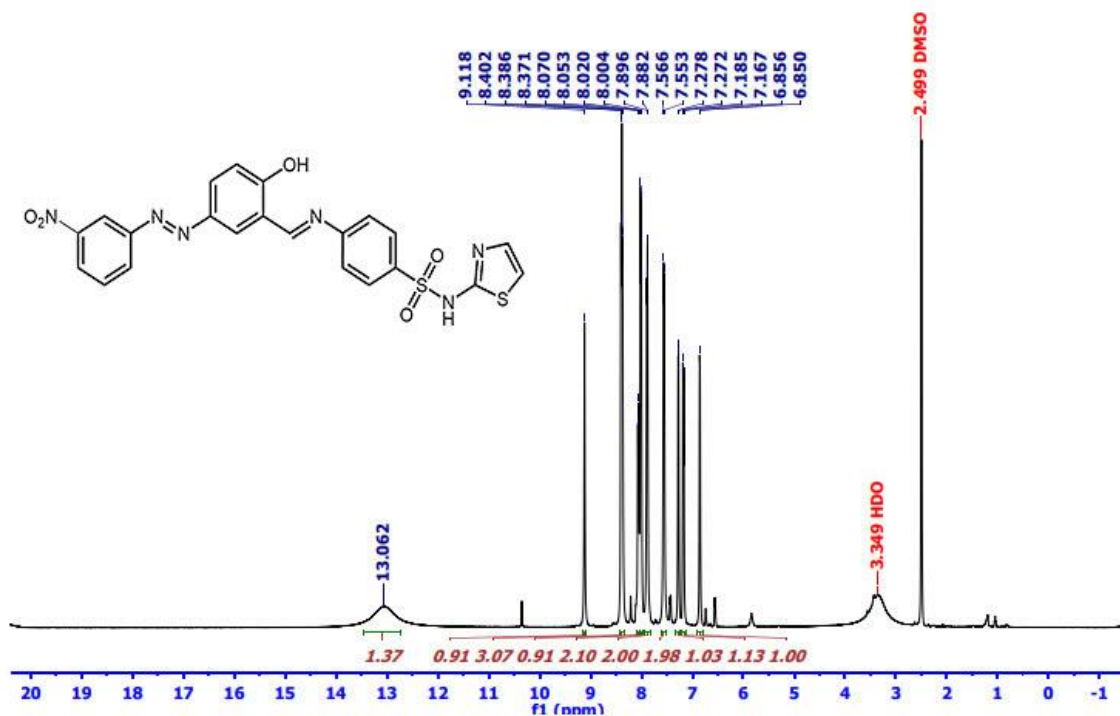
MTT assay data **5g**

4-(((*E*)-2-hydroxy-5-((*E*)-(3-nitrophenyl) diazenyl) benzylidene) amino)-*N*-(thiazol-2-yl) benzenesulfonamide **5h**



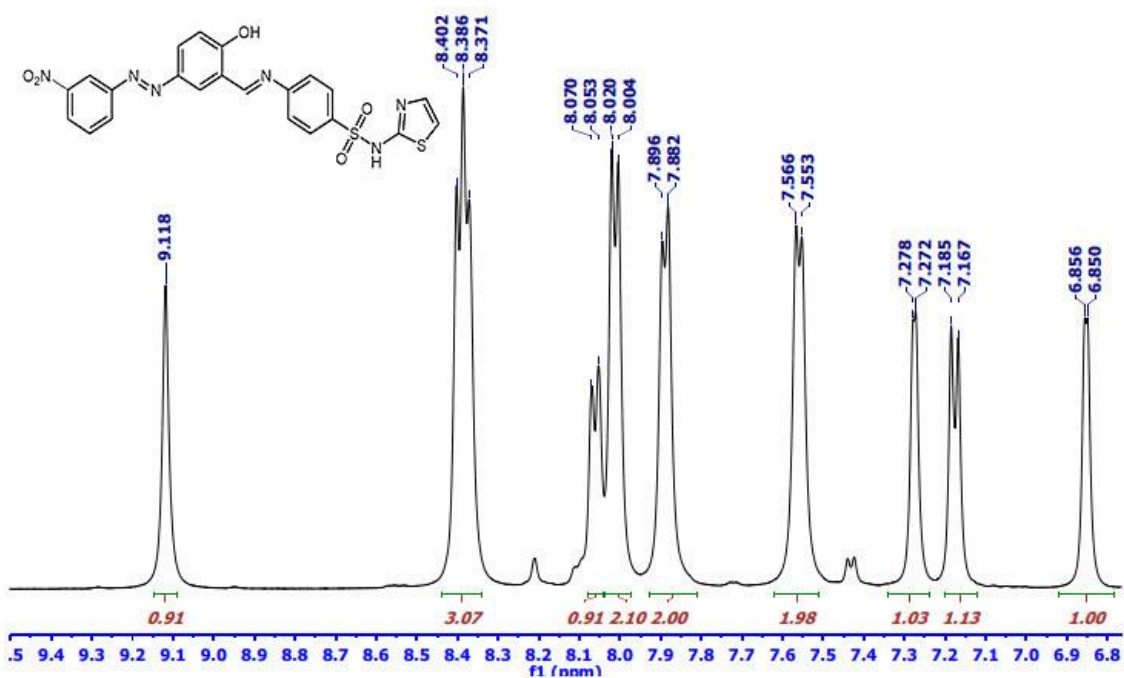
FT-IR (KBr) **5h**

f:\amoei.5219.fid
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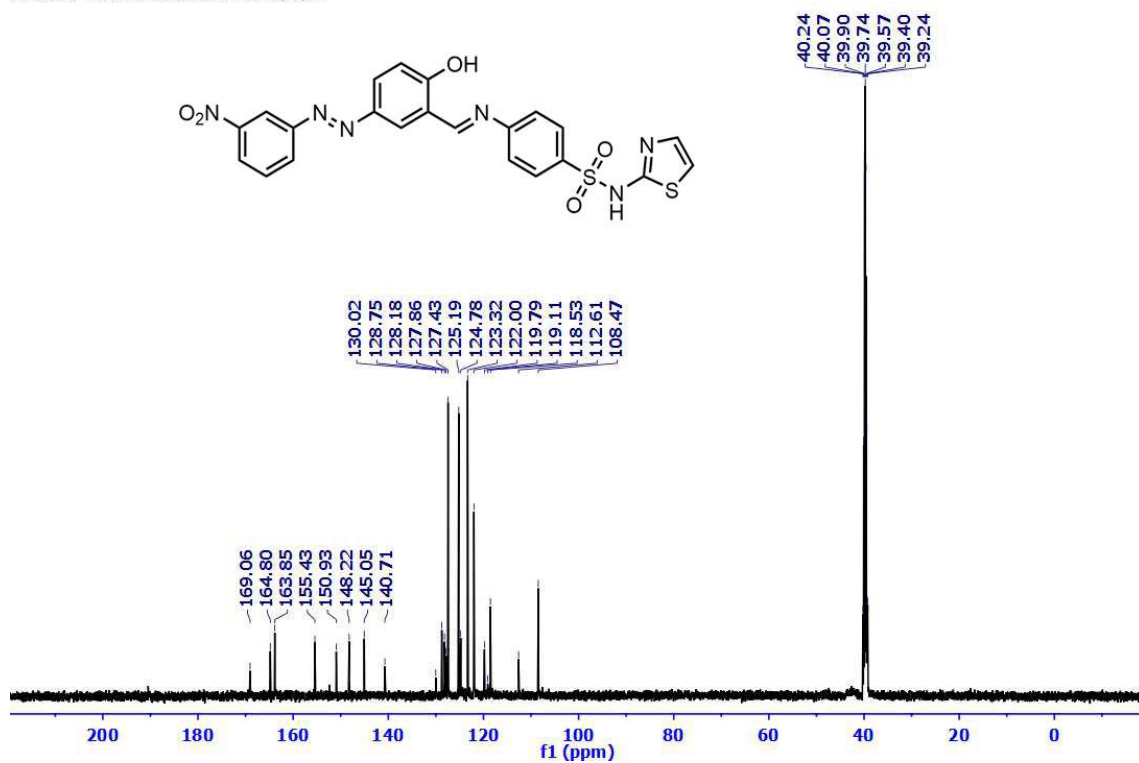


^1H NMR (DMSO- d_6 500 MHz) **5h**

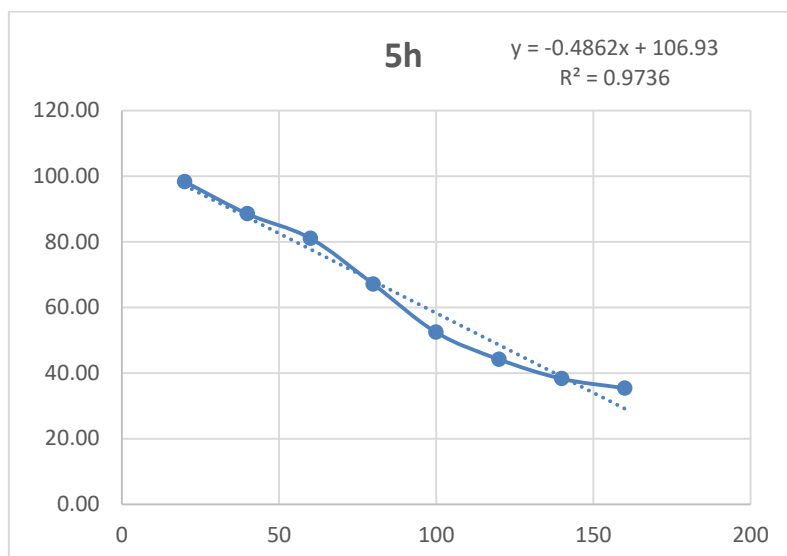
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f.amoei A7 1H NMR in DMSO-d₆ at 298K 1398/11/03



Guest.7952.fid
f.amoei A7 13C NMR in DMSO-d₆ at 298K 98/11/03

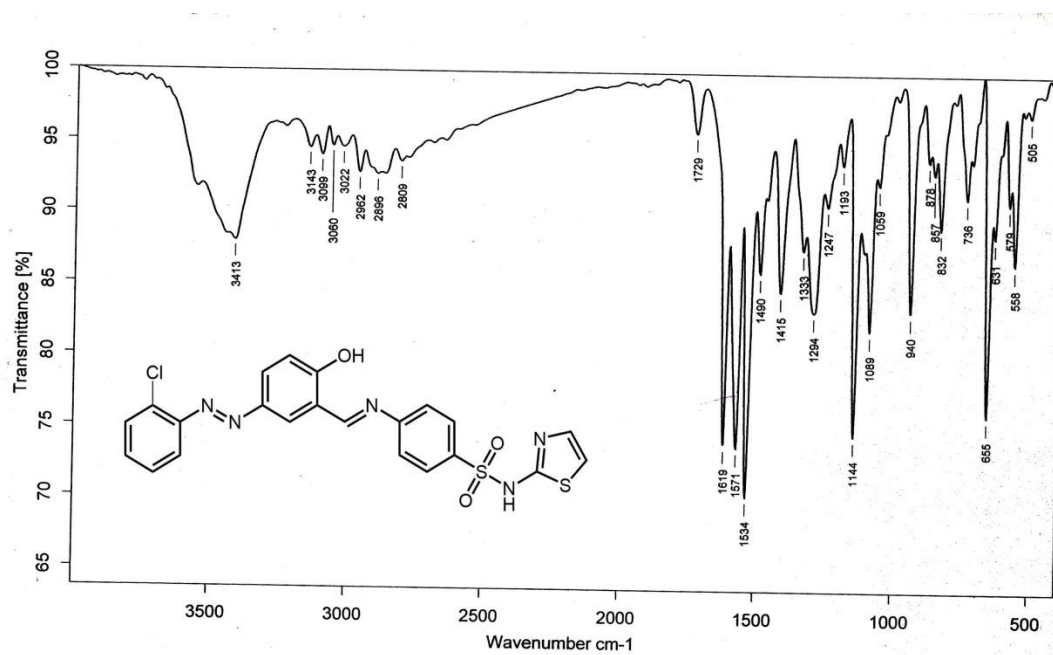
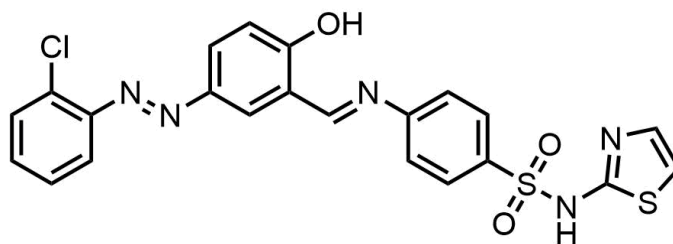


¹³C NMR (DMSO- *d*₆ 125 MHz) **5h**



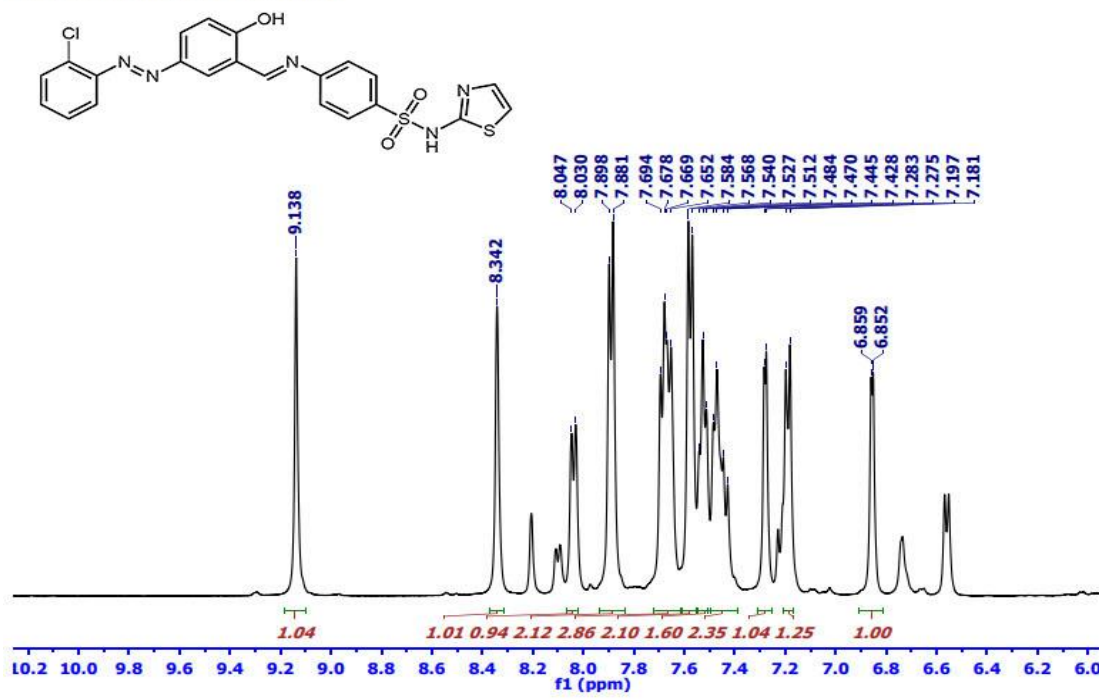
MTT assay data **5h**

4-(((*E*)-5-((*E*)-(2-chlorophenyl) diazenyl)-2-hydroxybenzylidene) amino)-*N*-(thiazol-2-yl) benzenesulfonamide **5i**



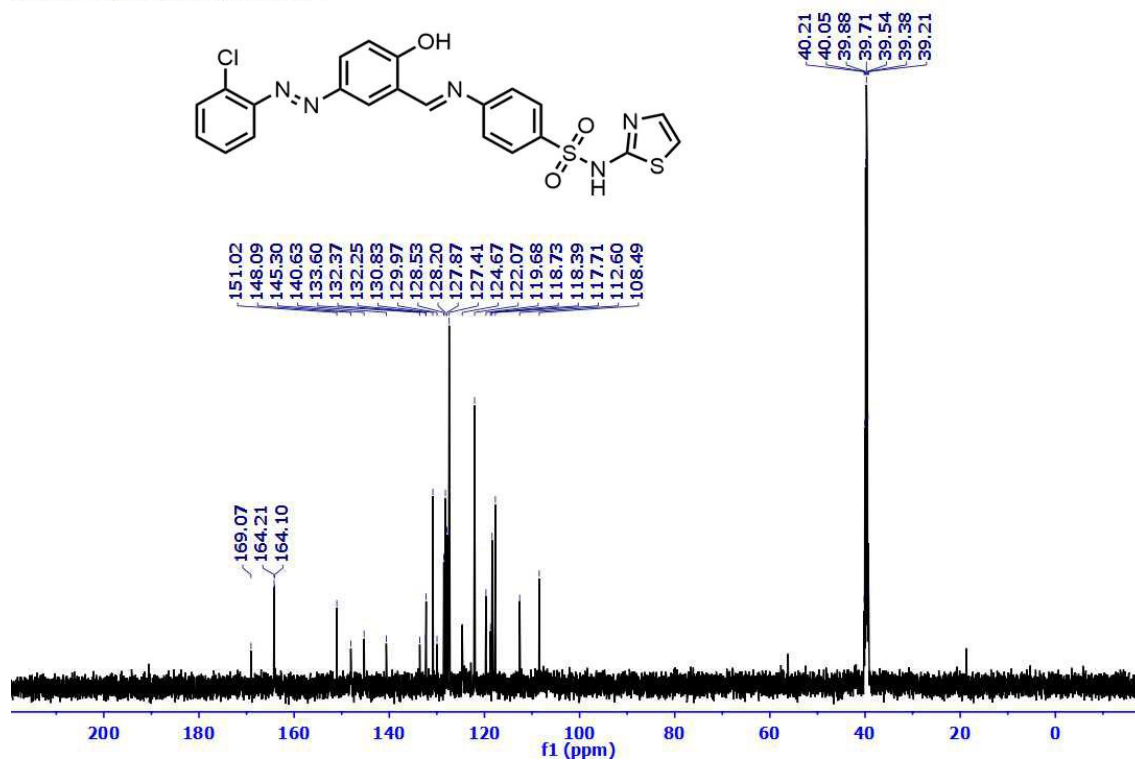
FT-IR (KBr) **5i**

f.amoei.8221.fid
famouei A8 1H NMR in DMSO-d₆ at 298K 1398/11/04

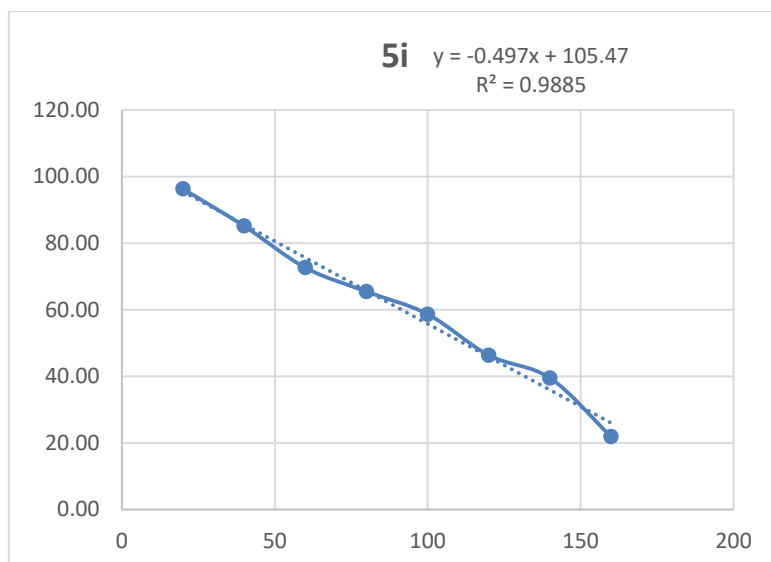


¹H NMR (DMSO- d₆ 500 MHz) extend **5i**

Guest.7952.fid
famouei A8 13C NMR in DMSO-d₆ at 298K 98/11/04



¹³C NMR (DMSO-d₆ 125 MHz) **5i**



MTT assay data **5i**