

Synthesis of novel series of 3,5-disubstituted imidazo[1,2-*d*][1,2,4]thiadiazoles involving S_NAr and Suzuki-Miyaura cross-coupling reactions

Clémentine Pescheteau^{a,†}, Matthieu Place^{a,†}, Alexandru Sava^{a,b}, Léa Nunes^a, Lenuta Profire^b, Sylvain Routier^{a,*} and Frédéric Buron^{a,*}

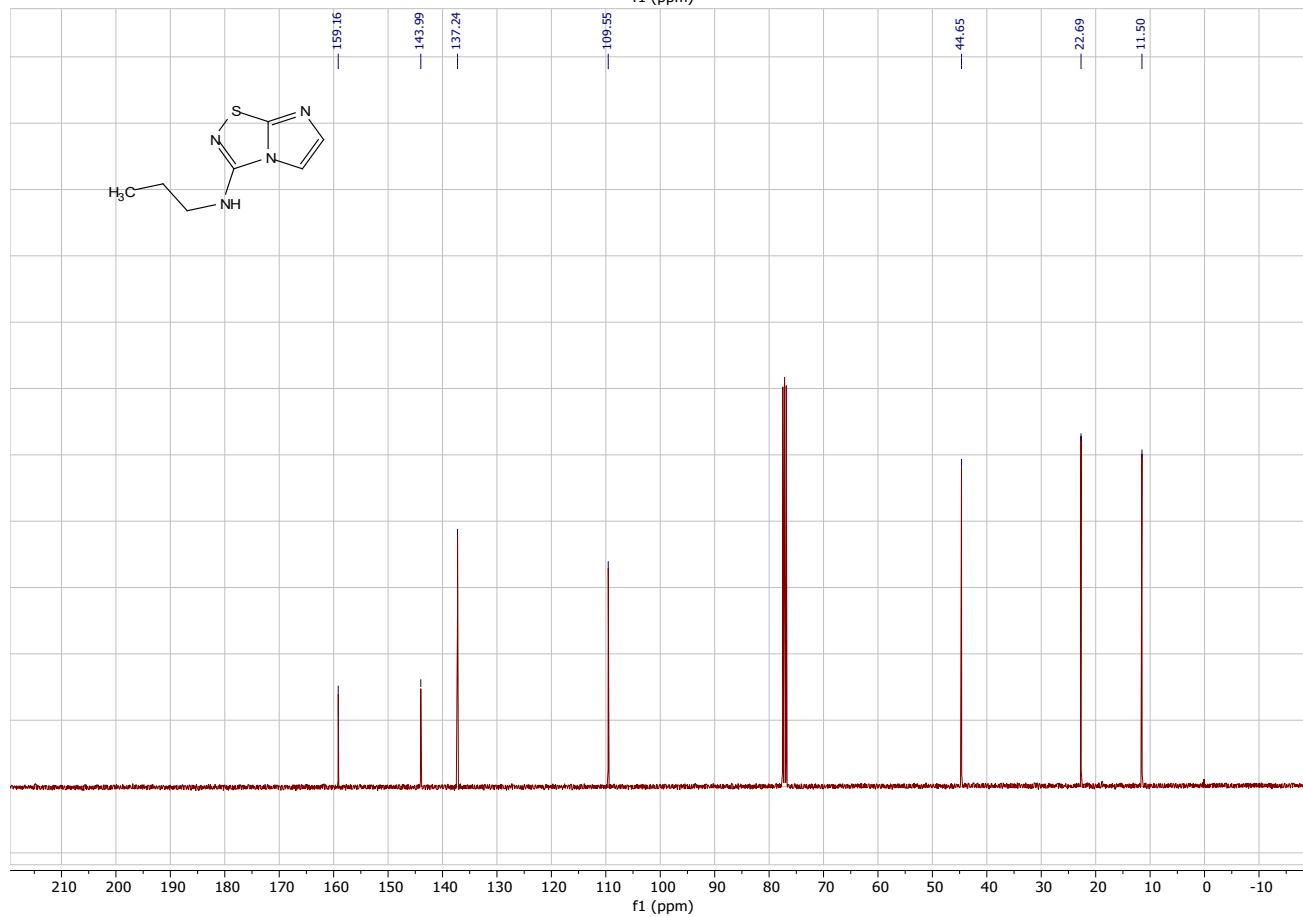
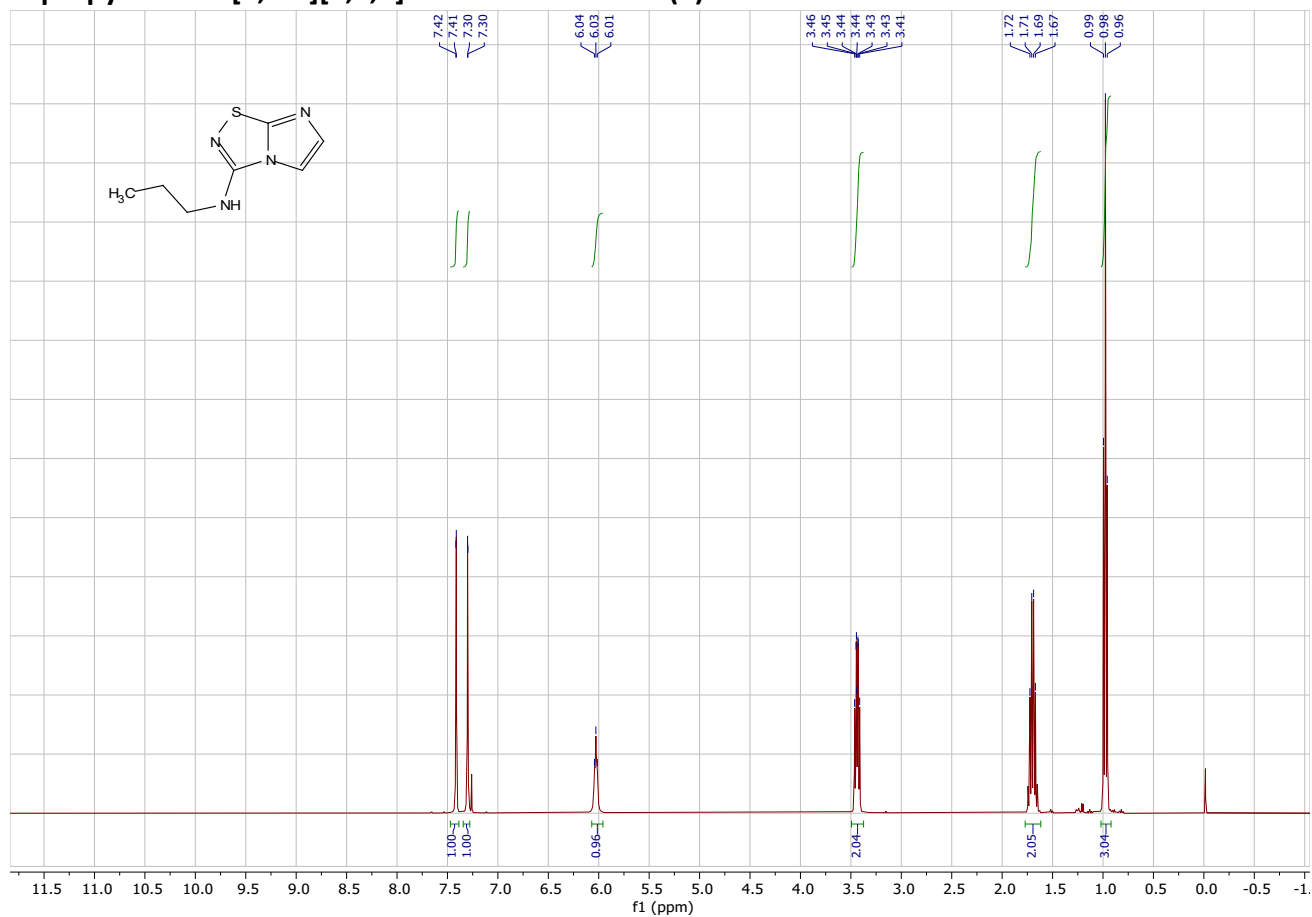
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^b Department of Pharmaceutical Chemistry, Faculty of Pharmacy, "Grigore T. Popa" University of Medicine and Pharmacy of Iași, 16 University Street, Iași, Romania.

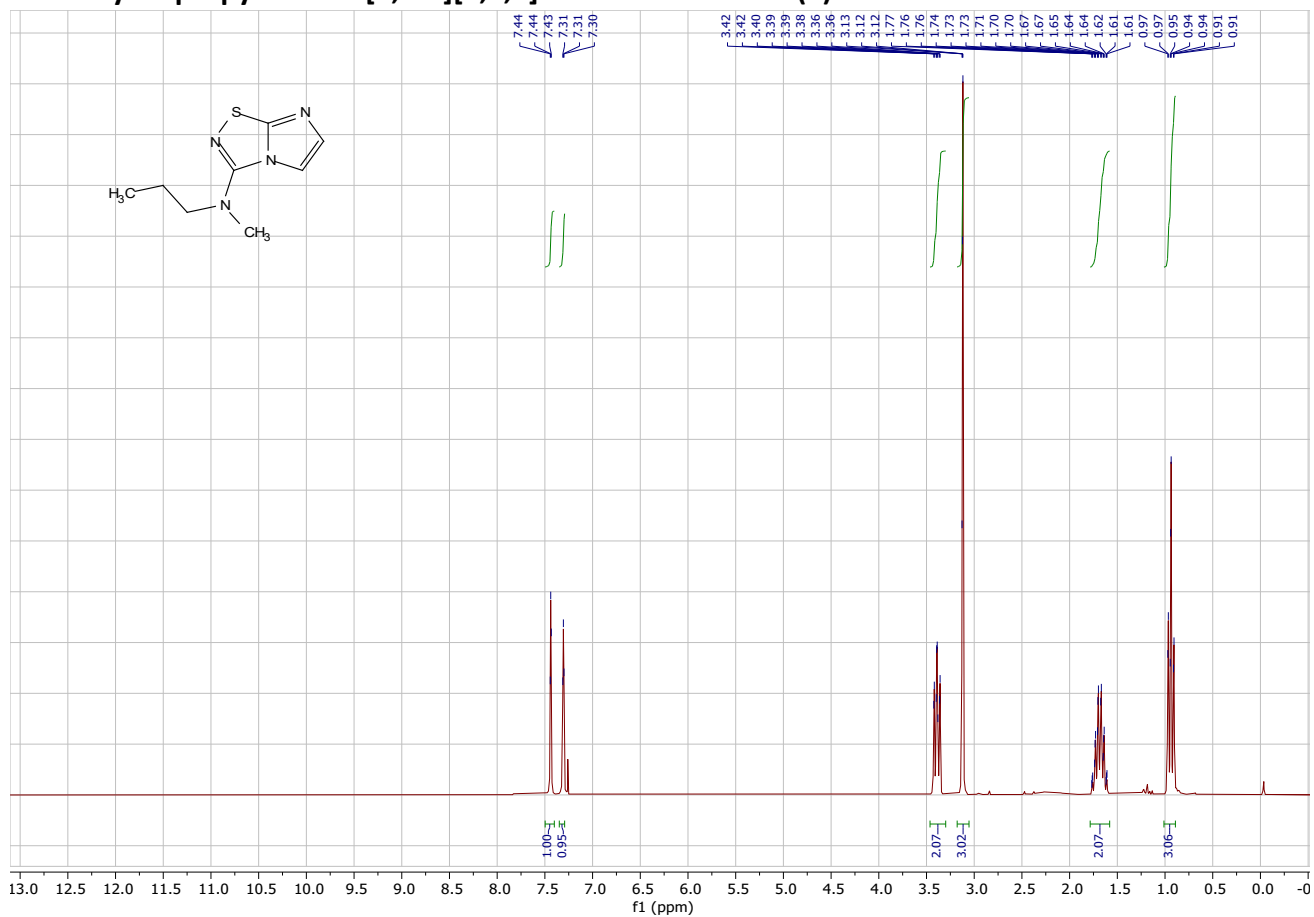
† These authors equally contributed to the presented work.

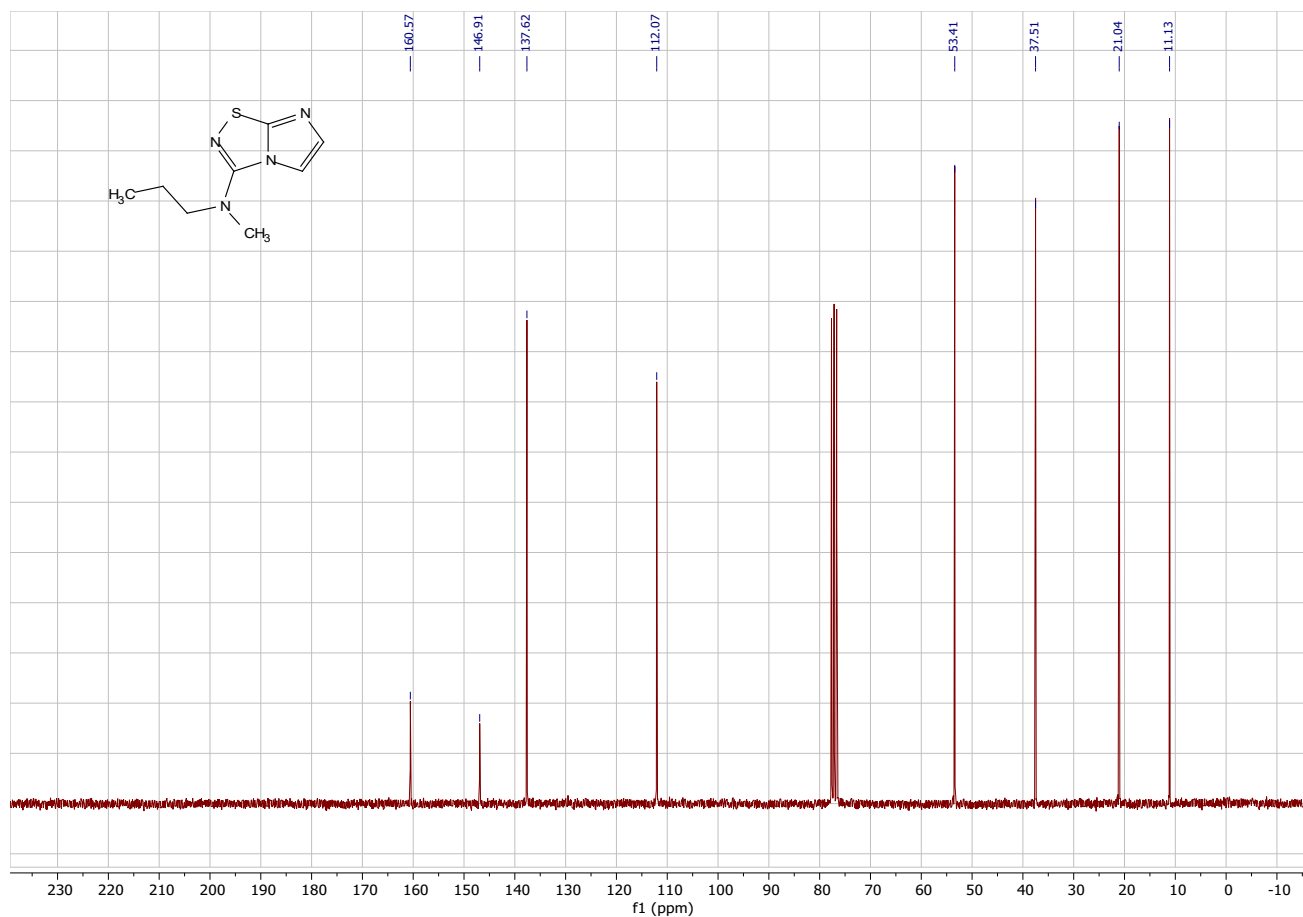
The supporting information contains the ¹H NMR and ¹³C NMR copy spectra.

***N*-propylimidazo[1,2-*d*][1,2,4]thiadiazol-3-amine (5)**

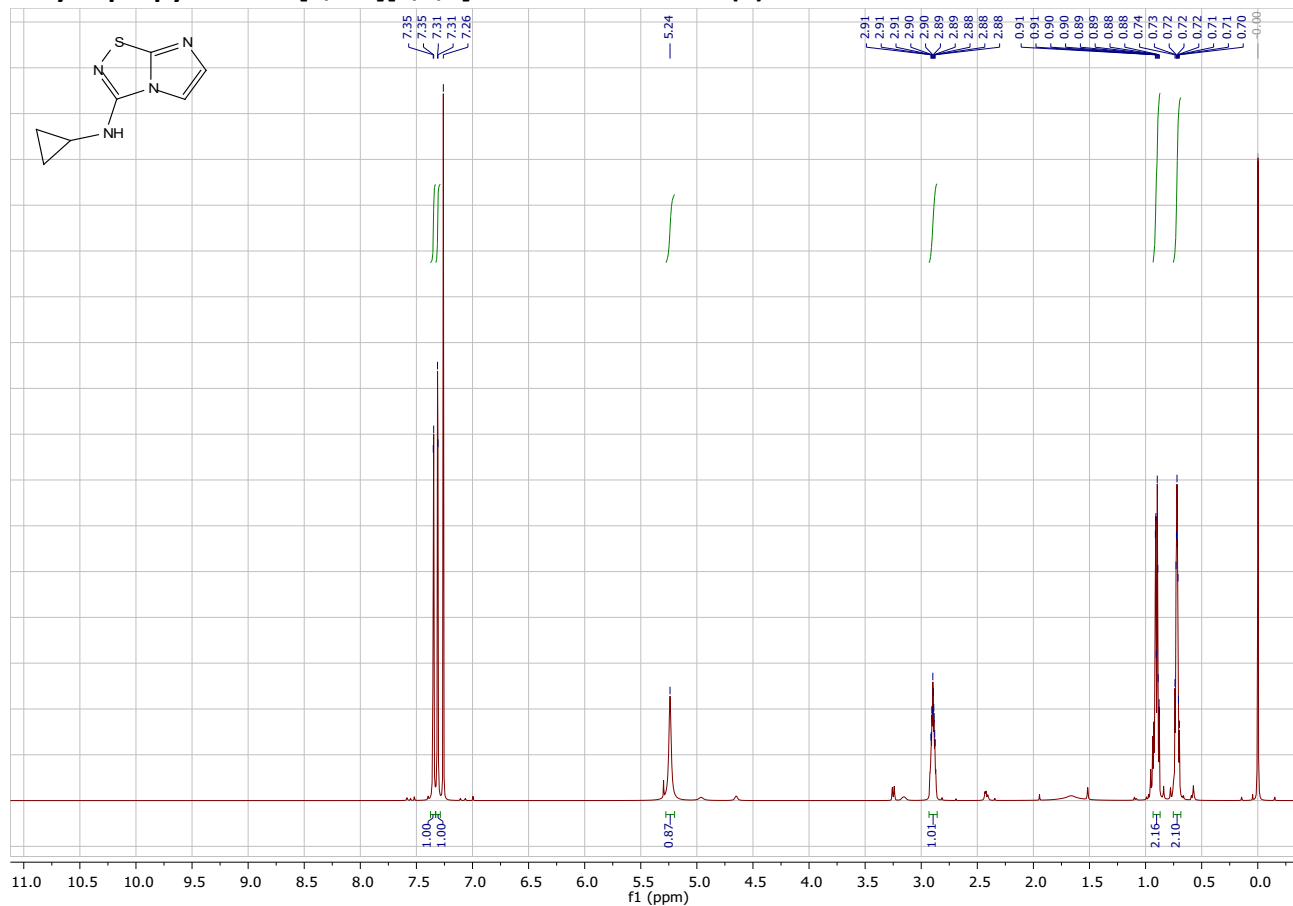


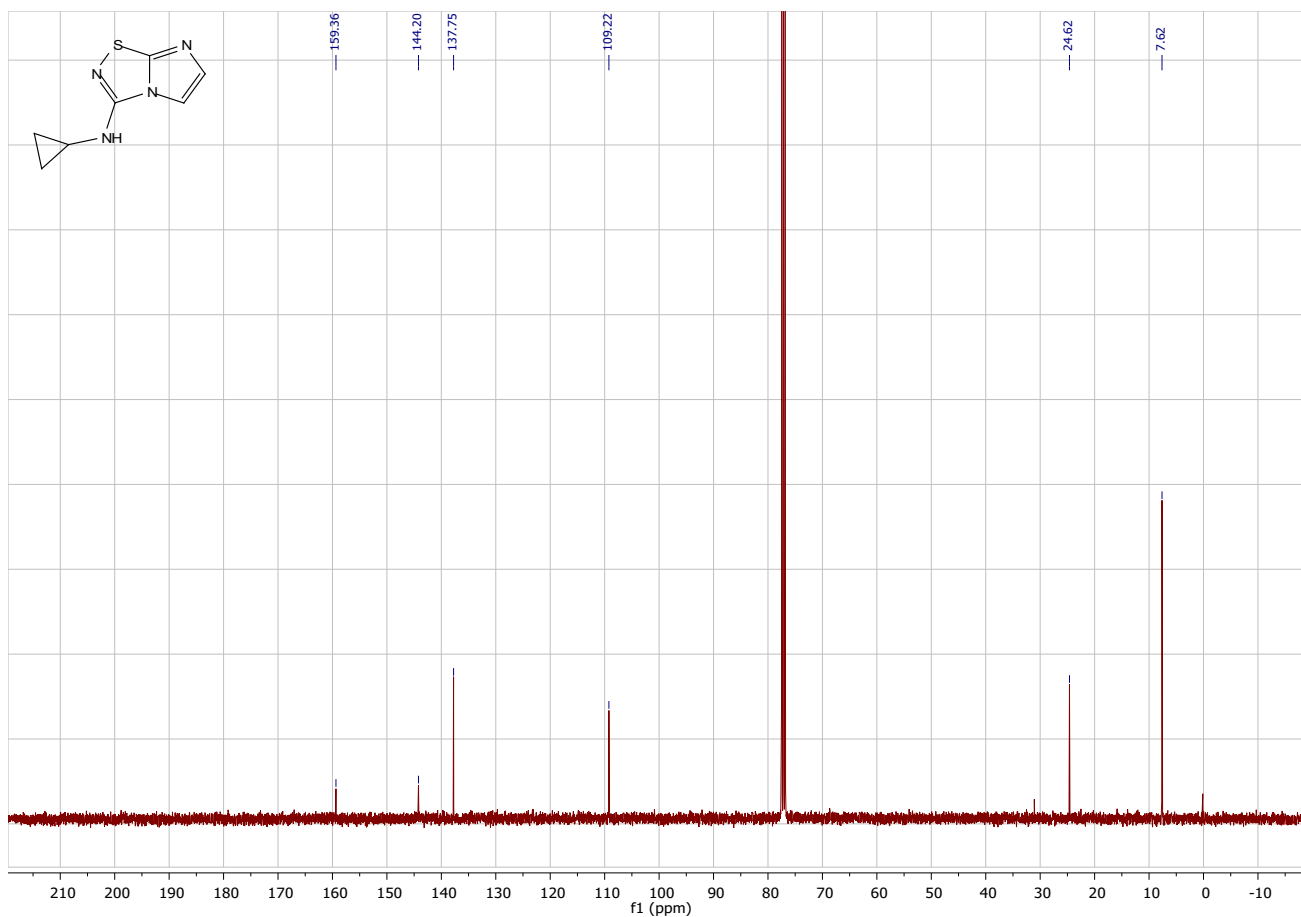
***N*-methyl-*N*-propylimidazo[1,2-*d*][1,2,4]thiadiazol-3-amine (6)**



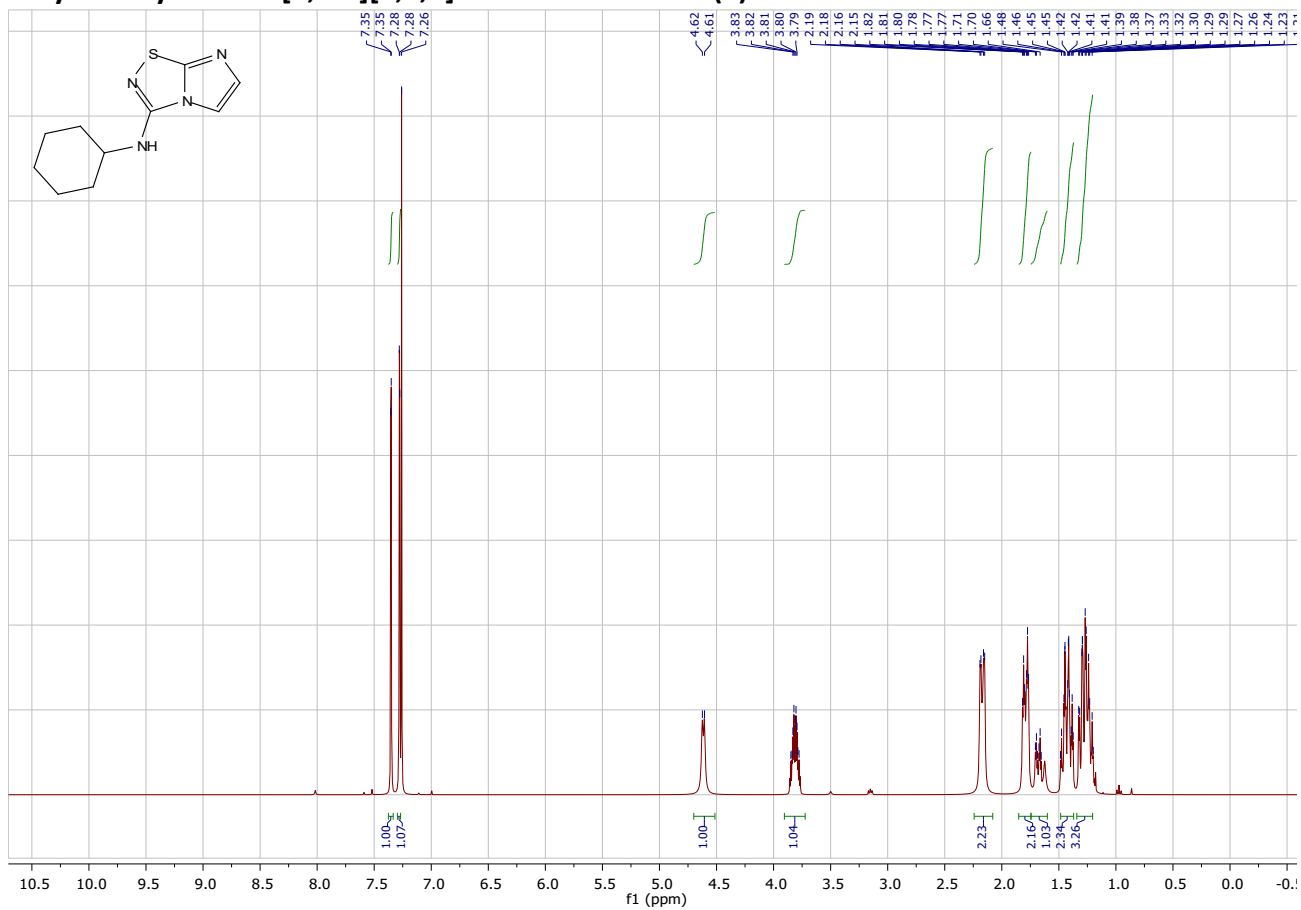


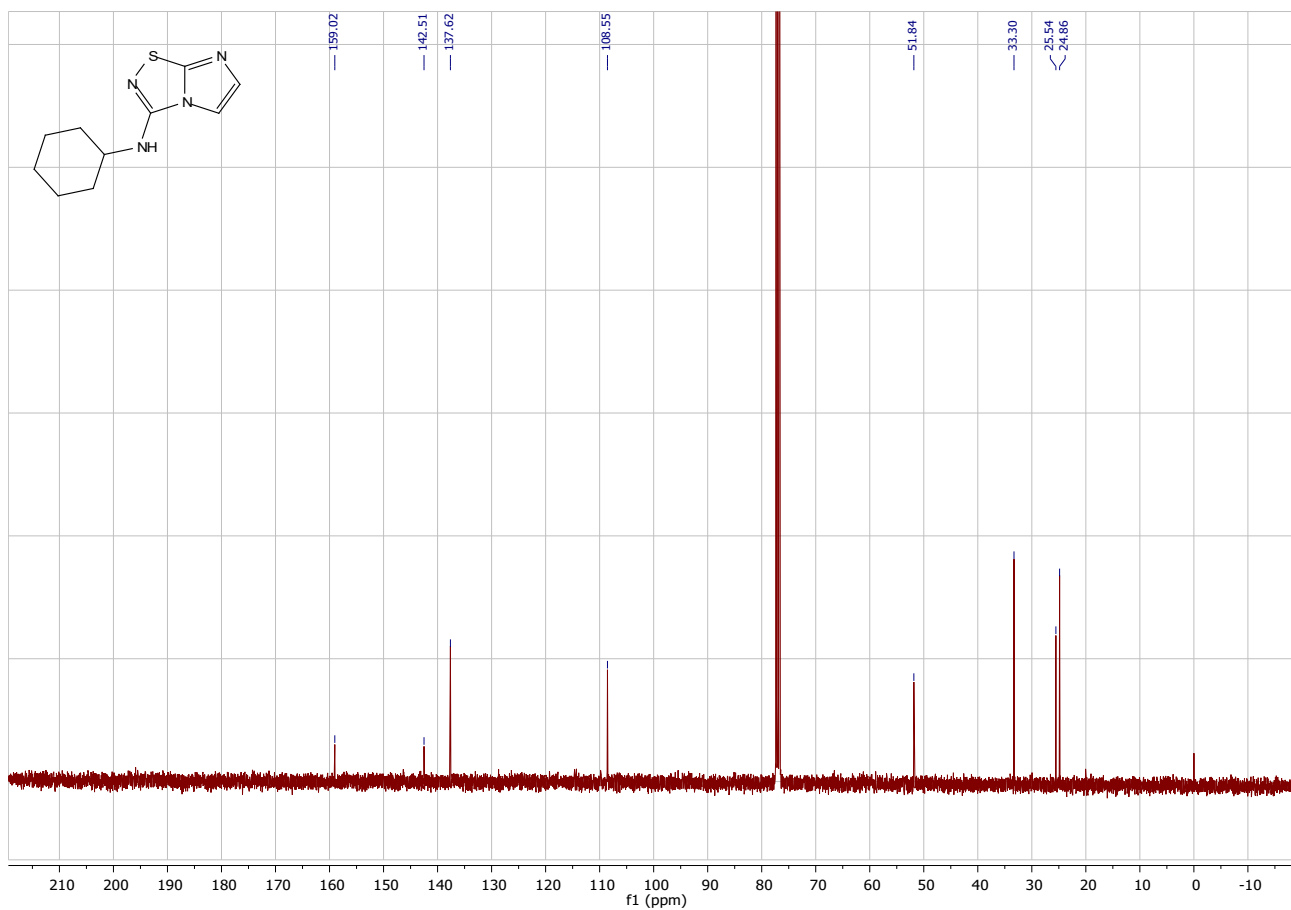
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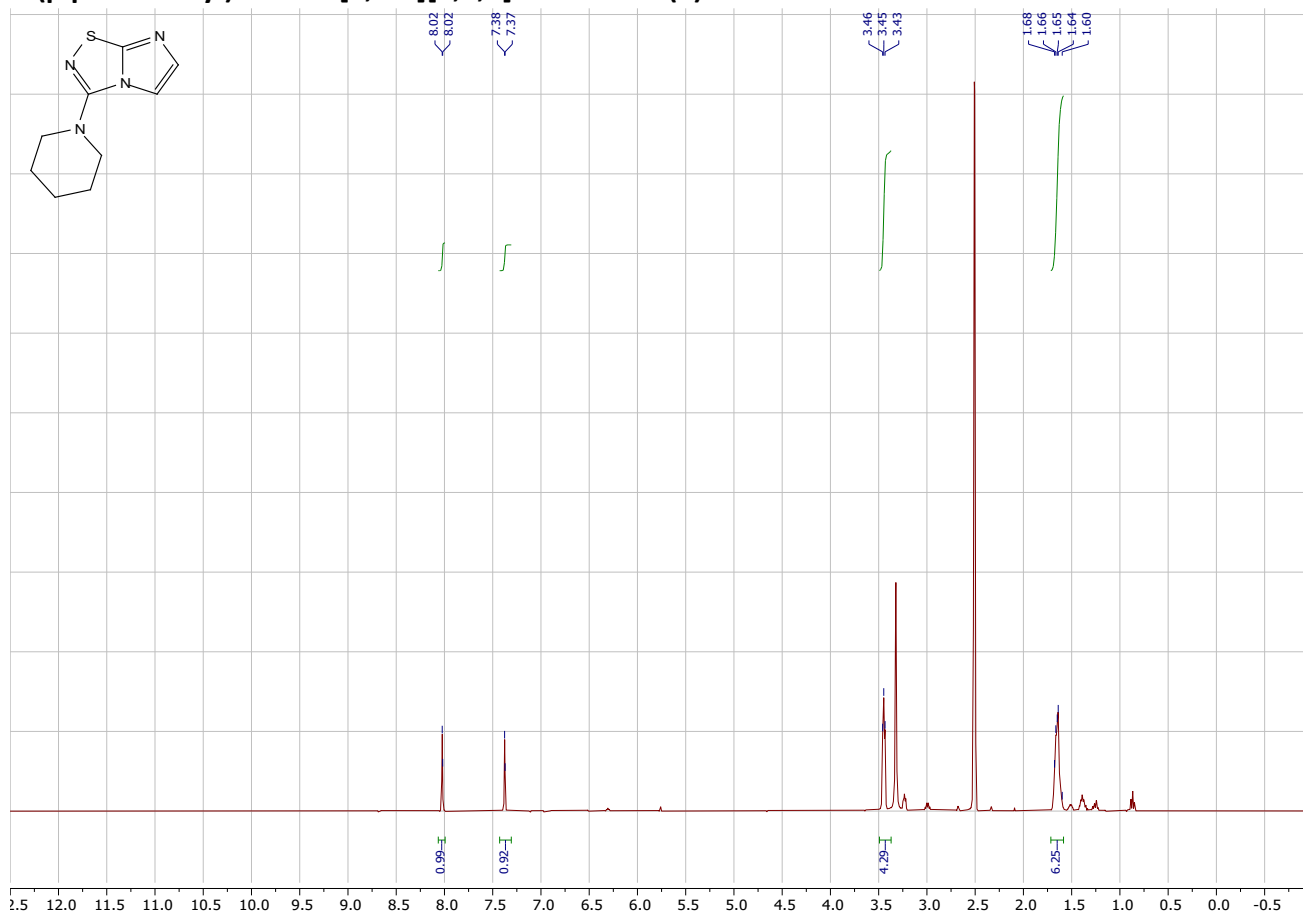


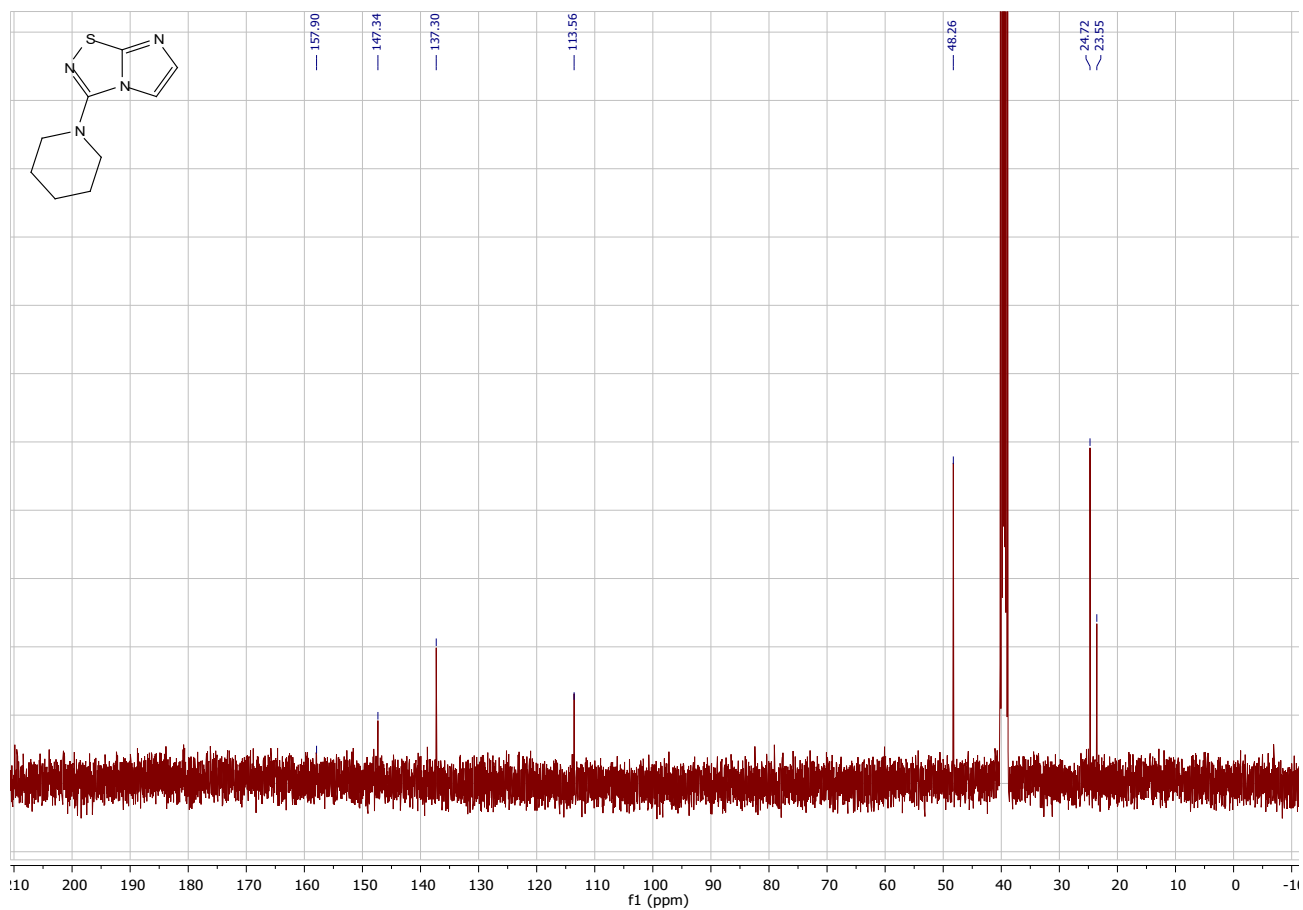
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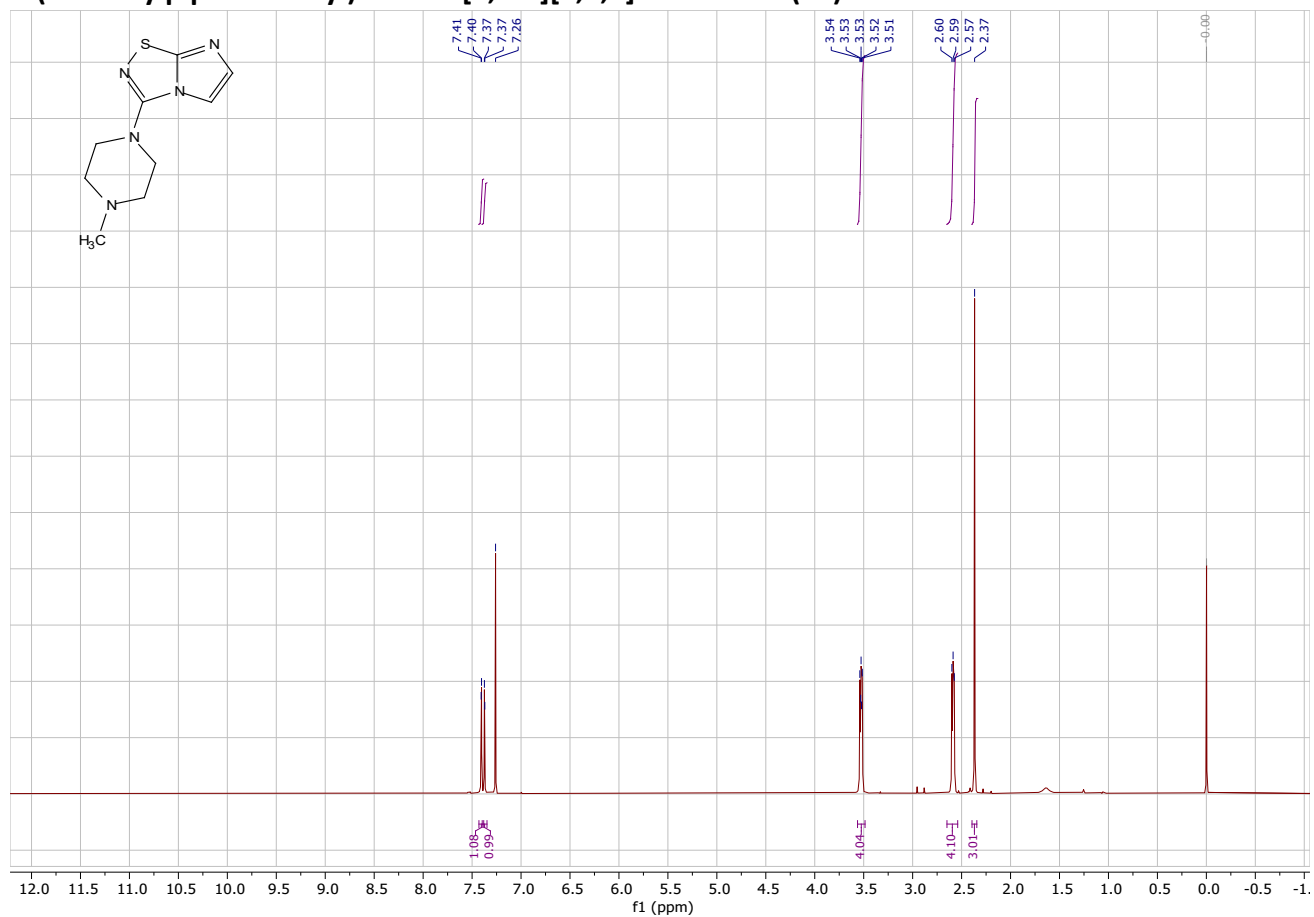


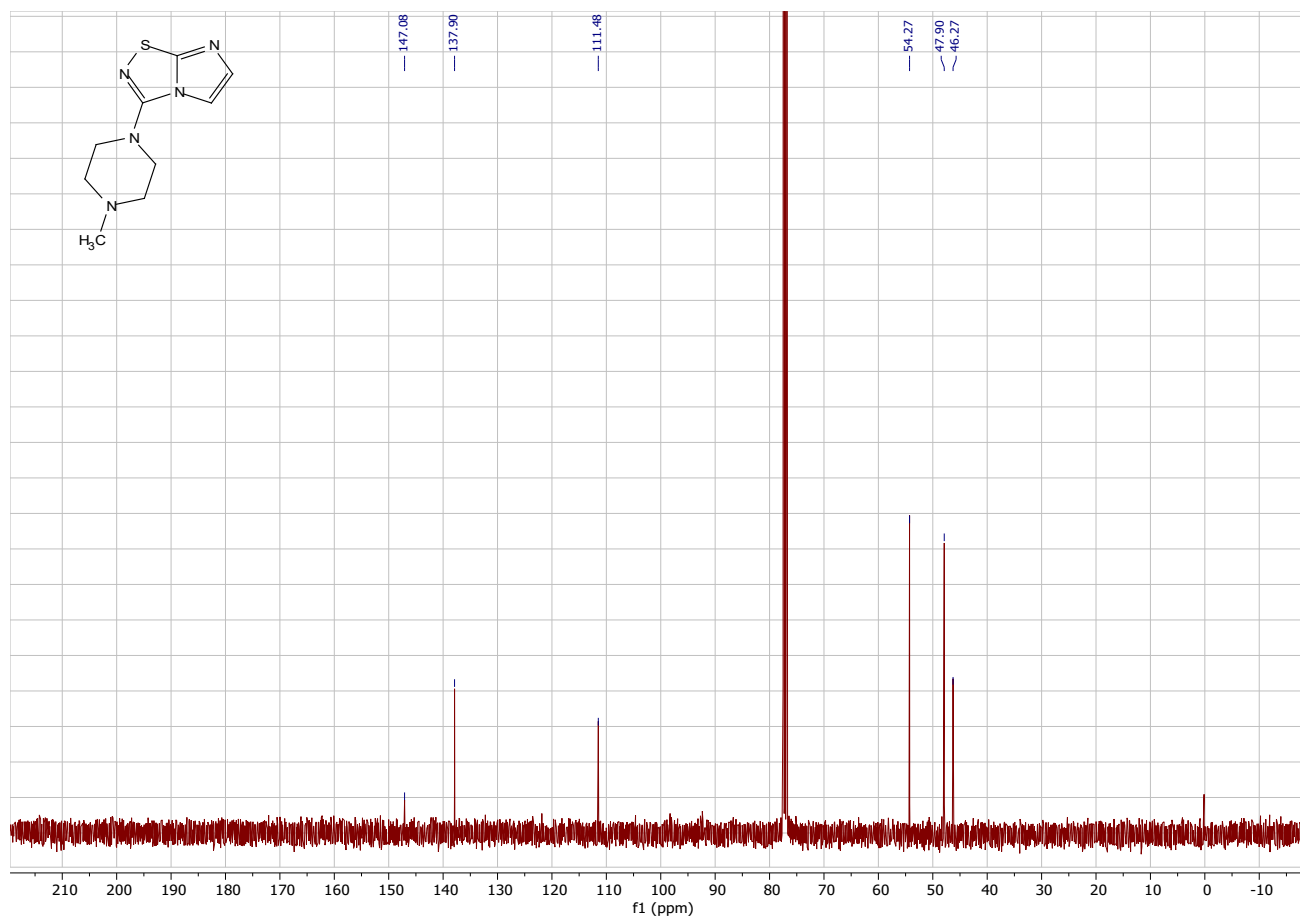
3-(piperidin-1-yl)imidazo[1,2-d][1,4]thiadiazole (9)



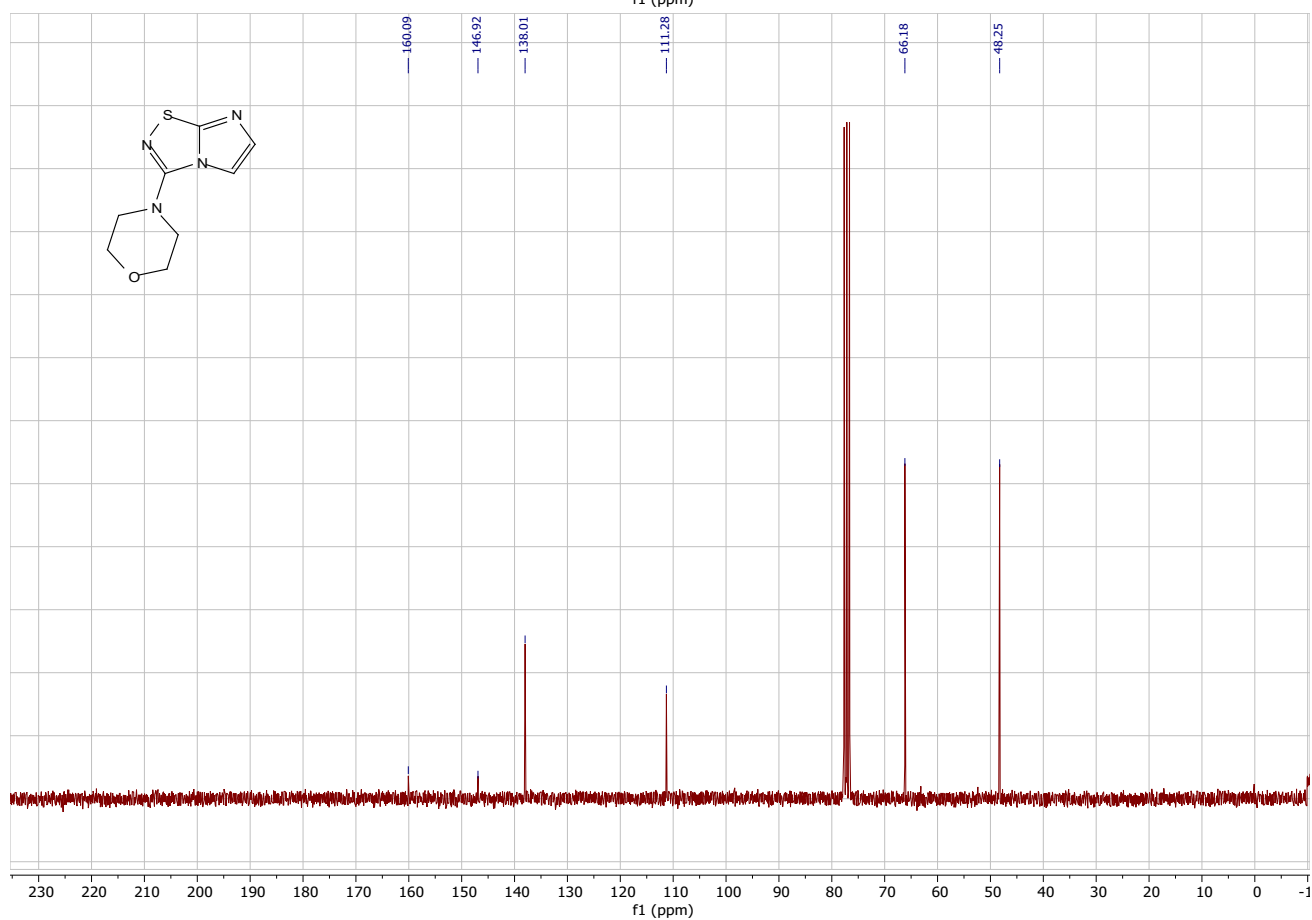
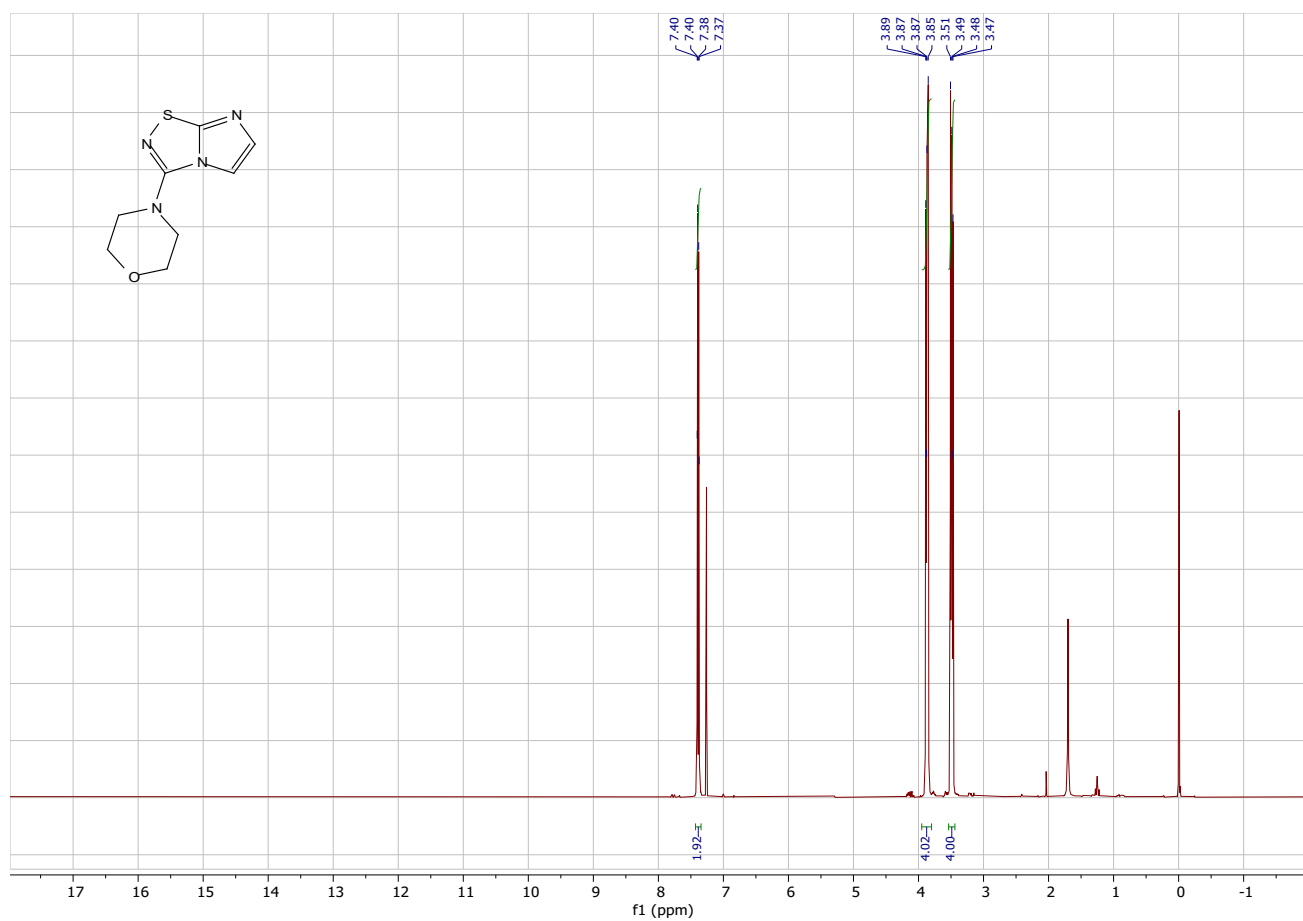


3-(4-methylpiperazin-1-yl)imidazo[1,2-d][1,2,4]thiadiazole (10)

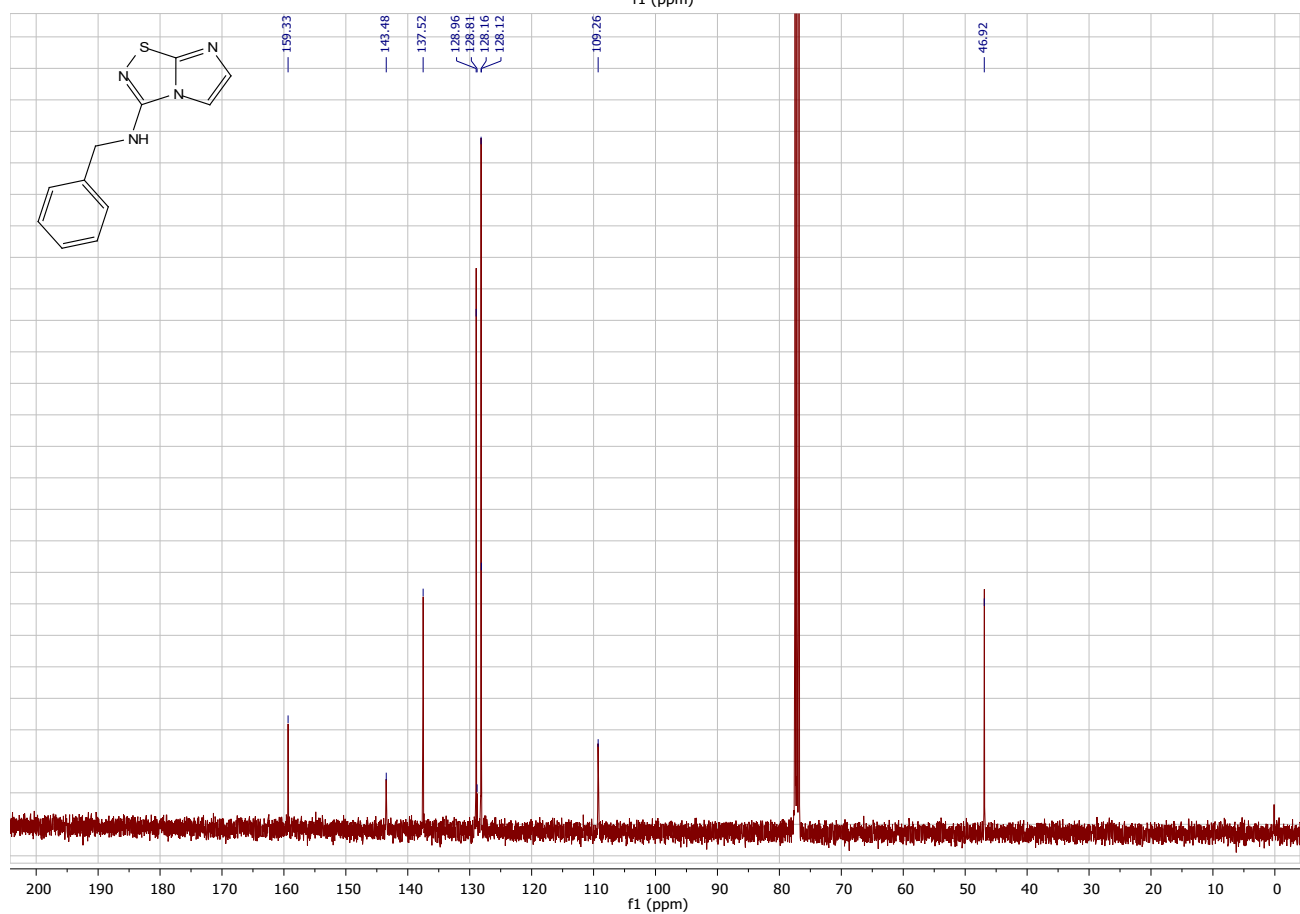
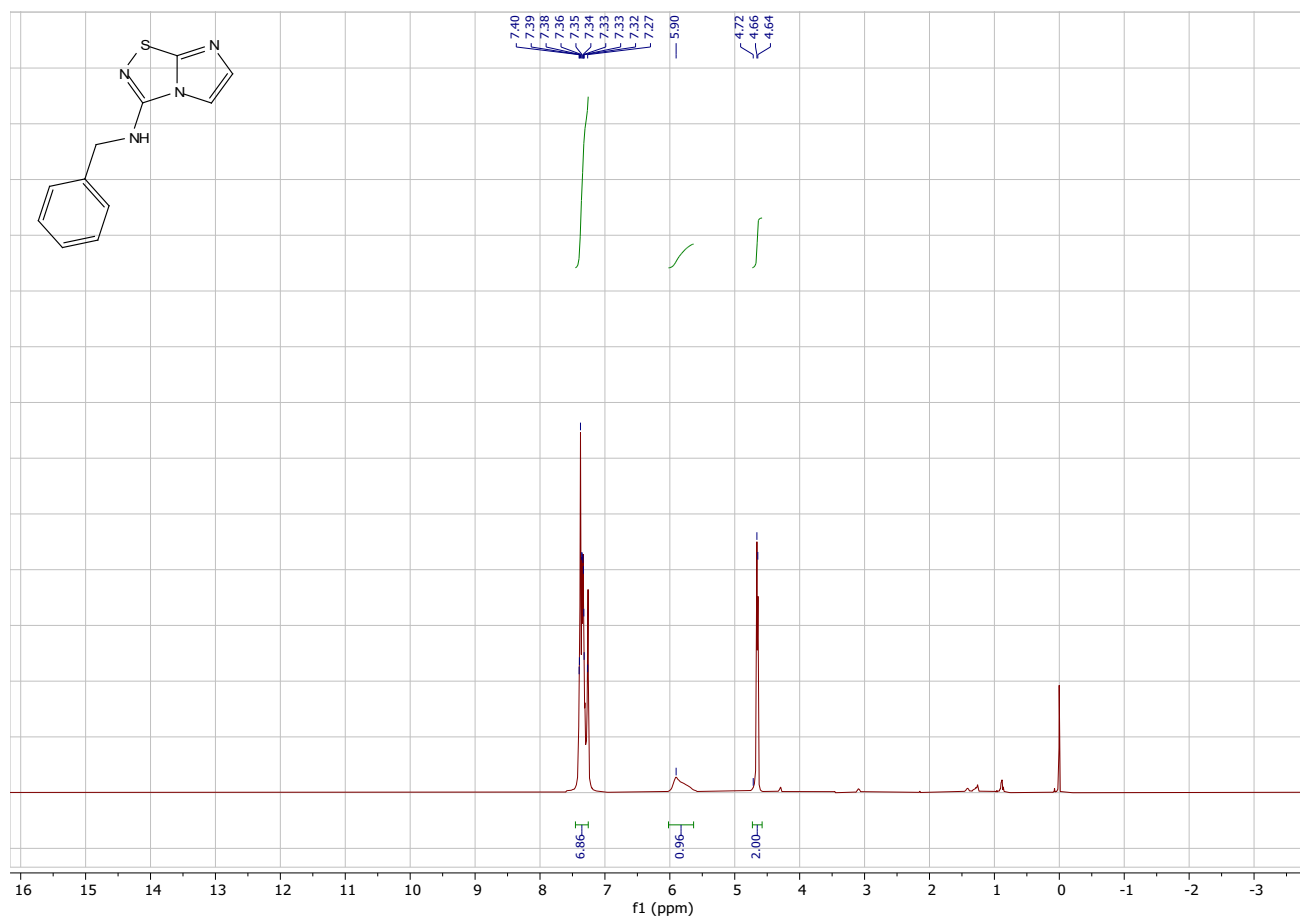




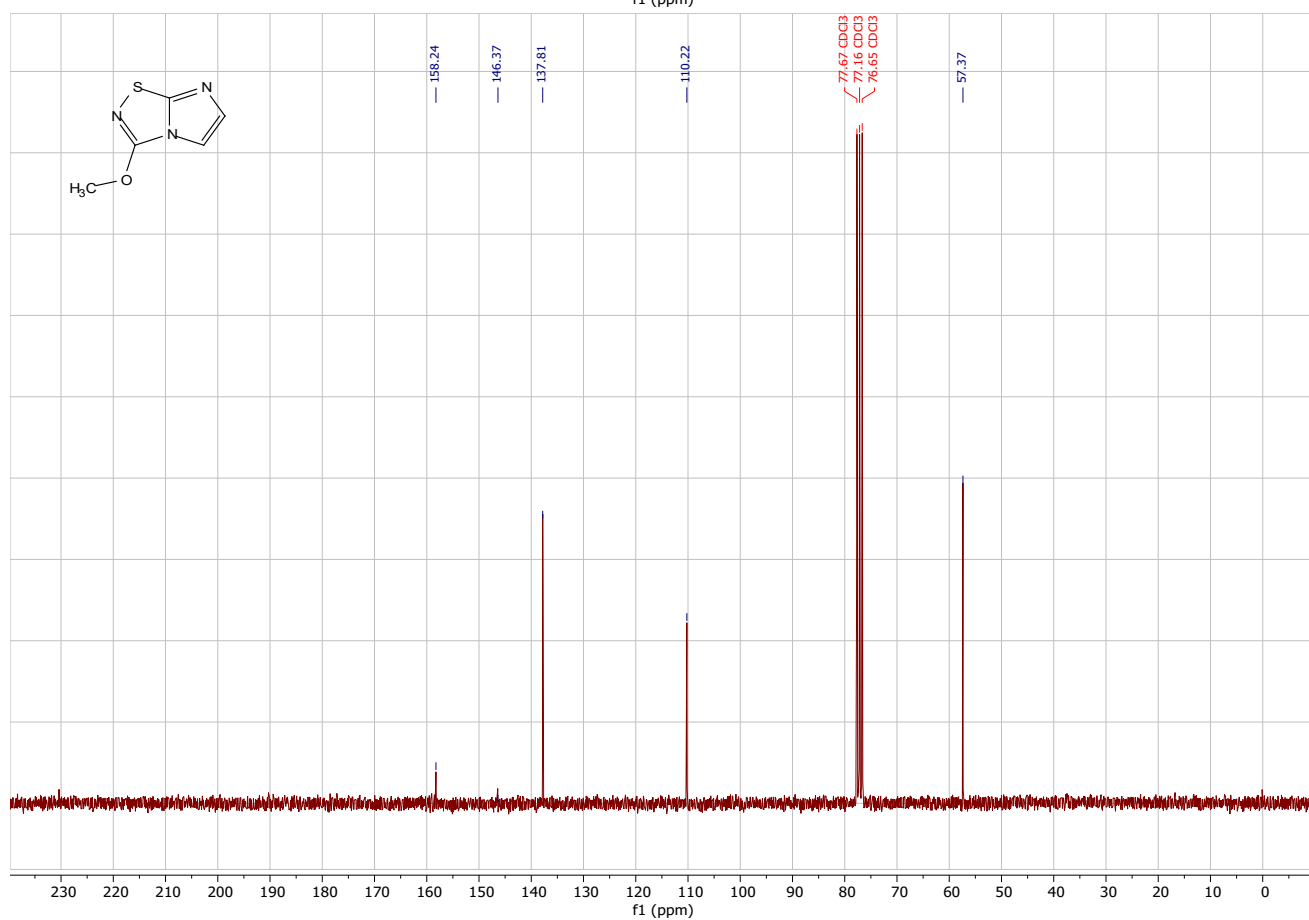
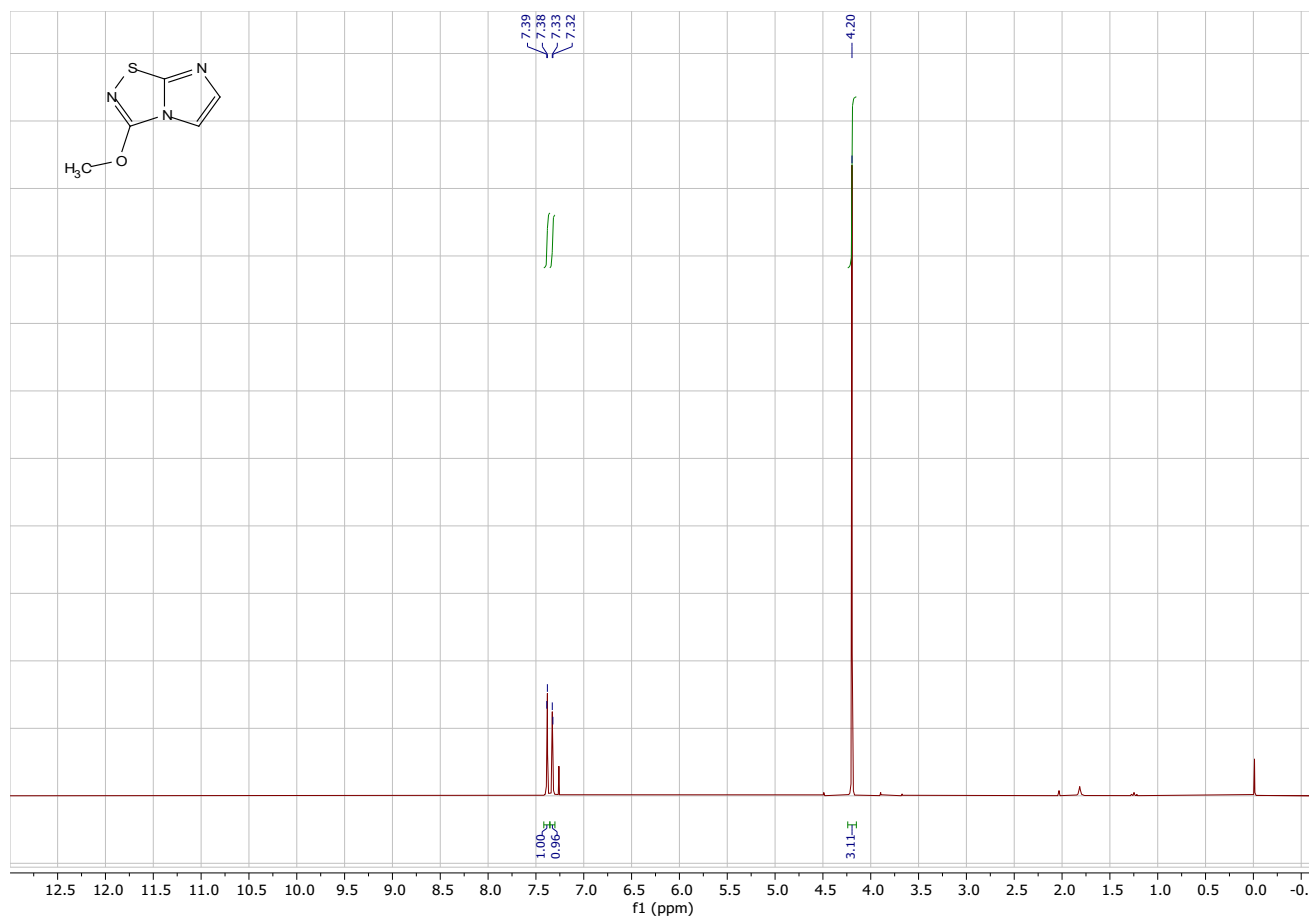
3-(Morpholin-4-yl)imidazo[1,2-*d*][1,2,4]thiadiazole (11)



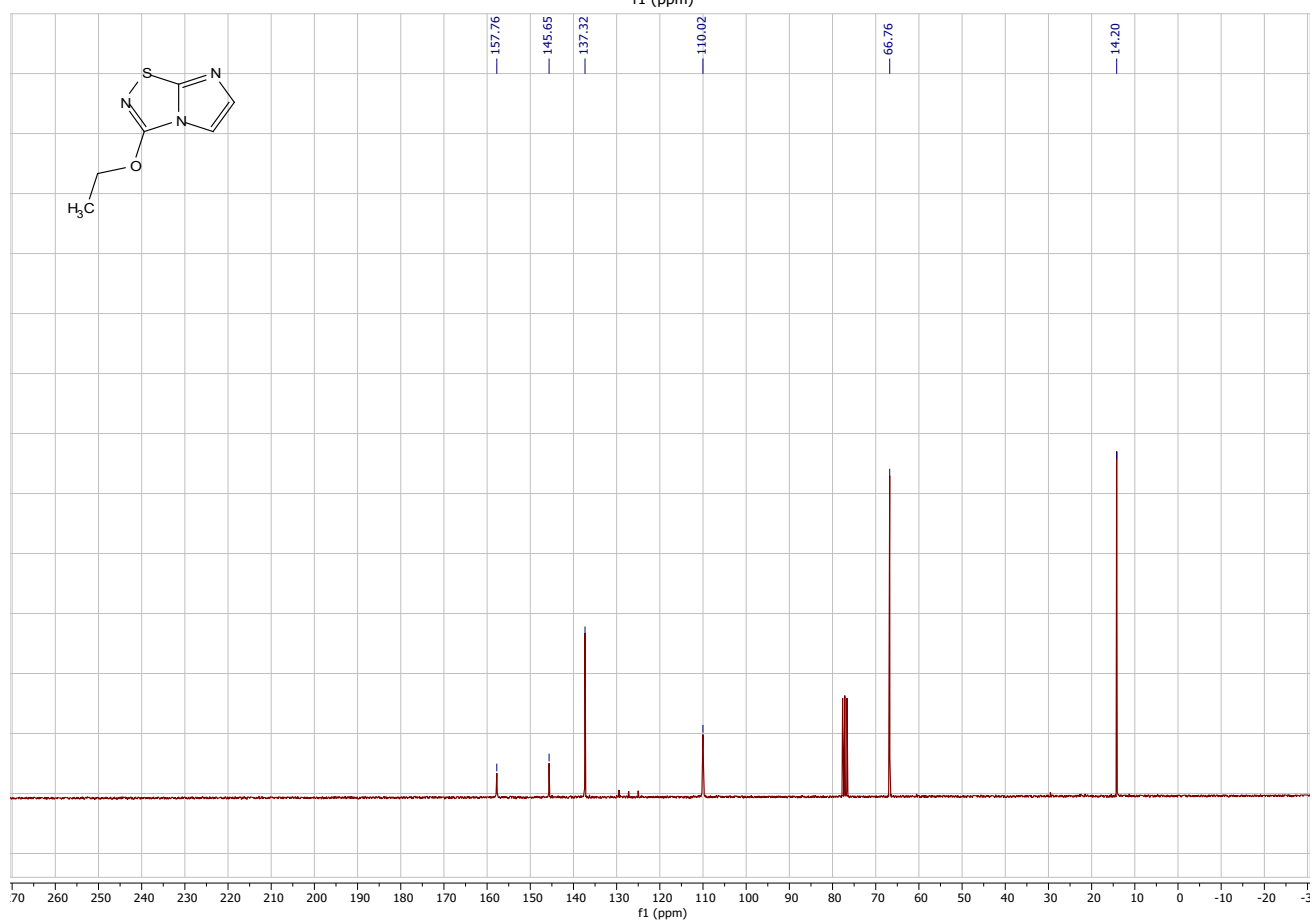
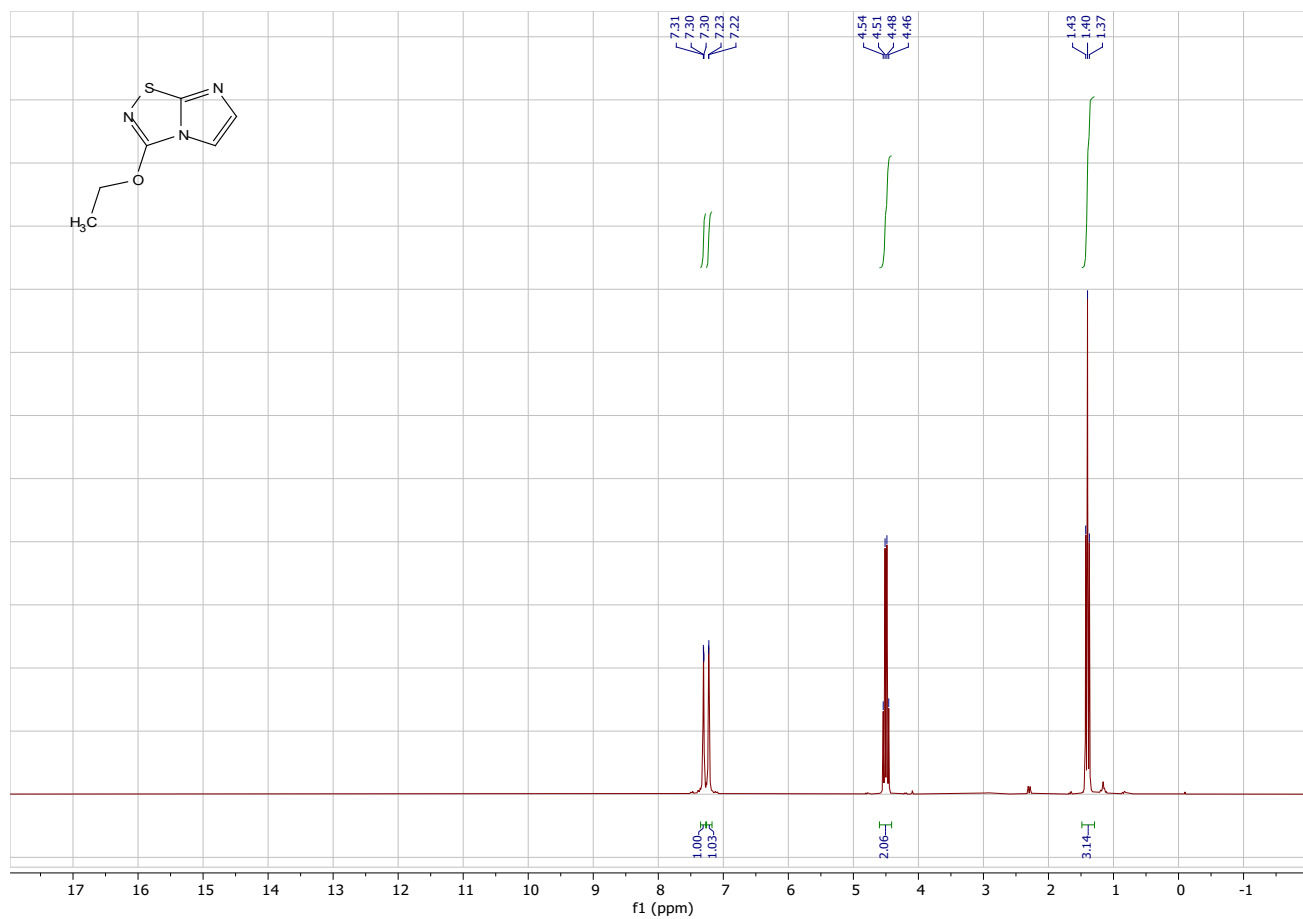
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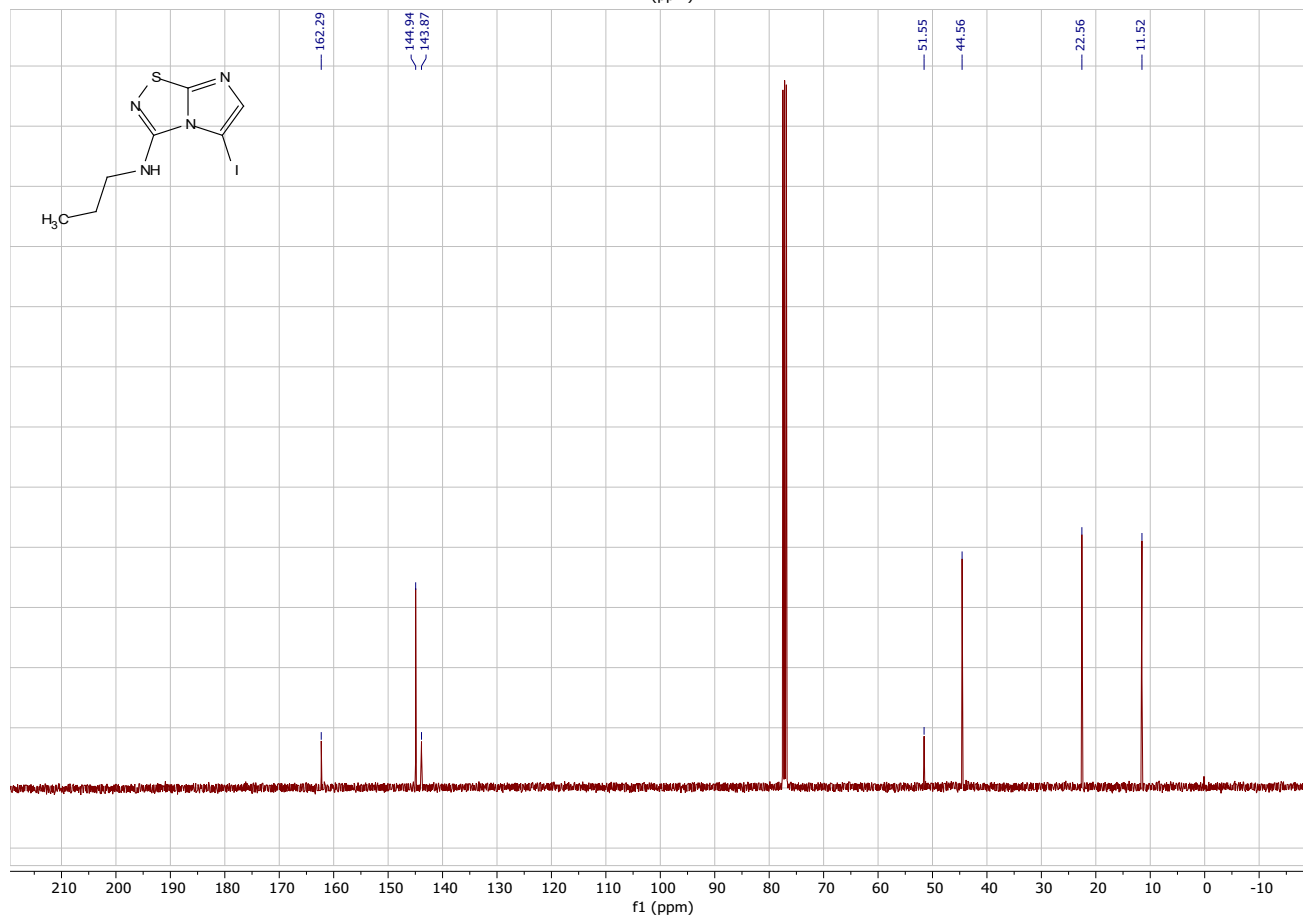
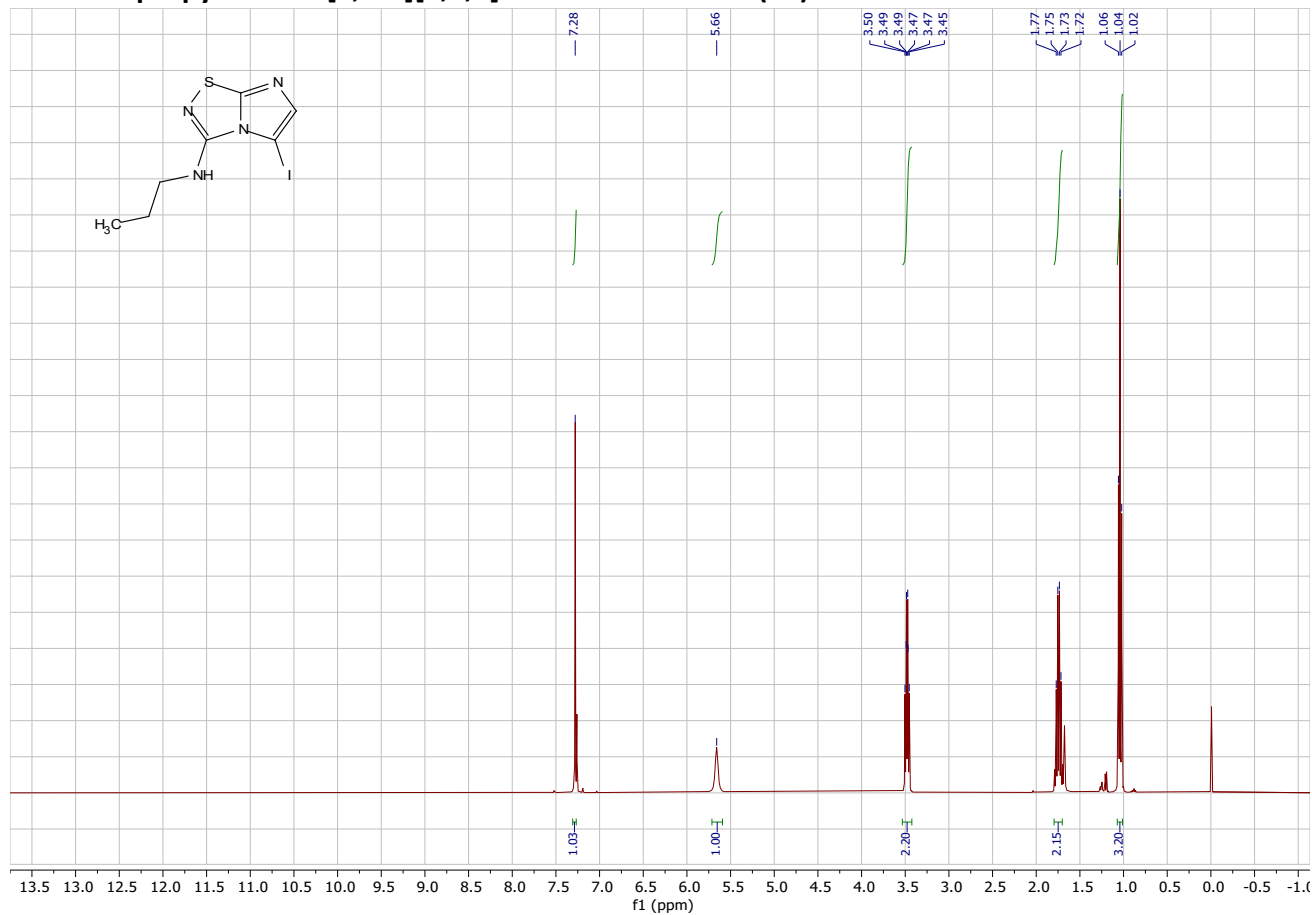
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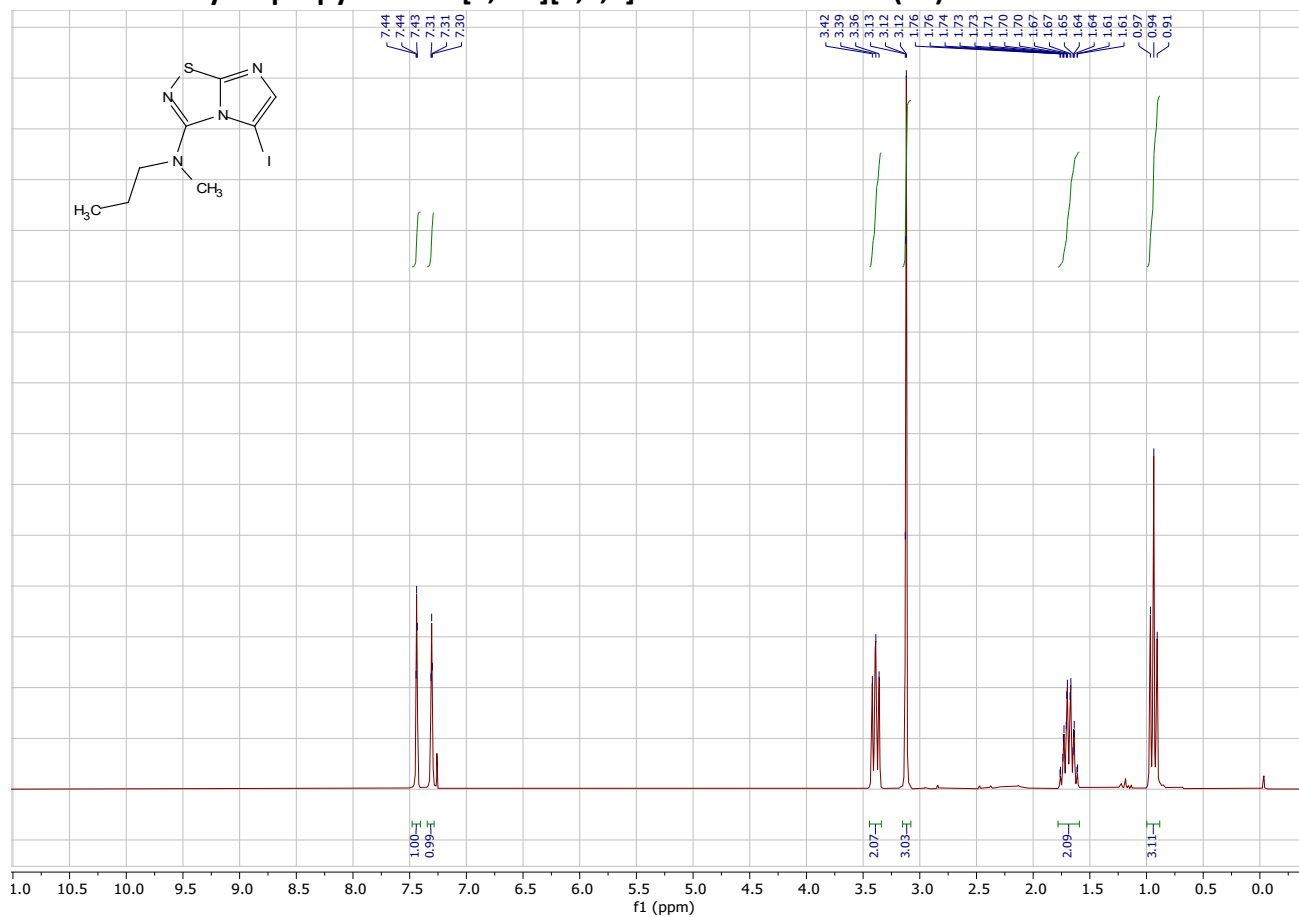
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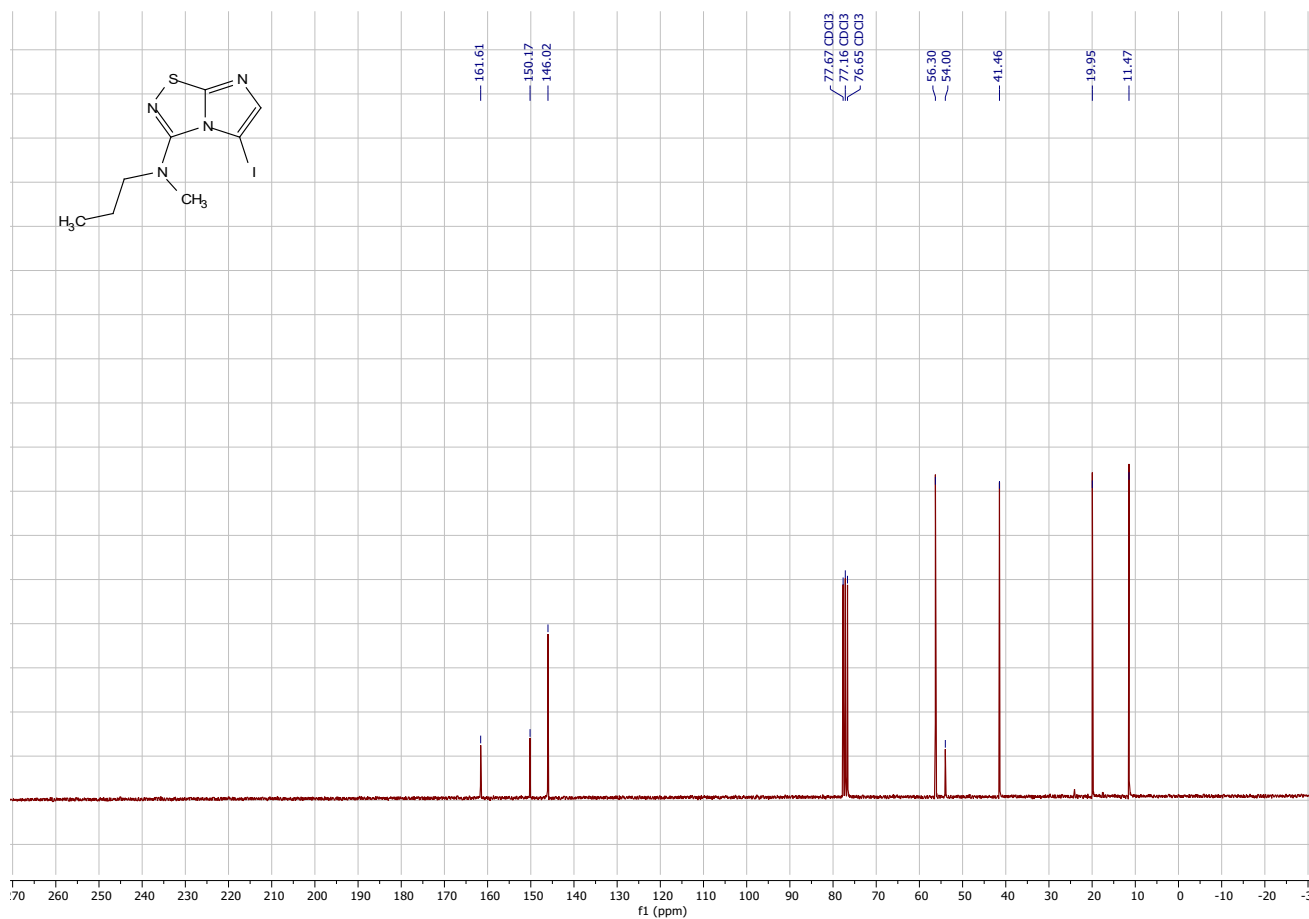


5-iodo-*N*-propylimidazo[1,2-*d*][1,2,4]thiadiazol-3-amine (16)

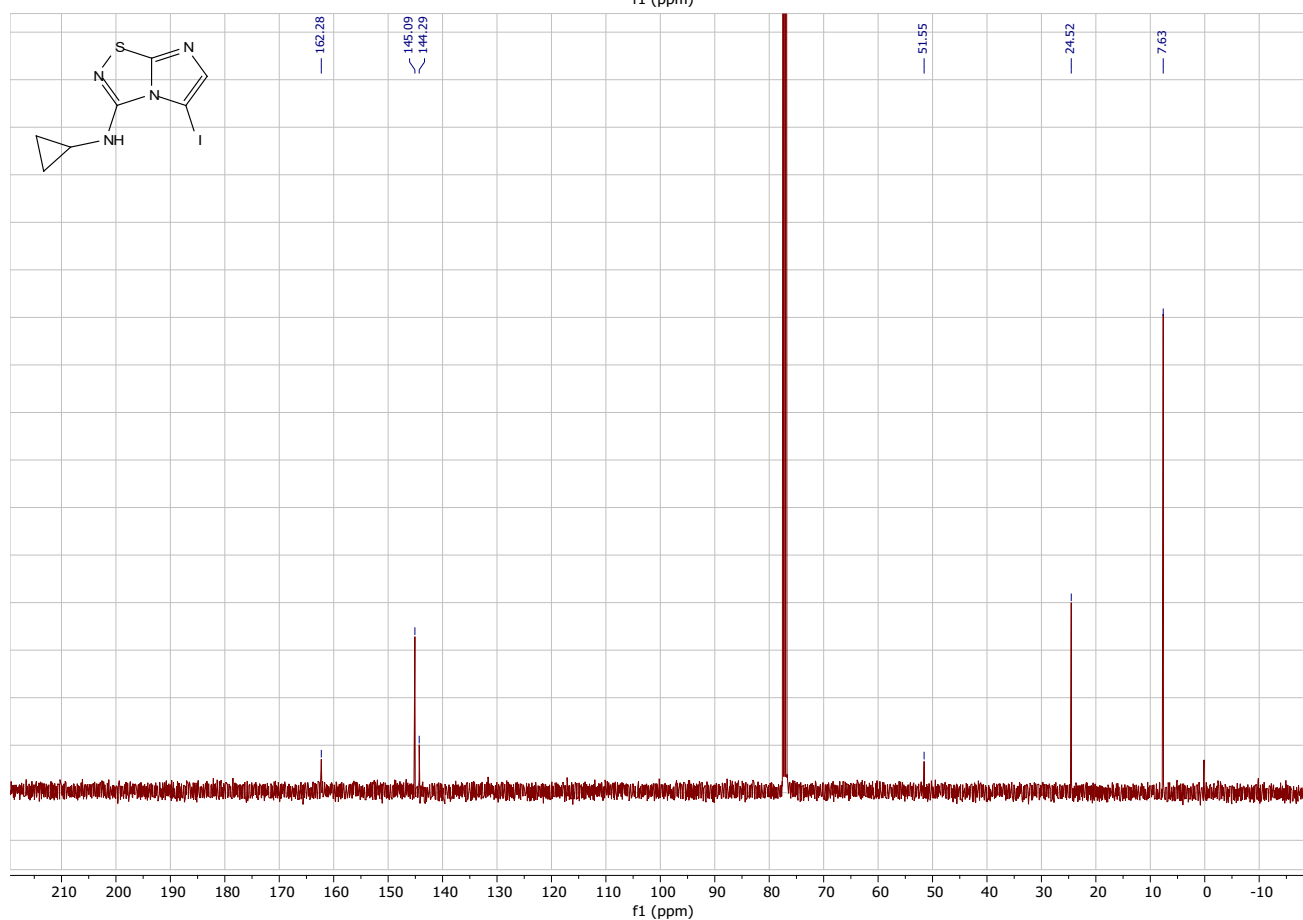
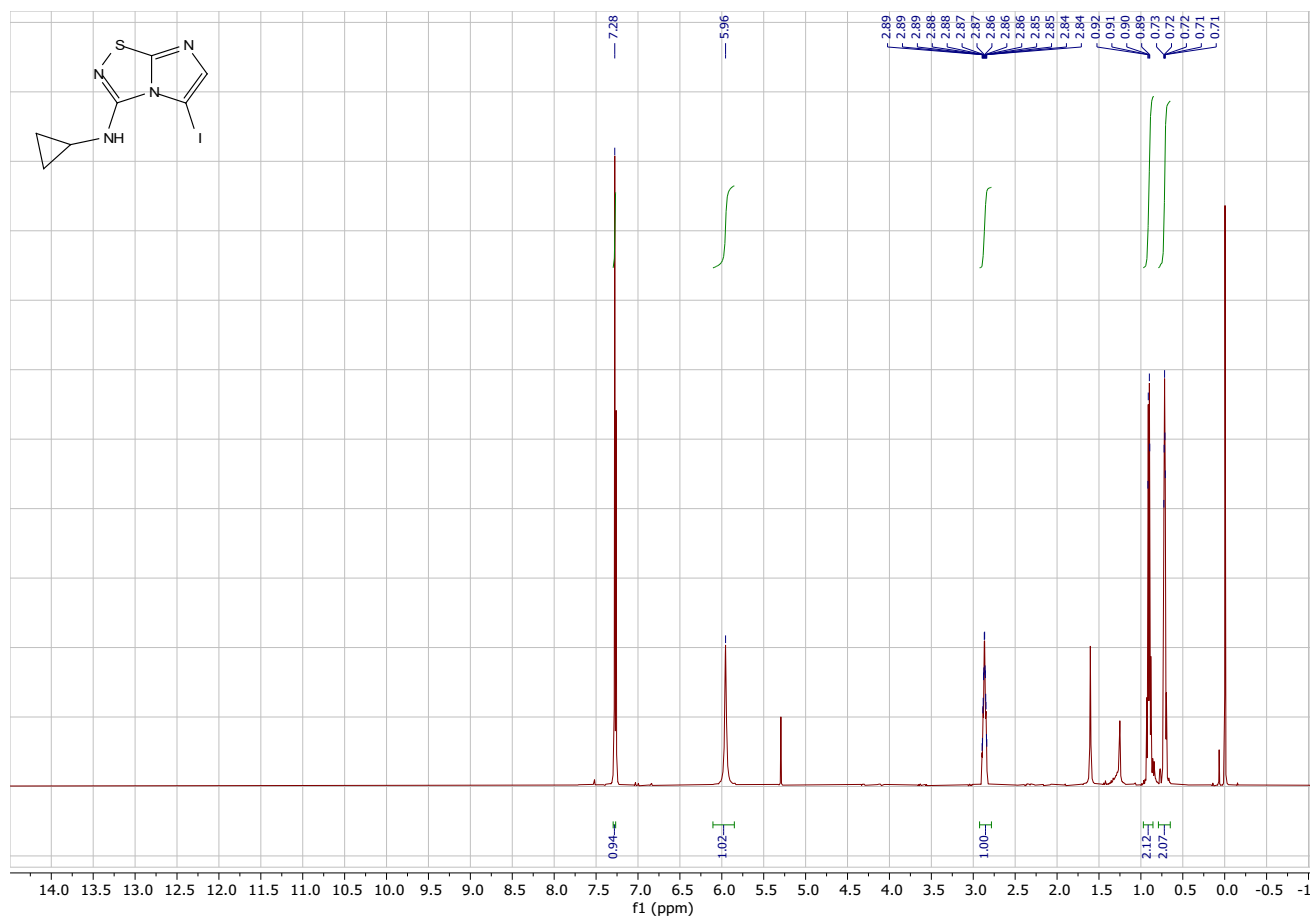


5-iodo-*N*-methyl-*N*-propylimidazo[1,2-*d*][1,2,4]thiadiazol-3-amine (17)

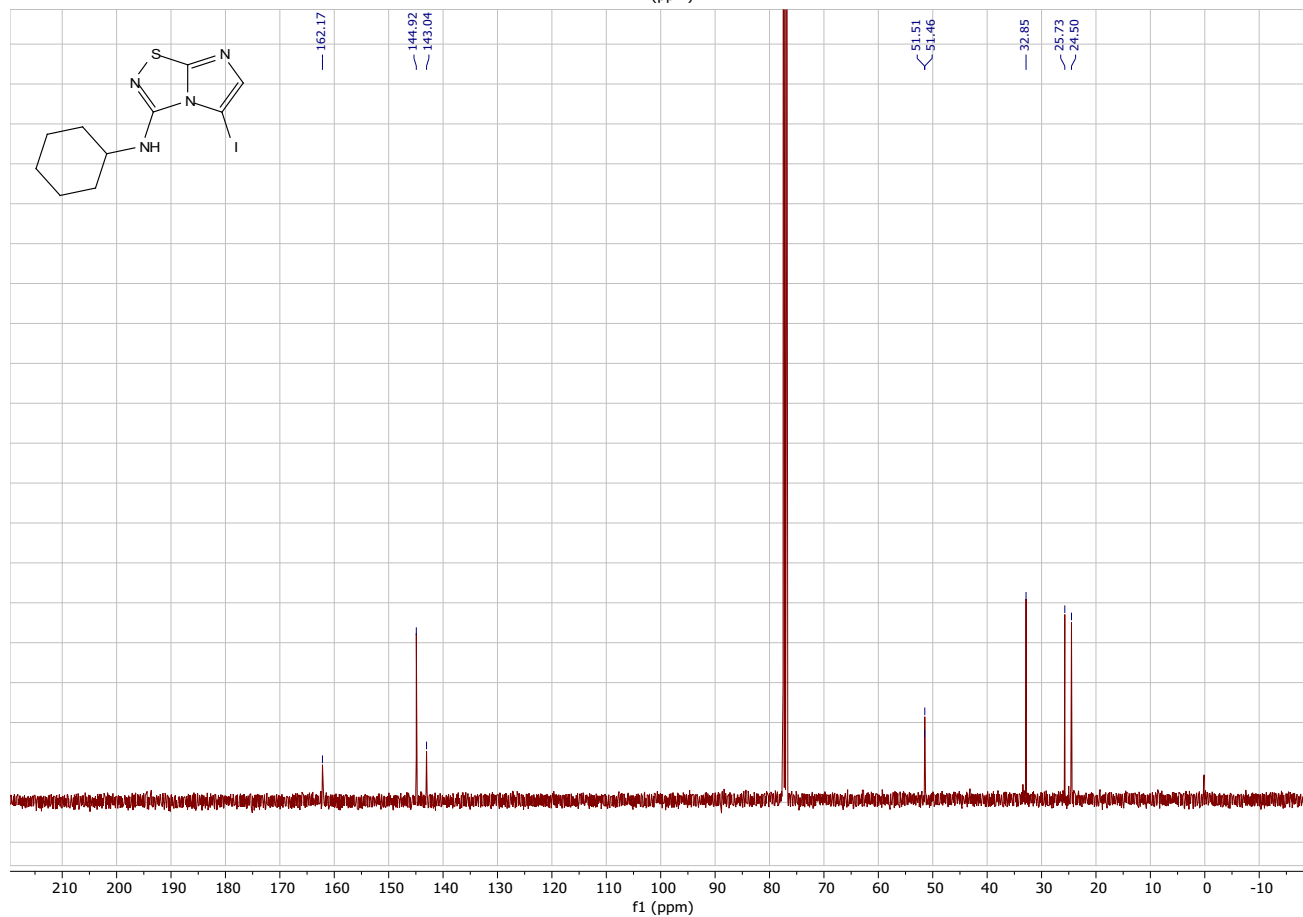
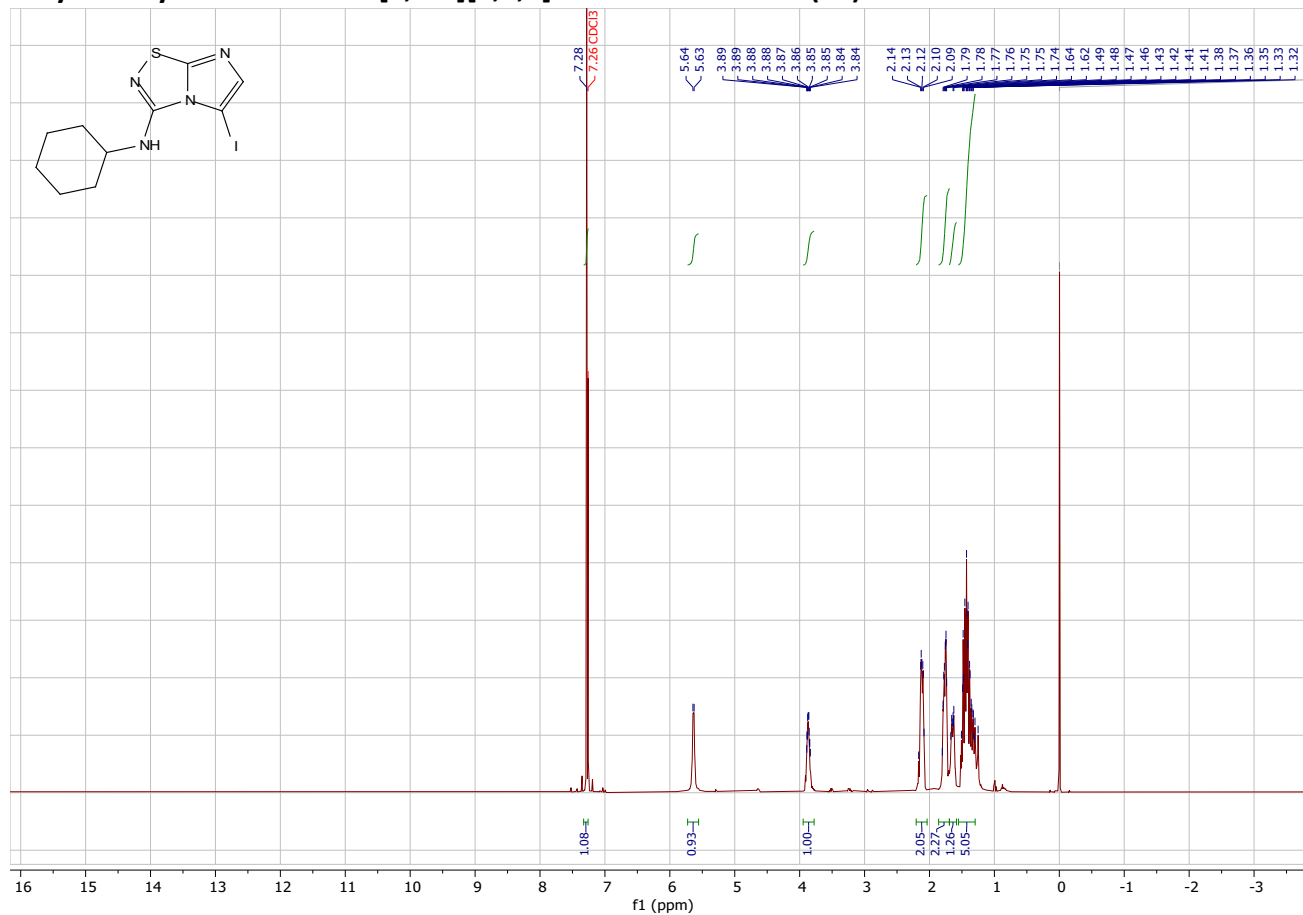




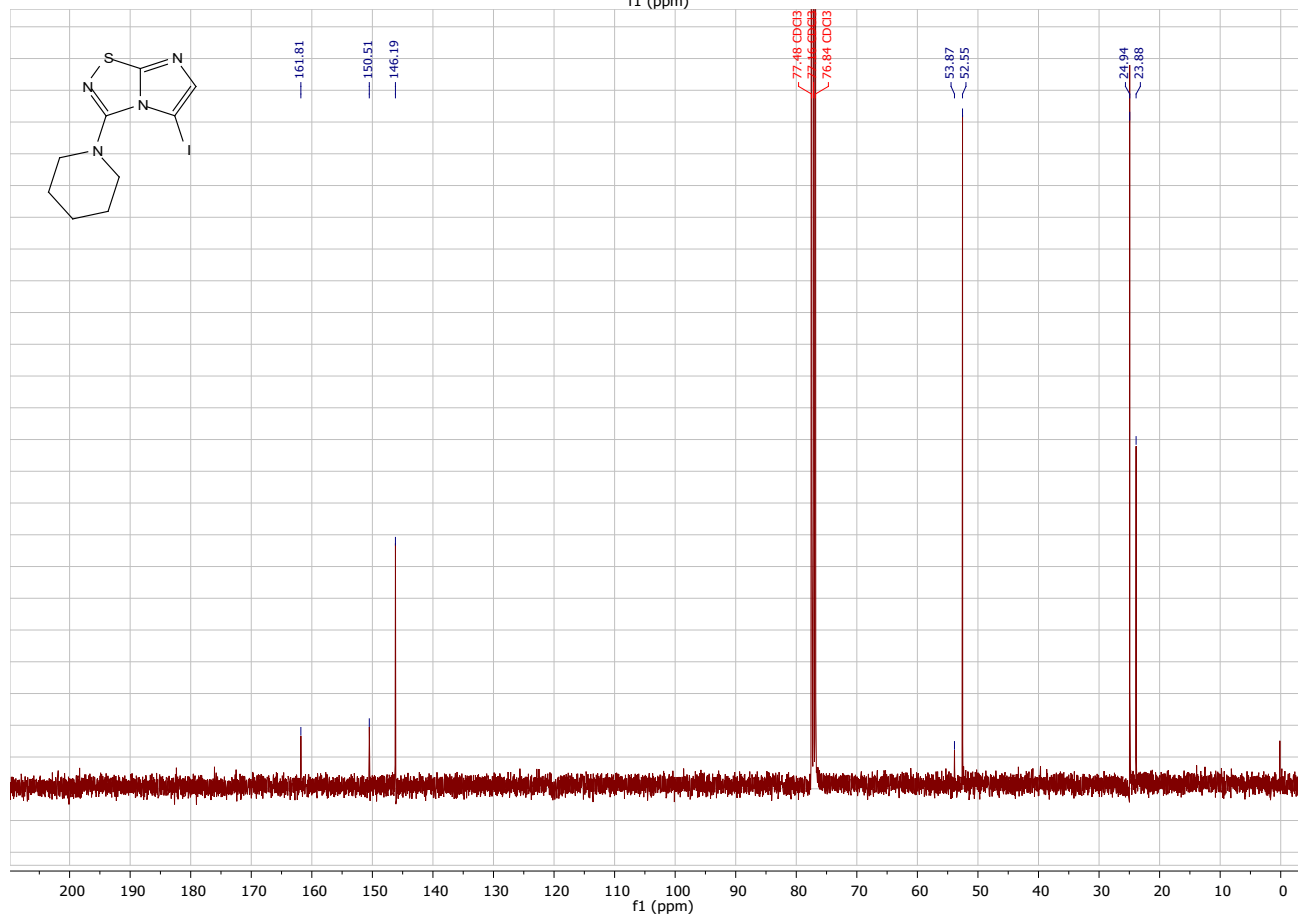
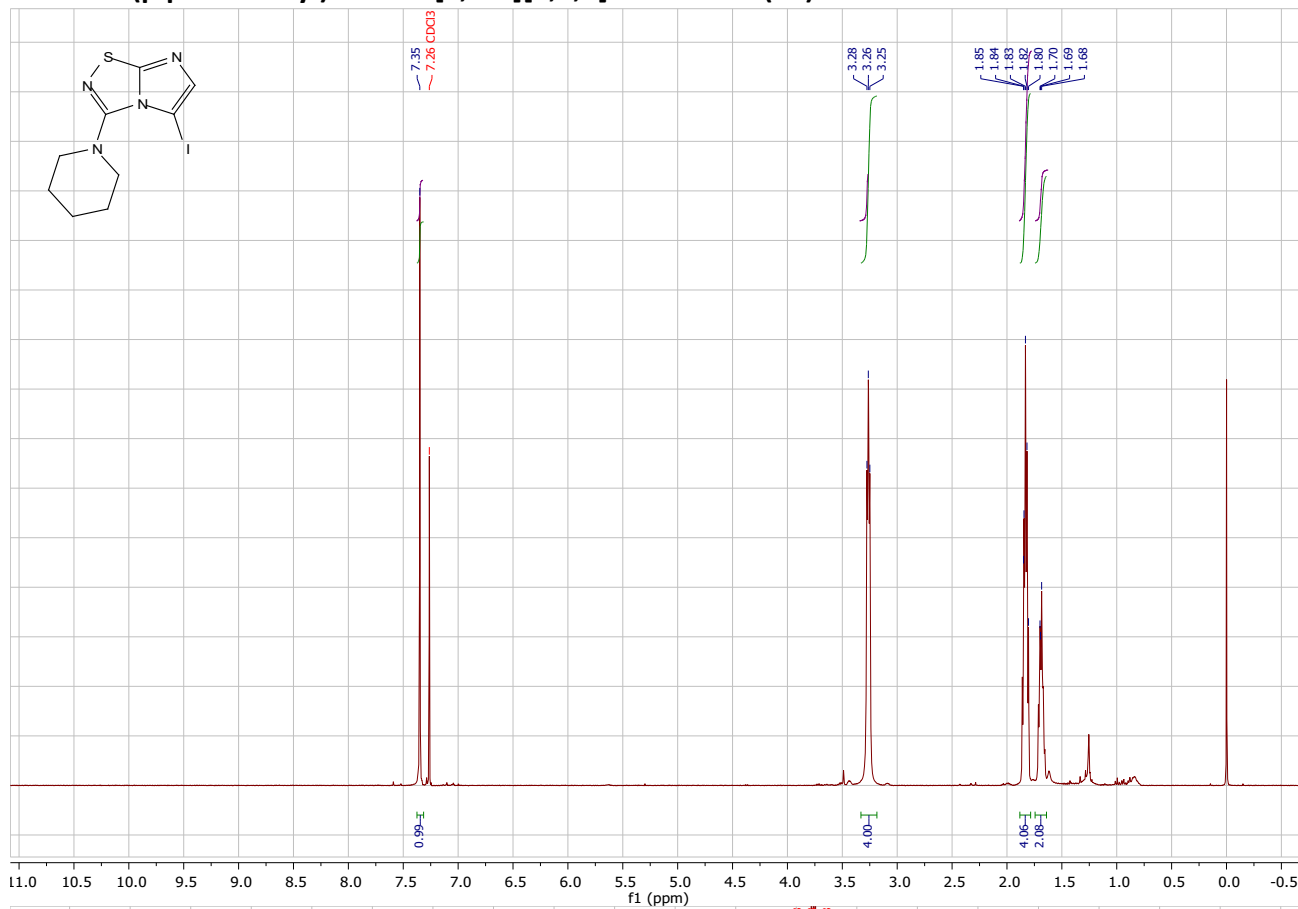
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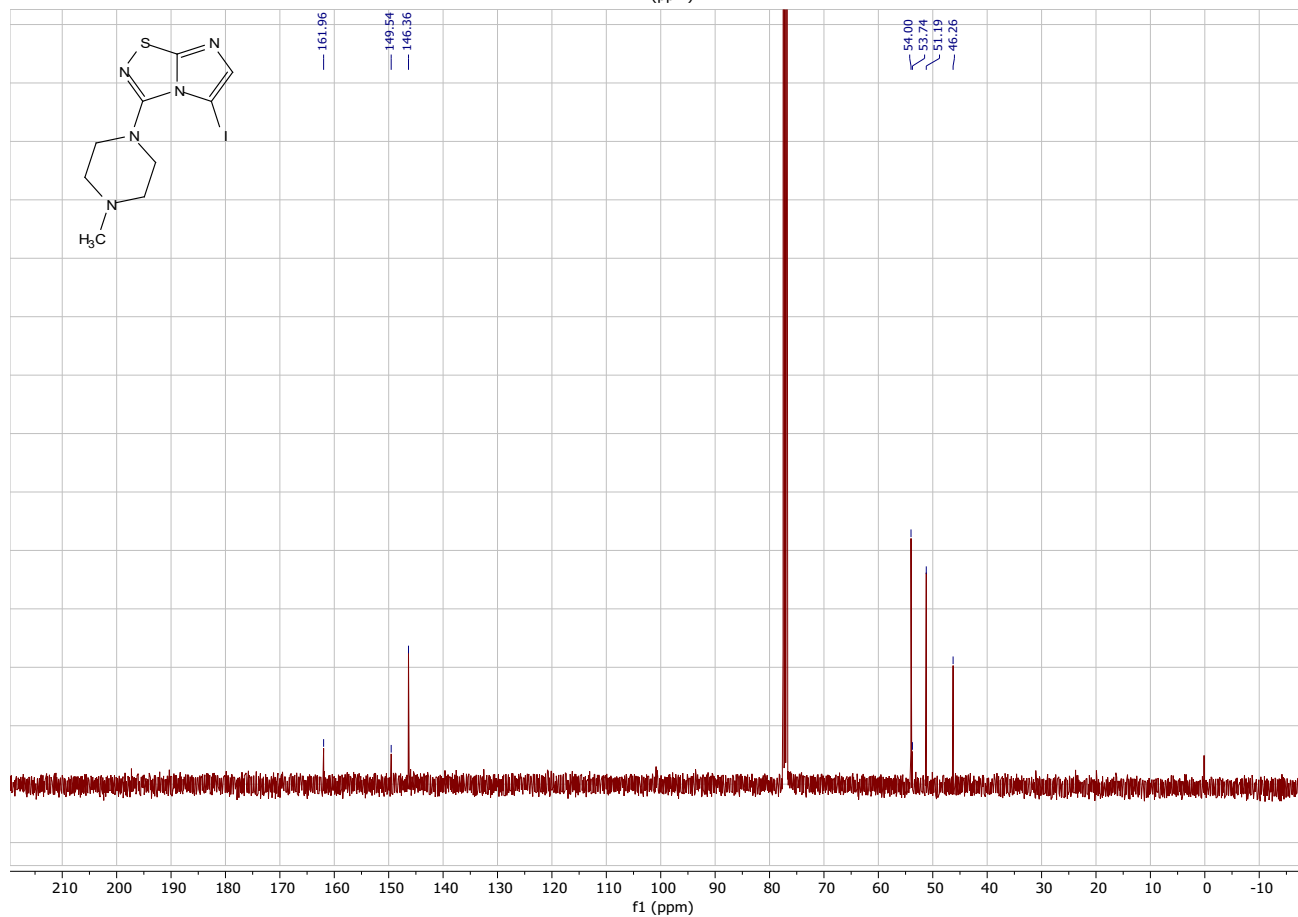
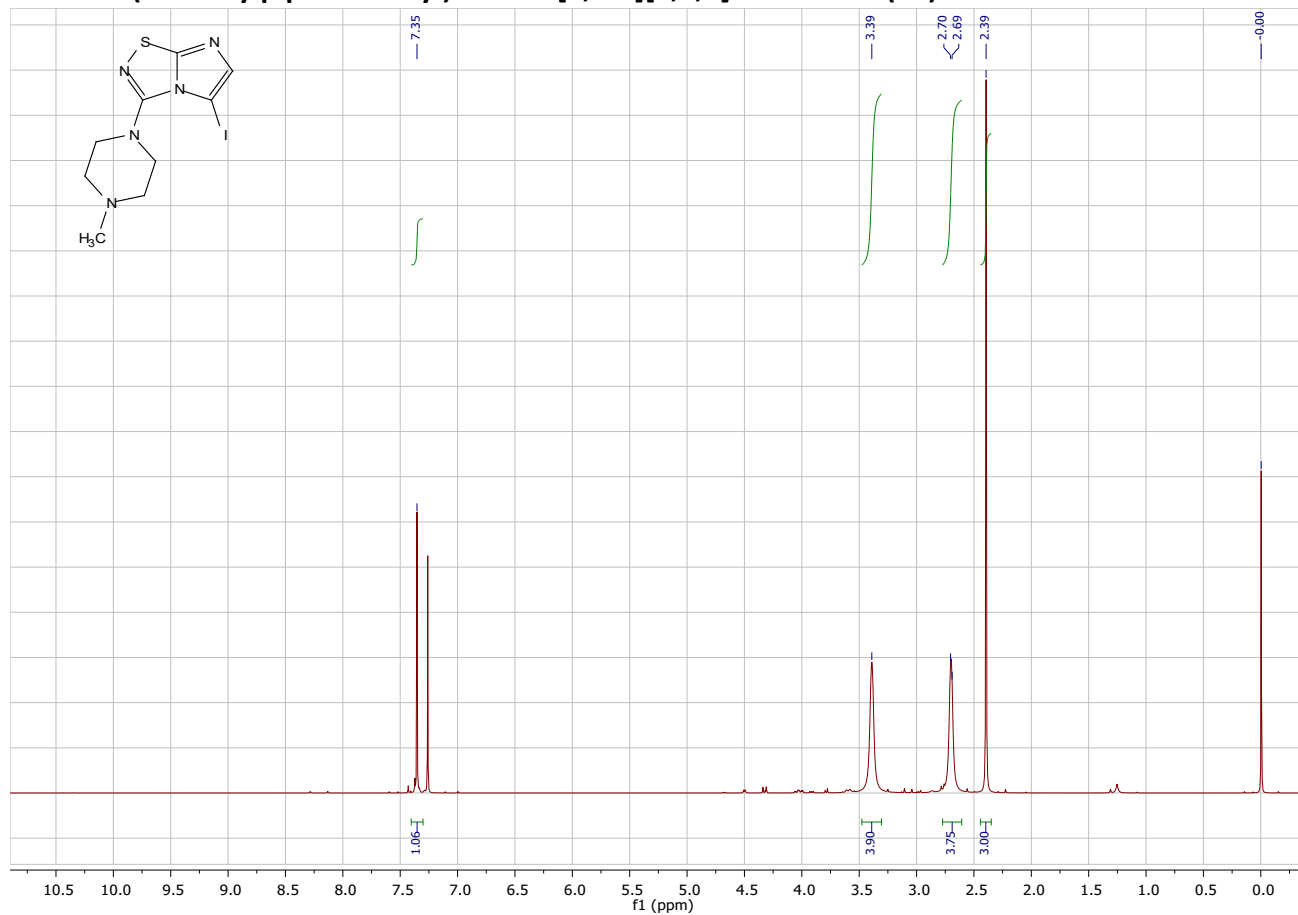
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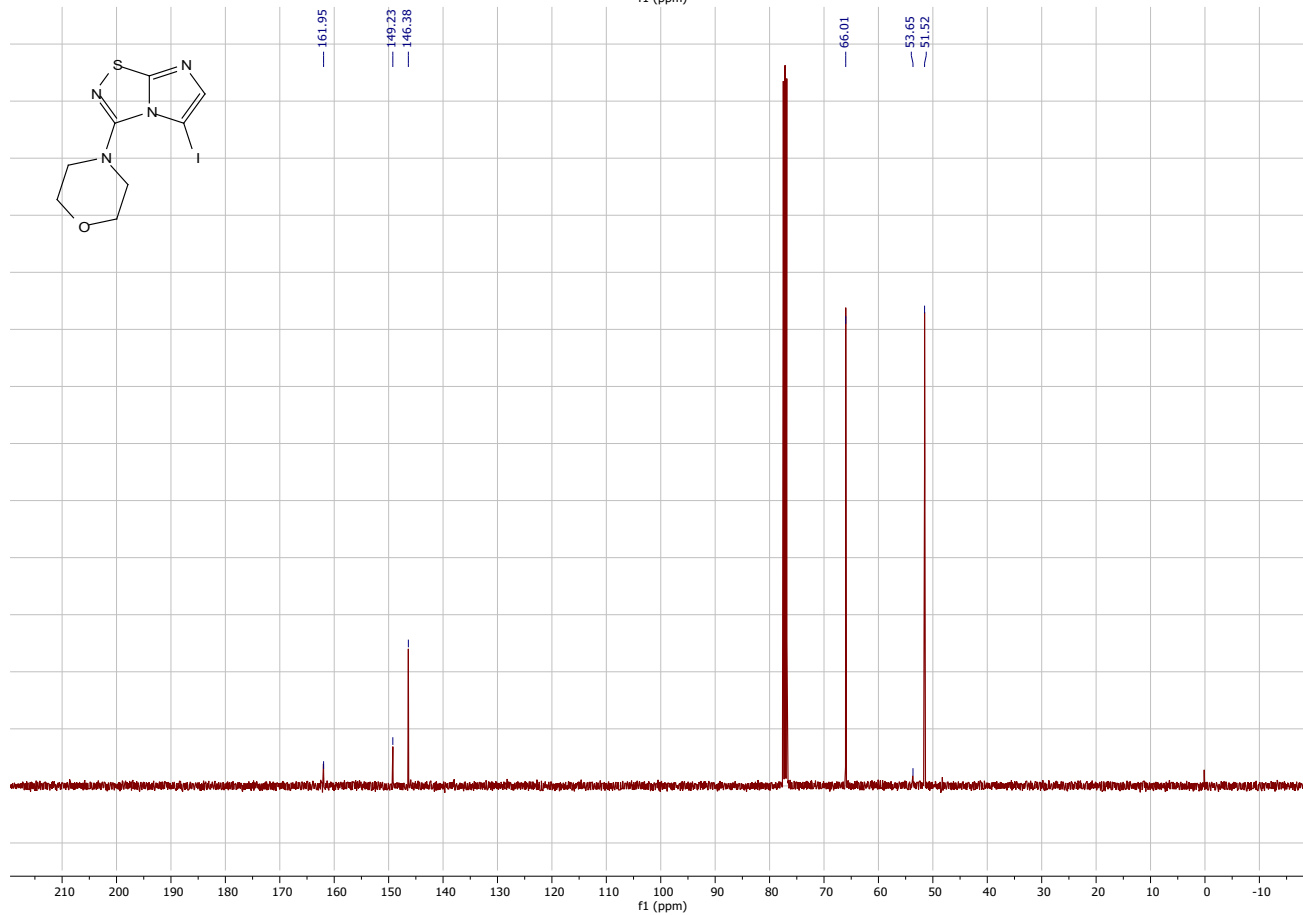
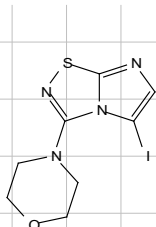
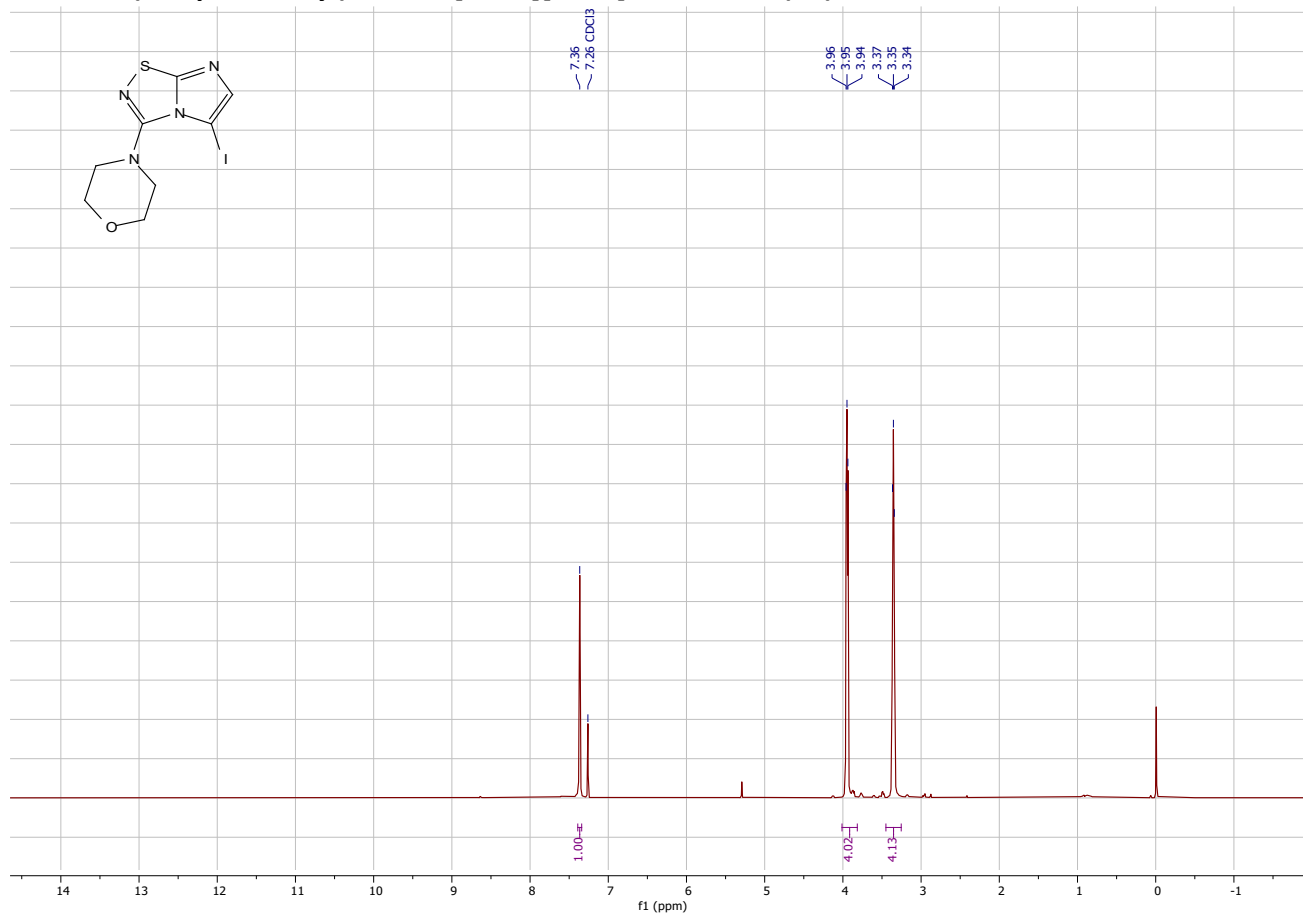
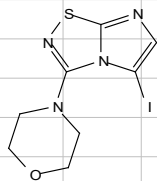
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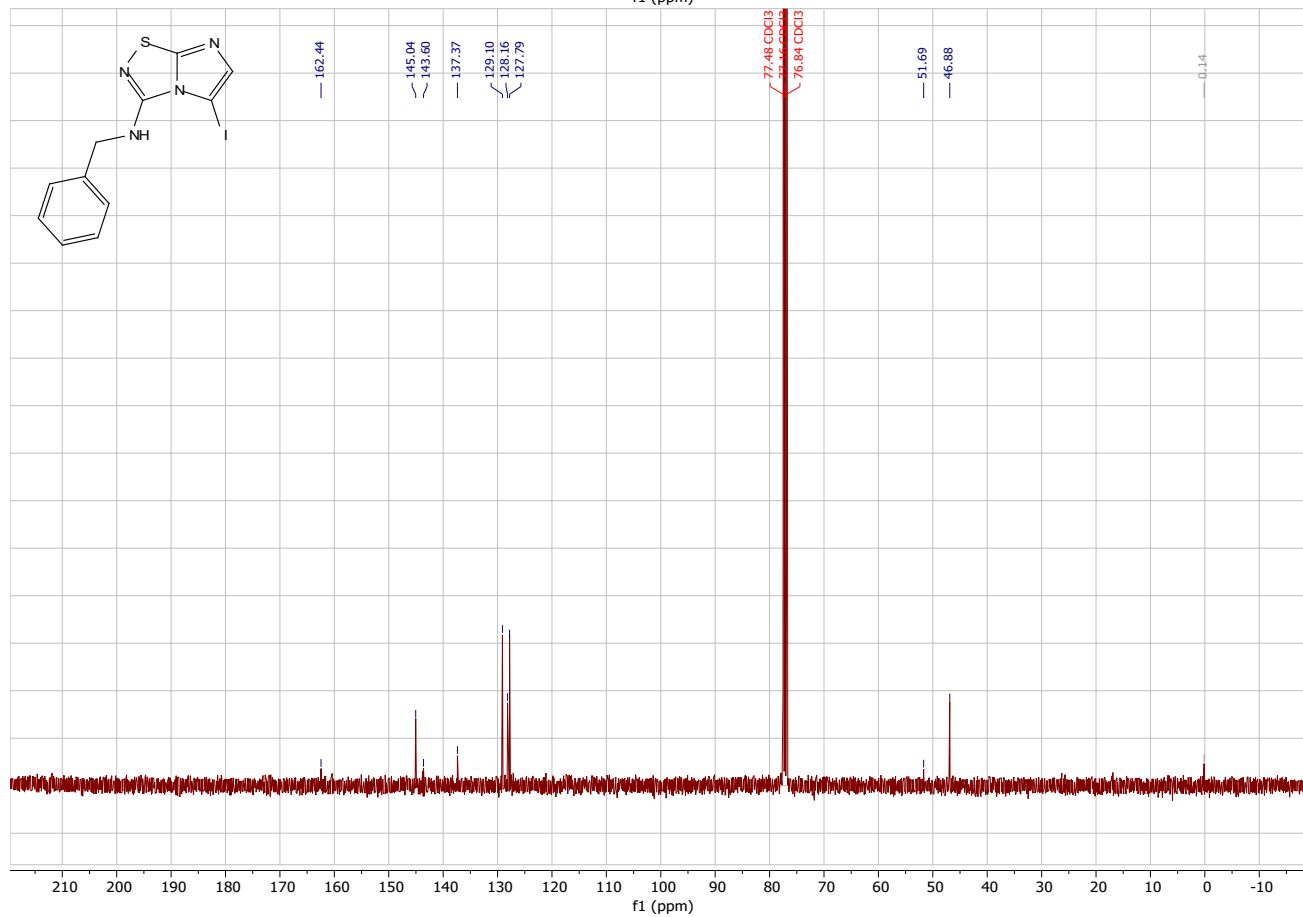
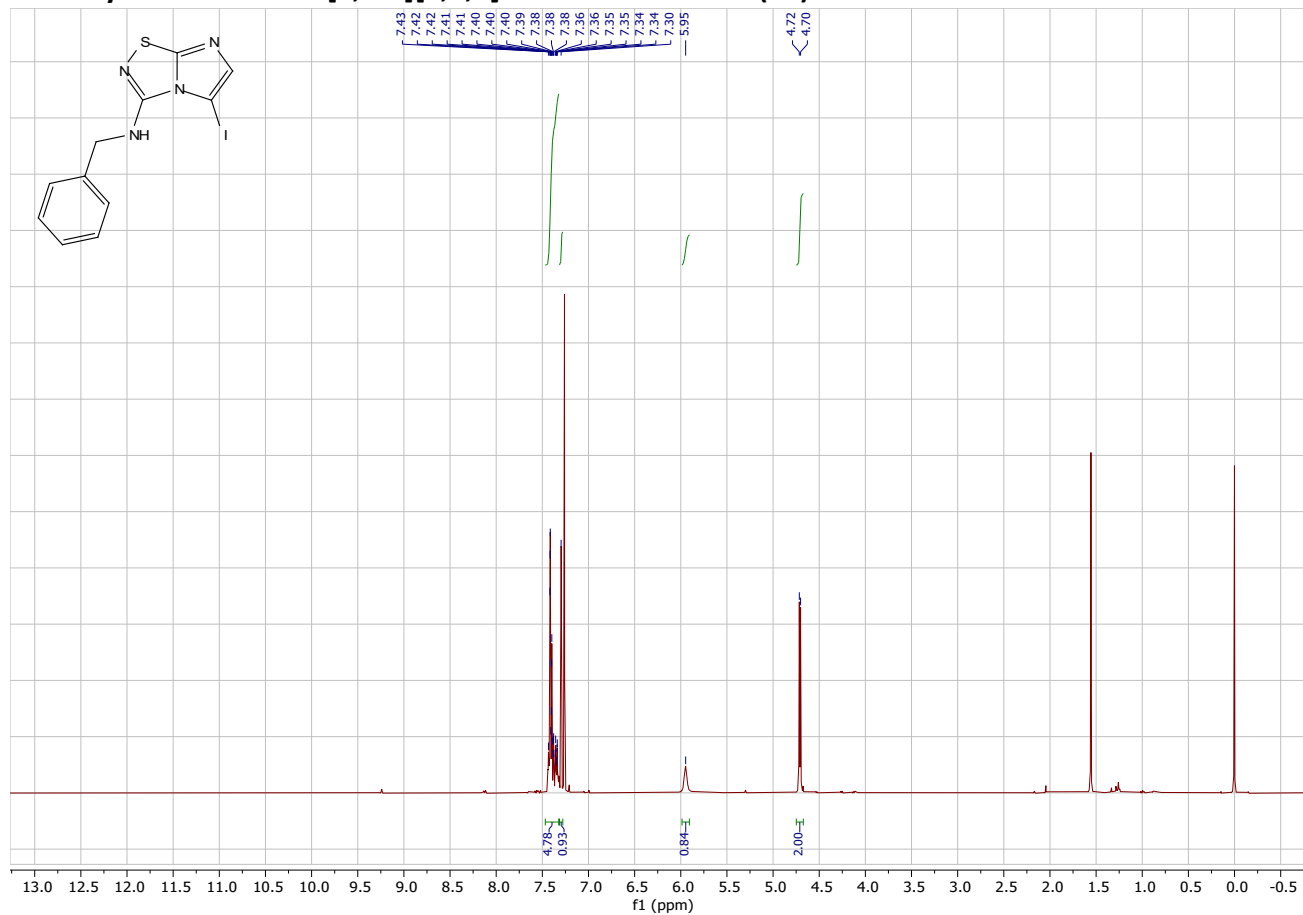
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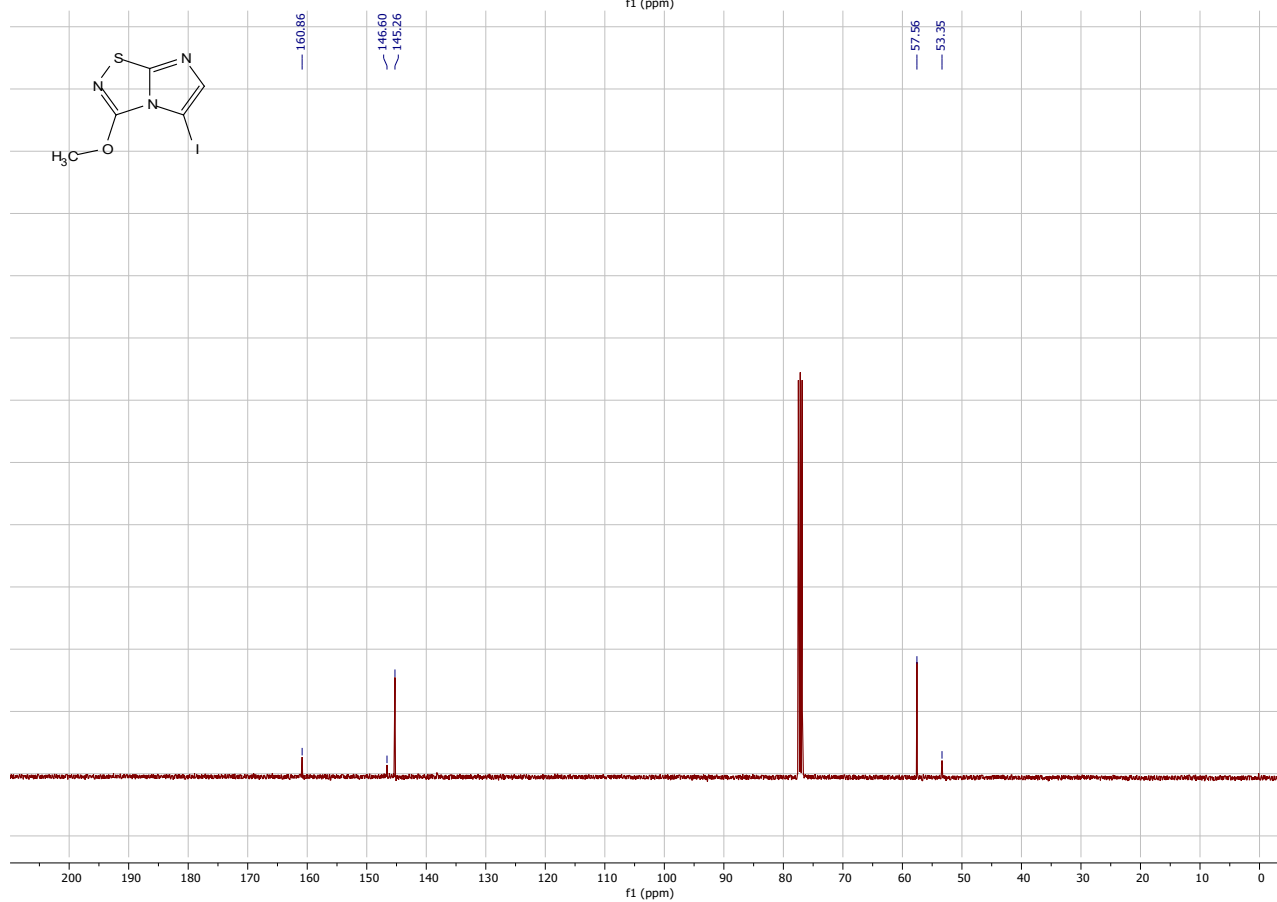
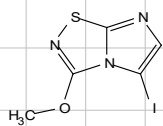
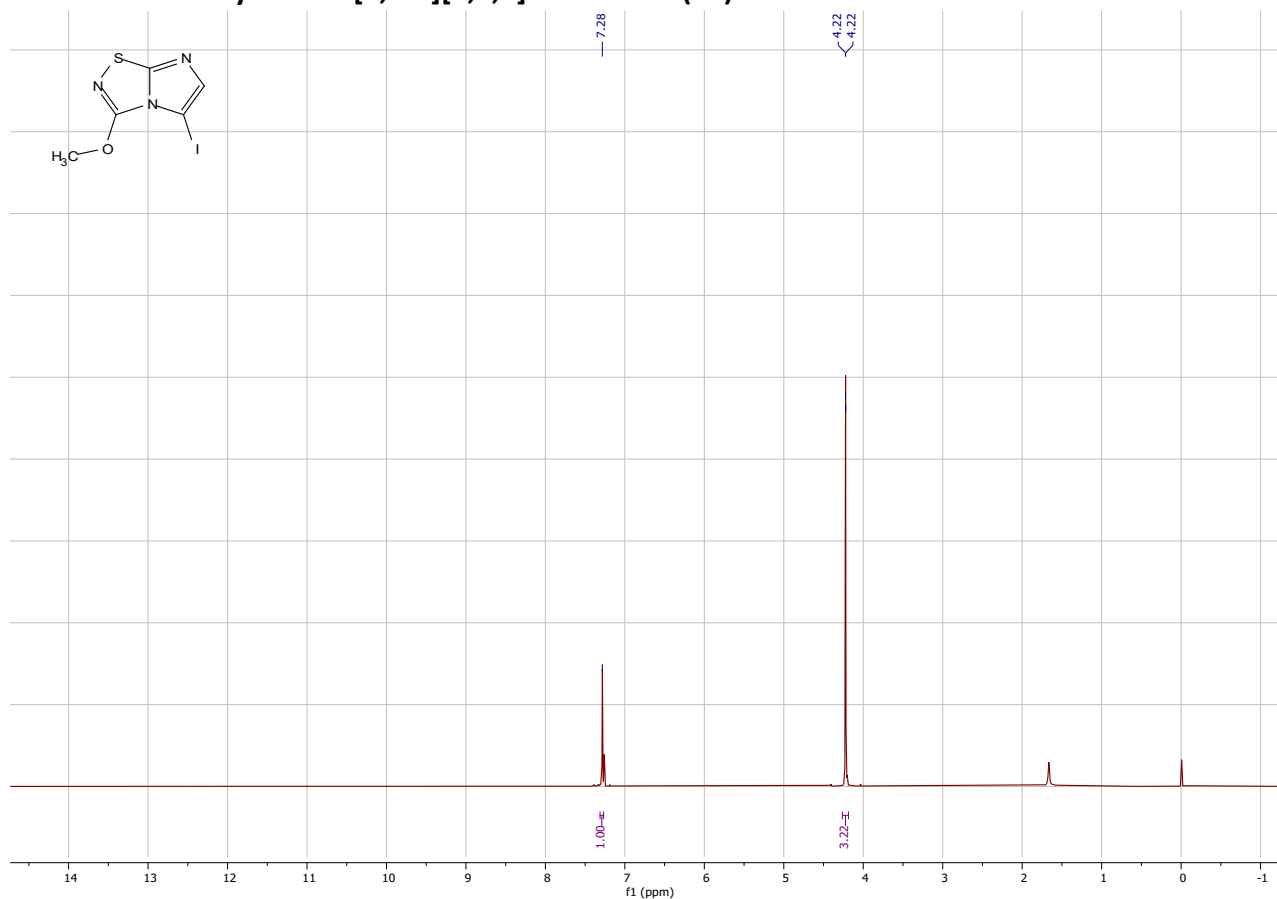
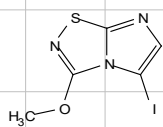
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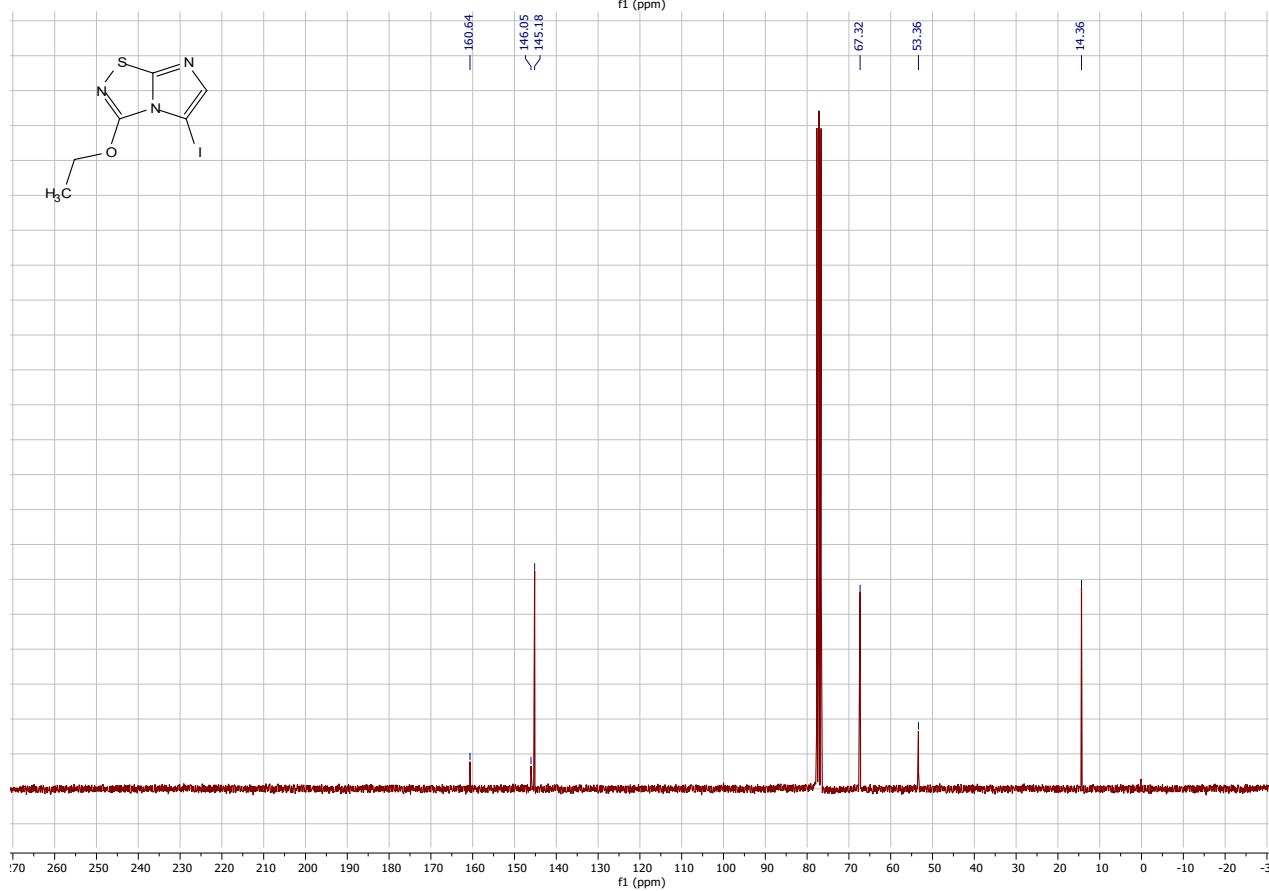
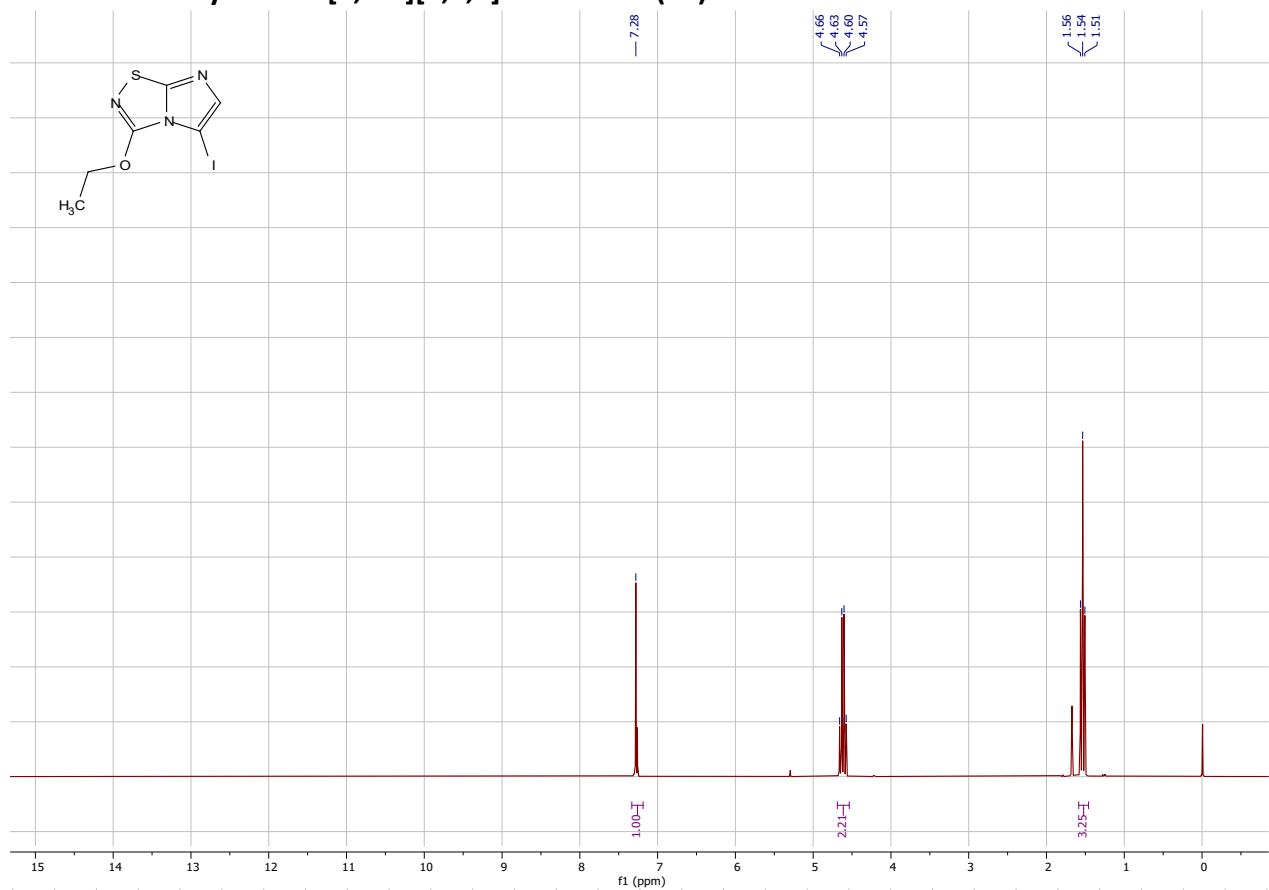
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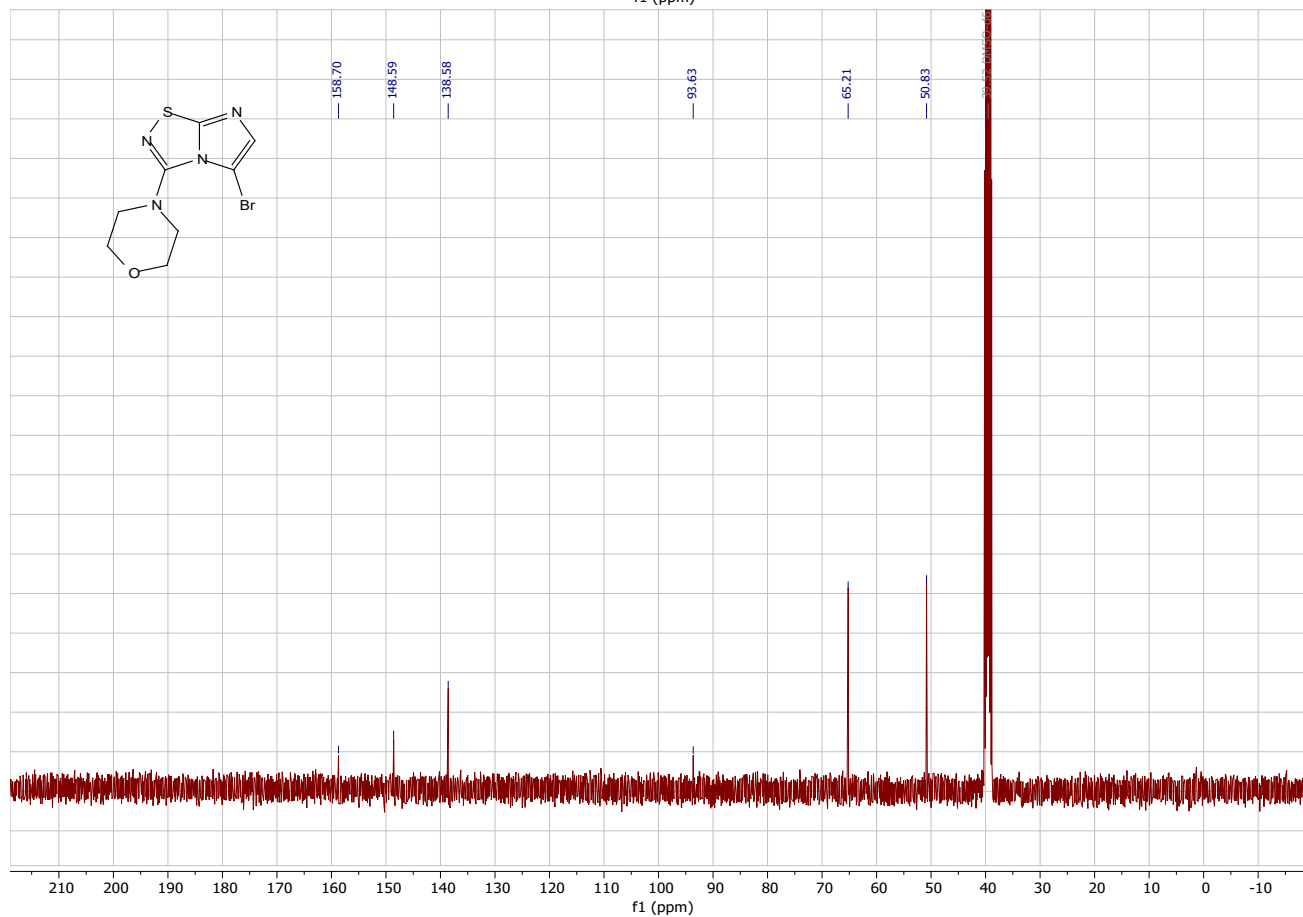
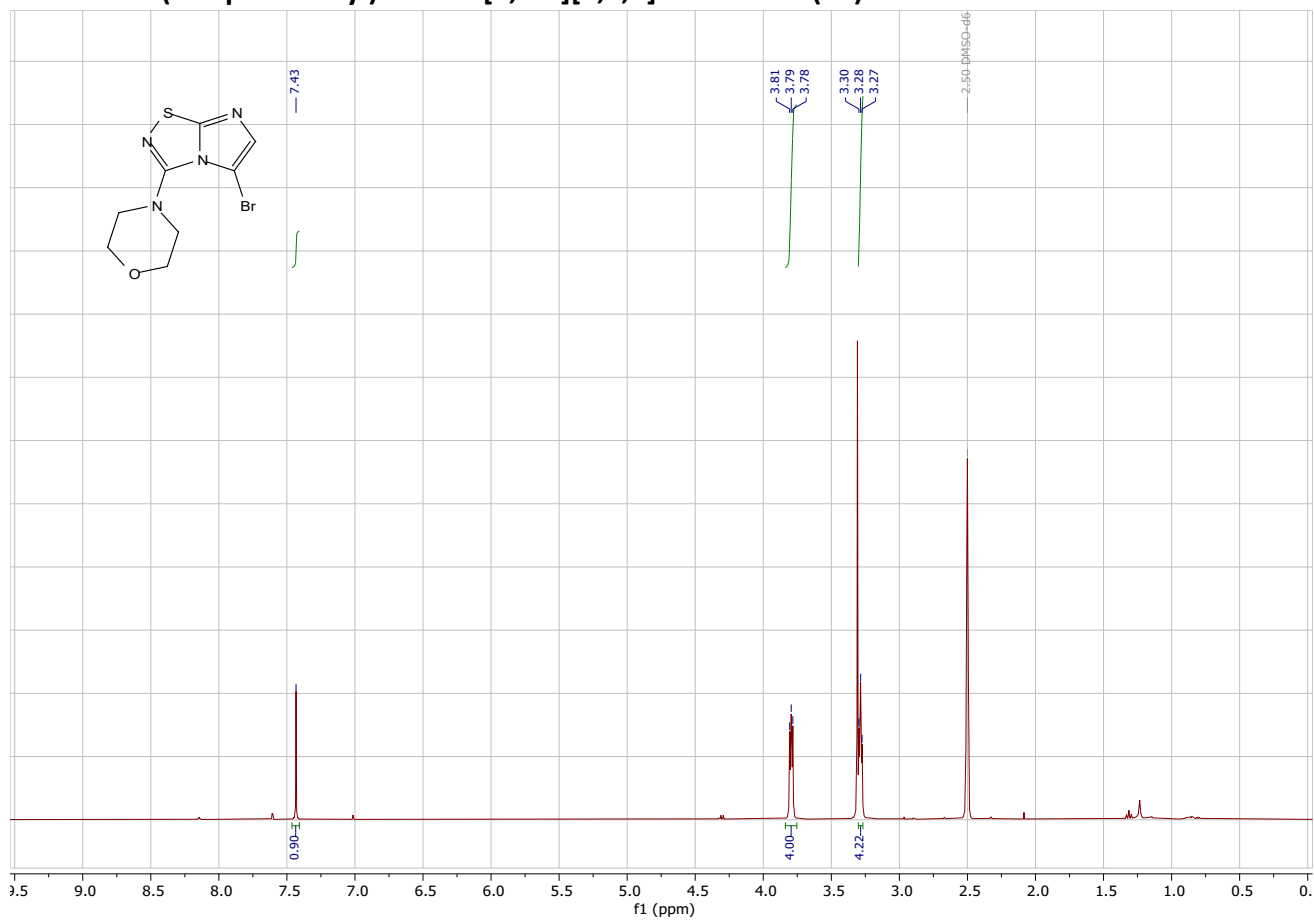
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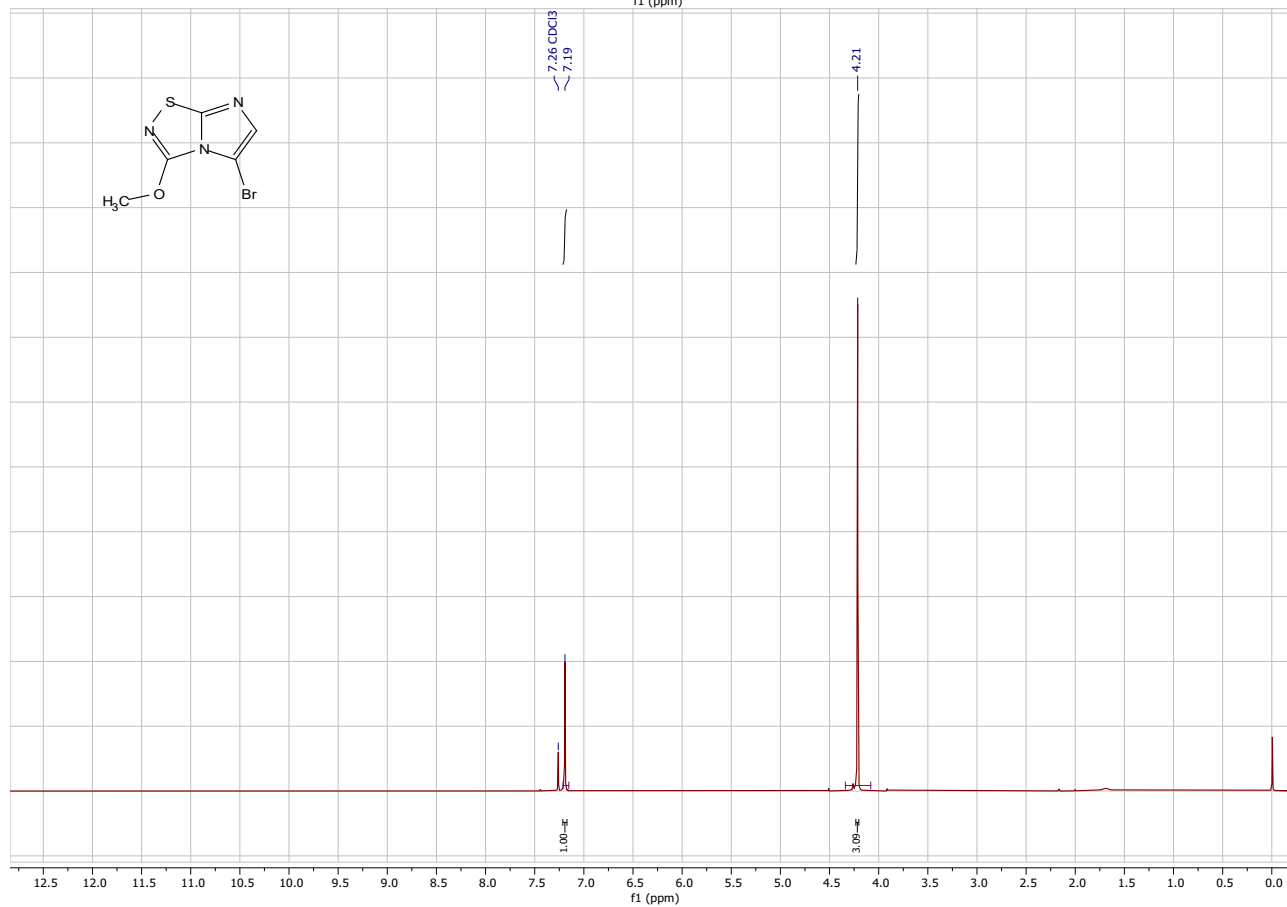
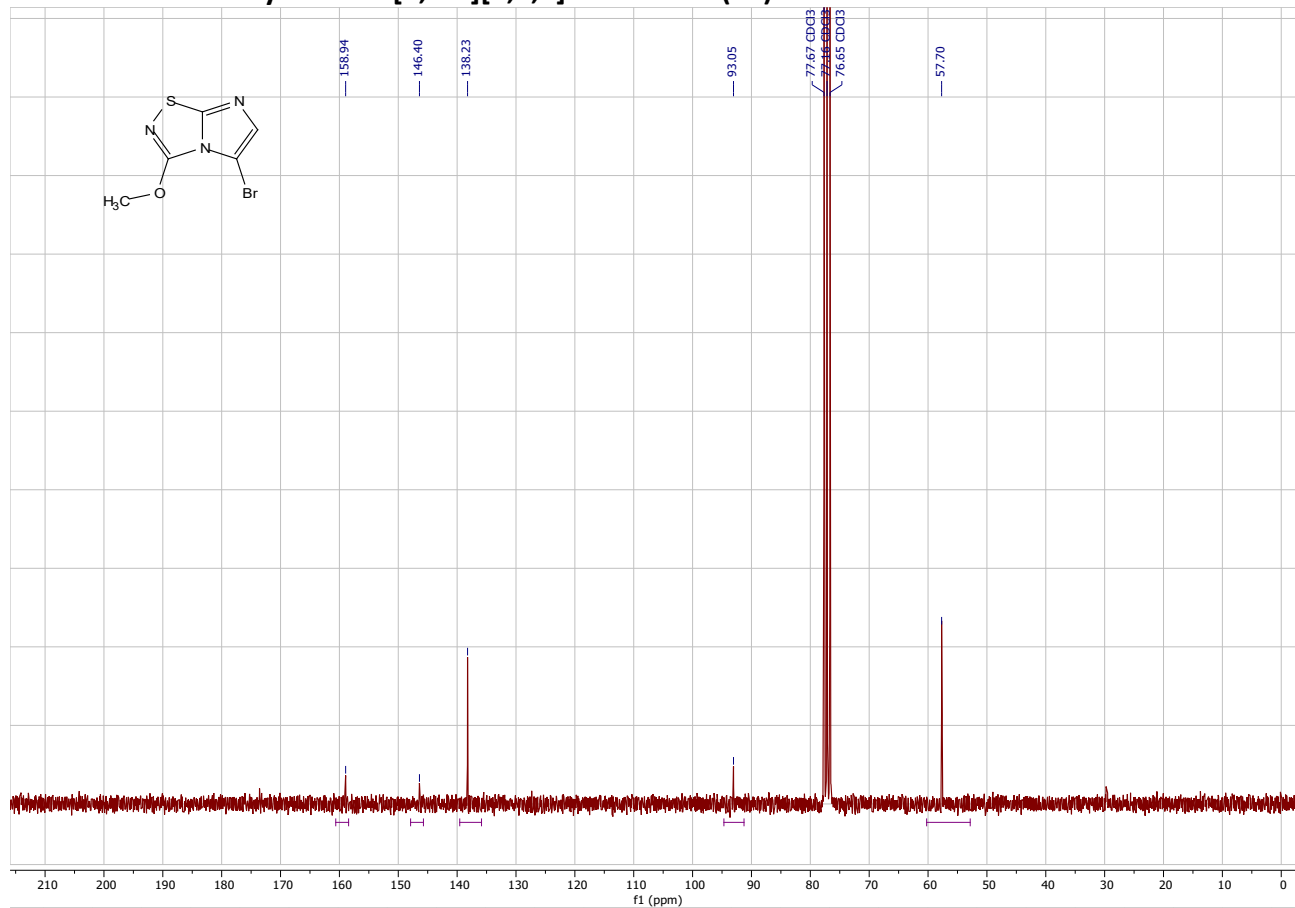
5-iodo-3-ethoxyimidazo[1,2-d][1,2,4]thiadiazole (25)



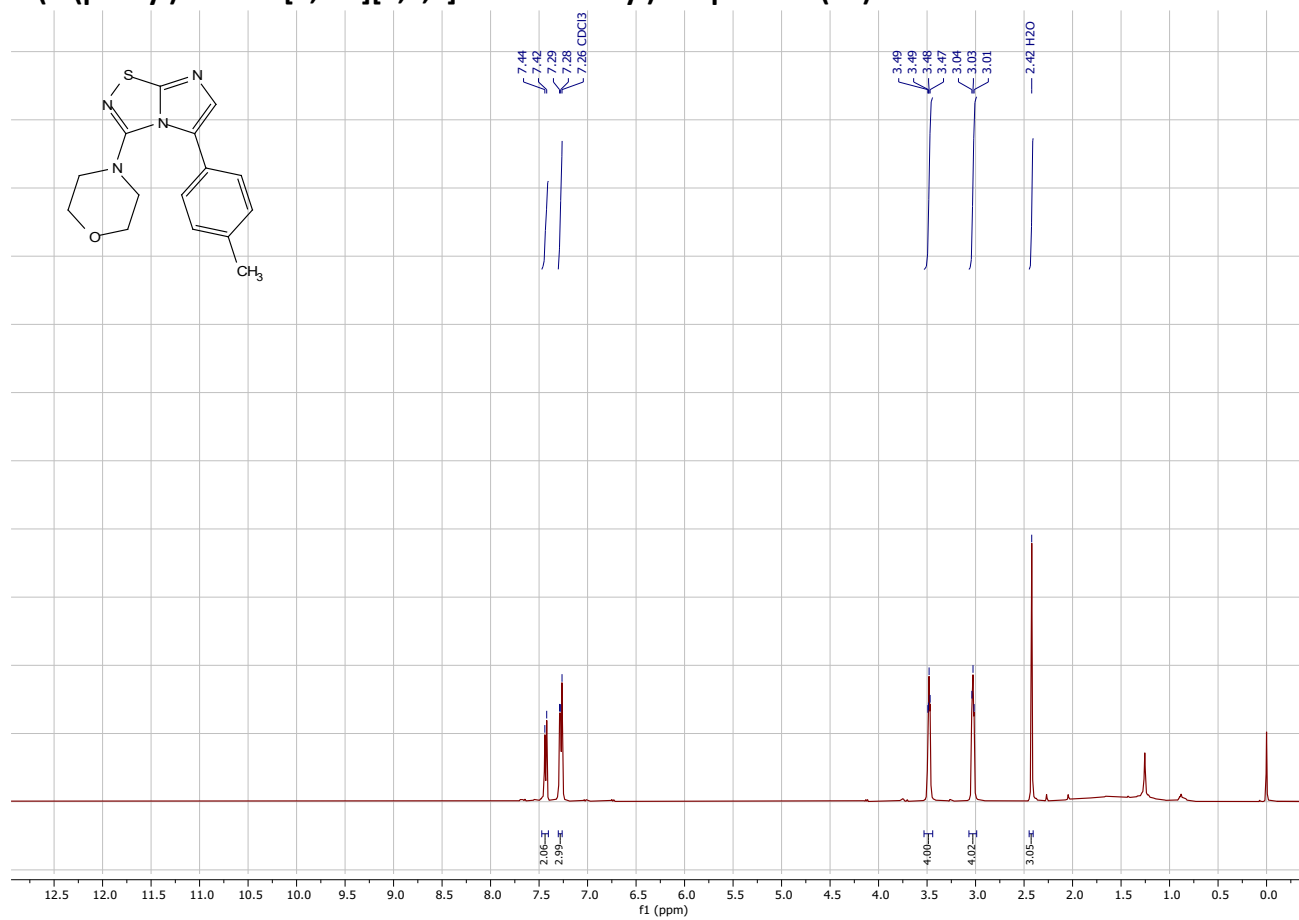
5-bromo-3-(morpholin-4-yl)imidazo[1,2-d][1,2,4]thiadiazole (26)

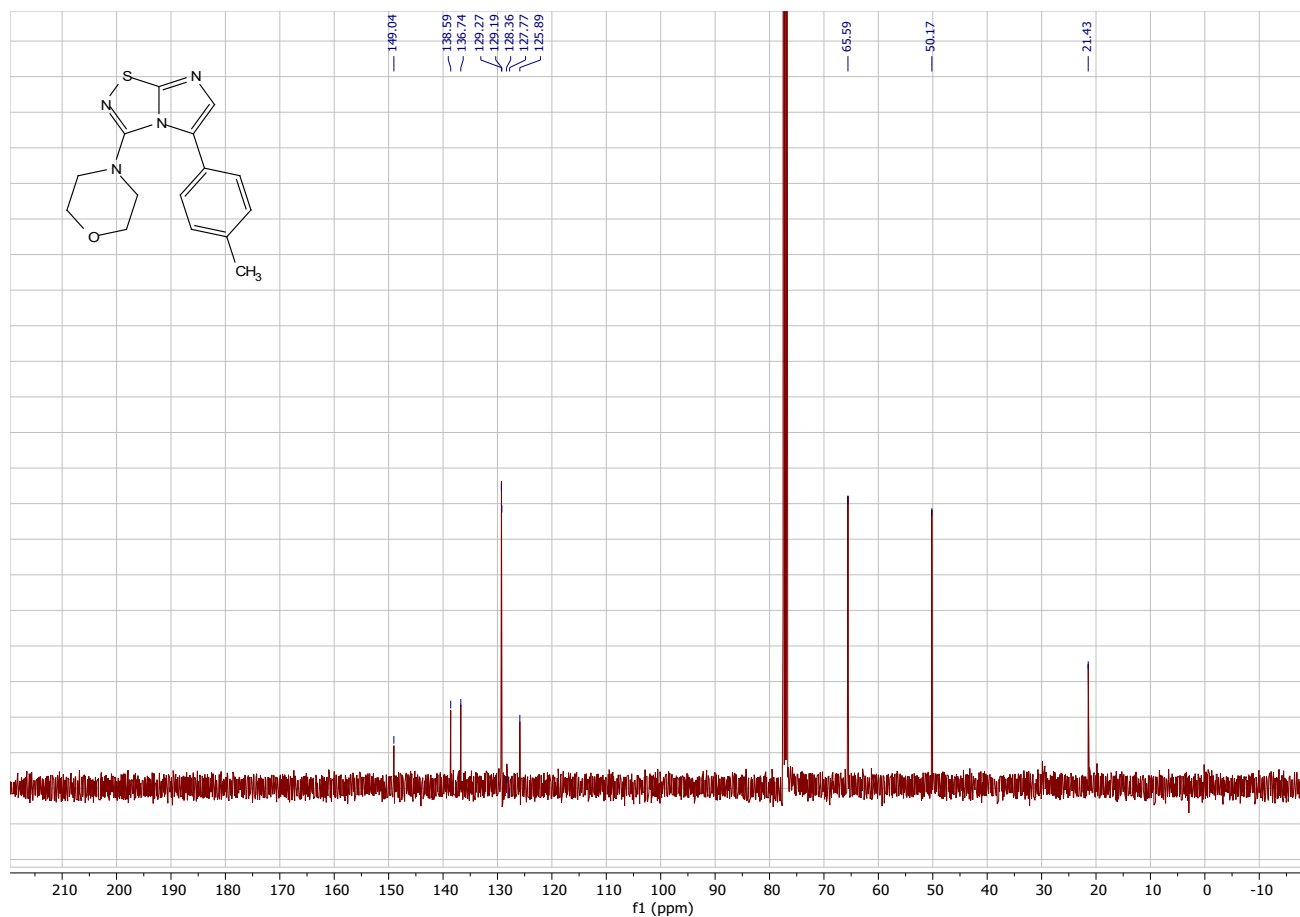


5-bromo-3-methoxy-imidazo[1,2-d][1,2,4]thiadiazole (27)

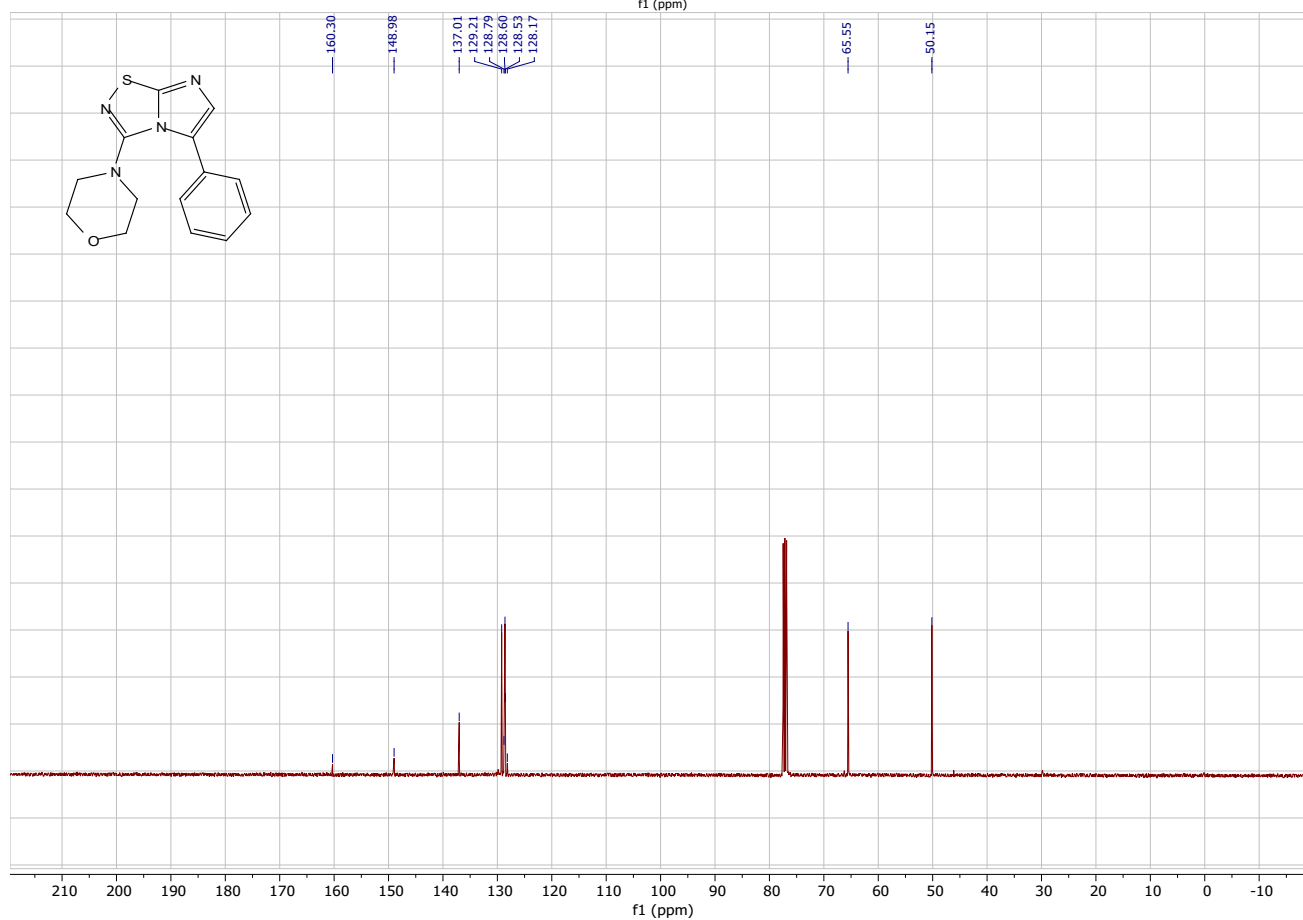
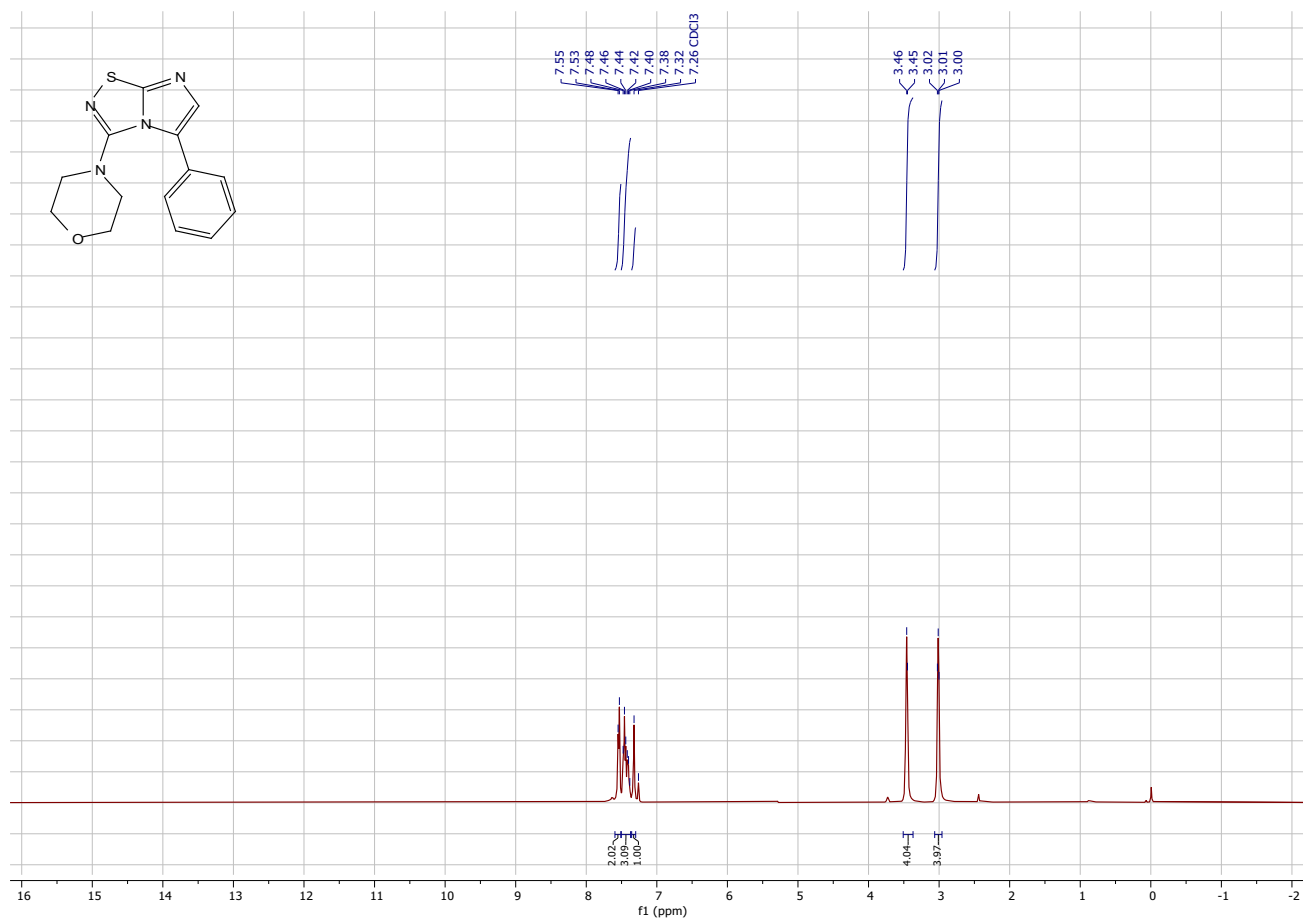


4-(5-(p-tolyl)imidazo[1,2-d][1,2,4]thiadiazol-3-yl)morpholine (28)

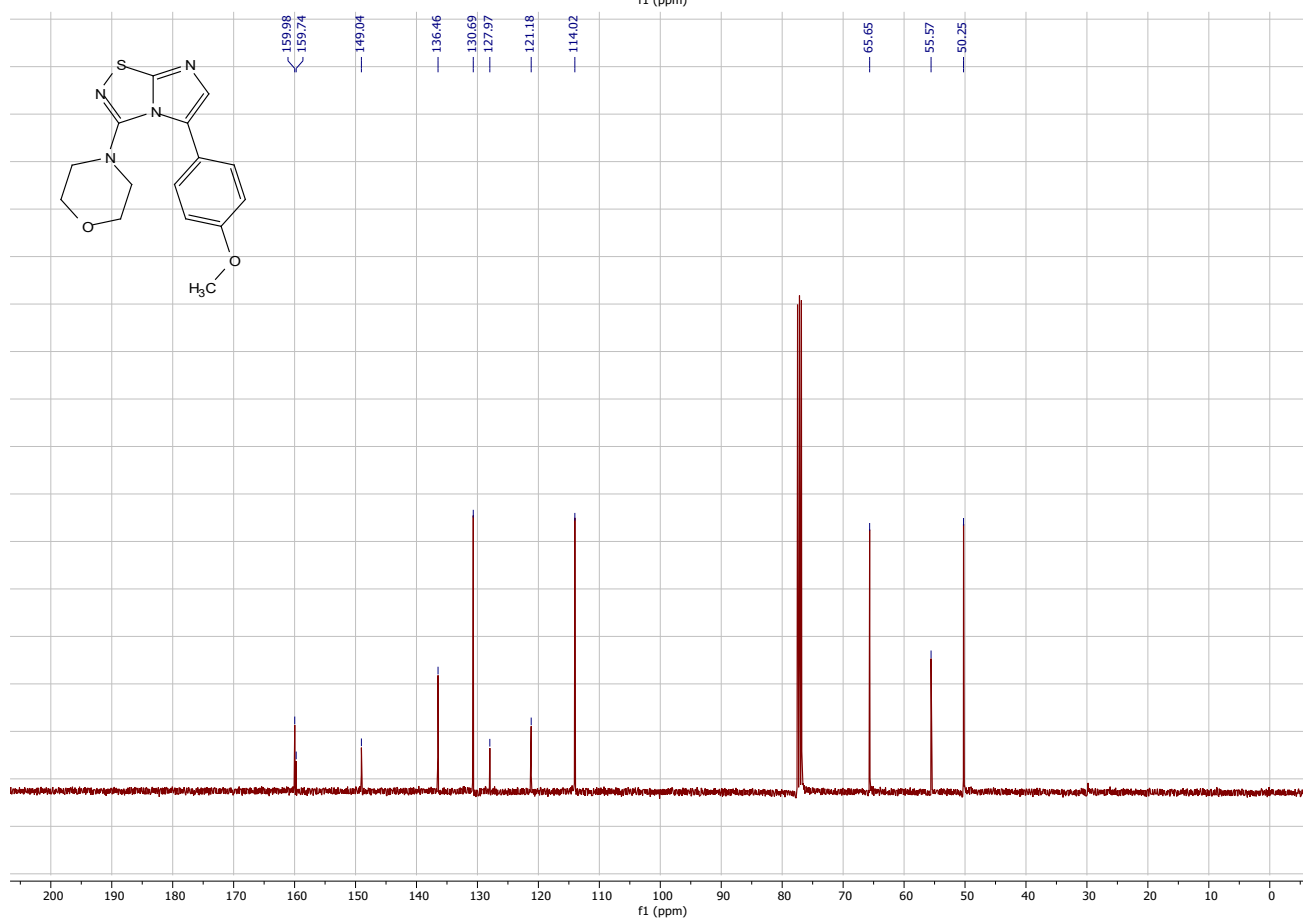
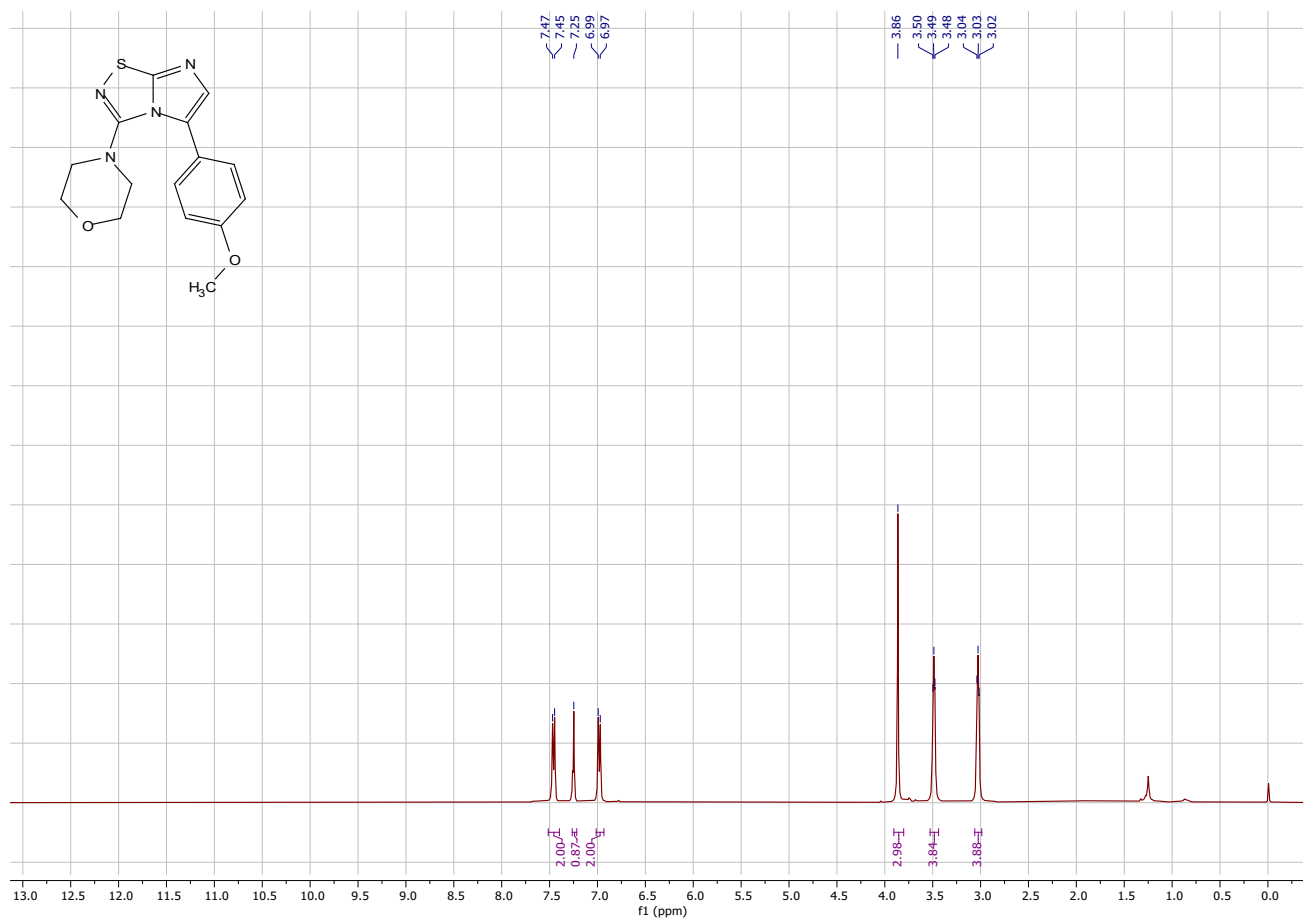




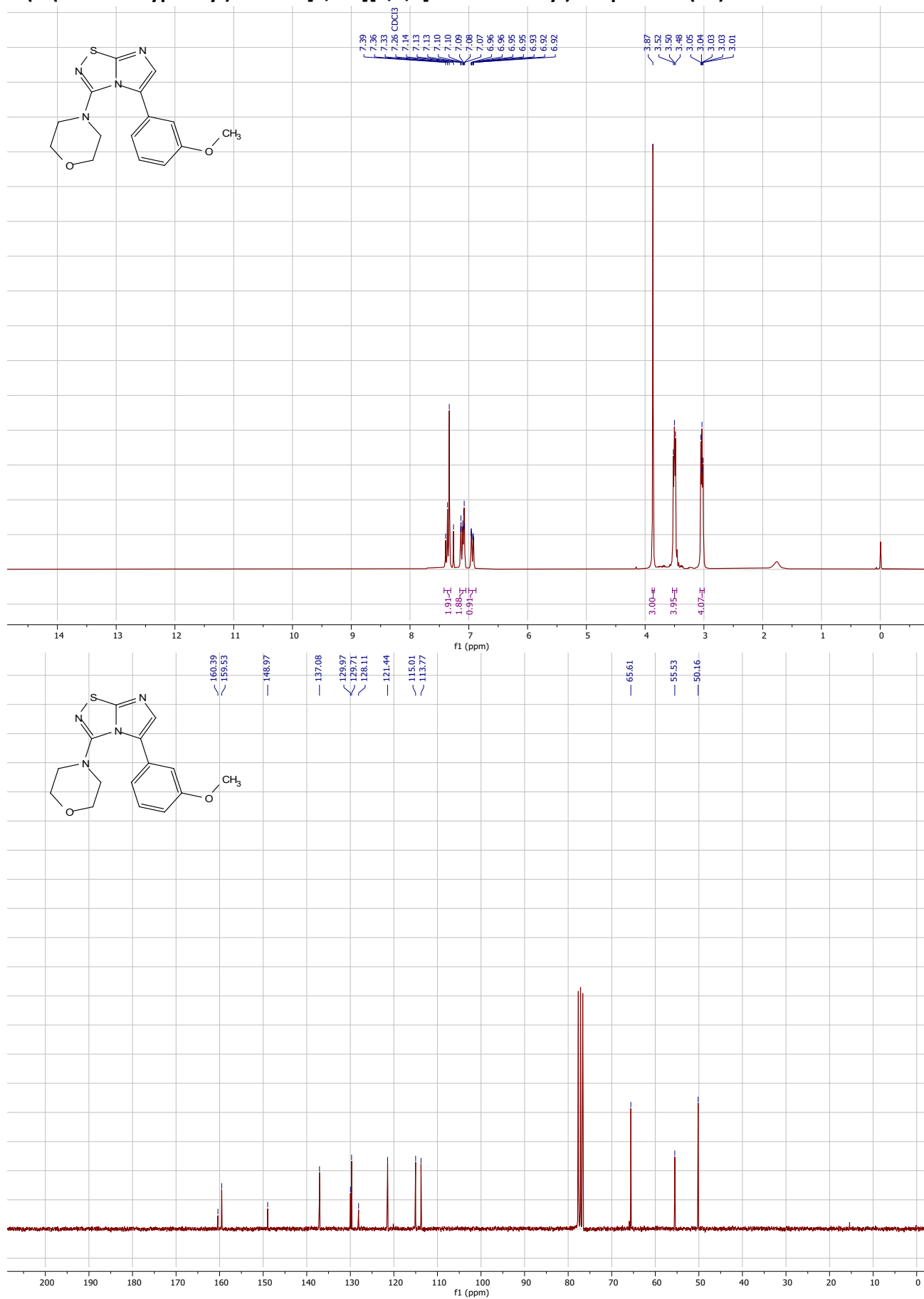
4-(5-phenylimidazo[1,2-*d*][1,2,4]thiadiazol-3-yl)morpholine (29)



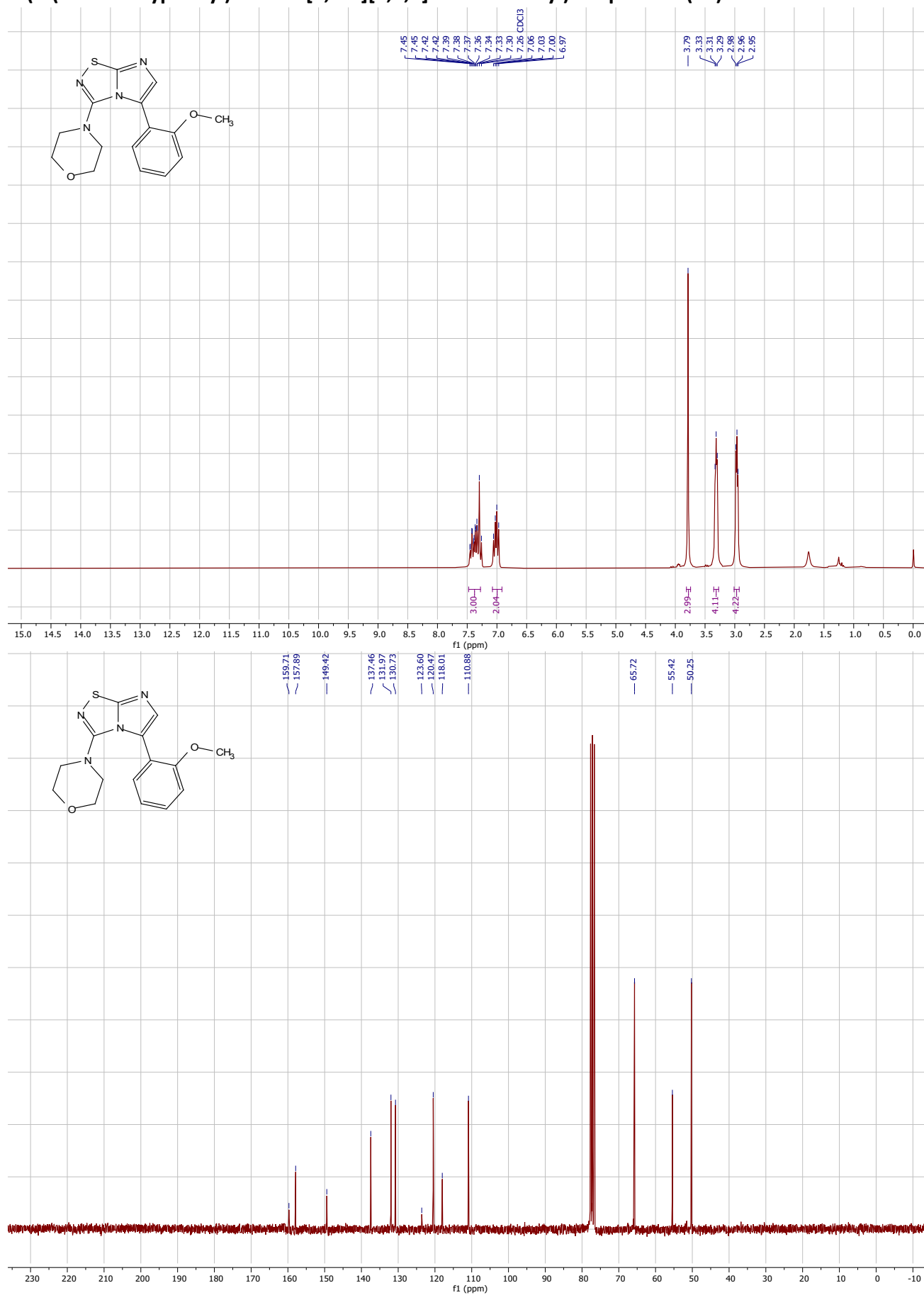
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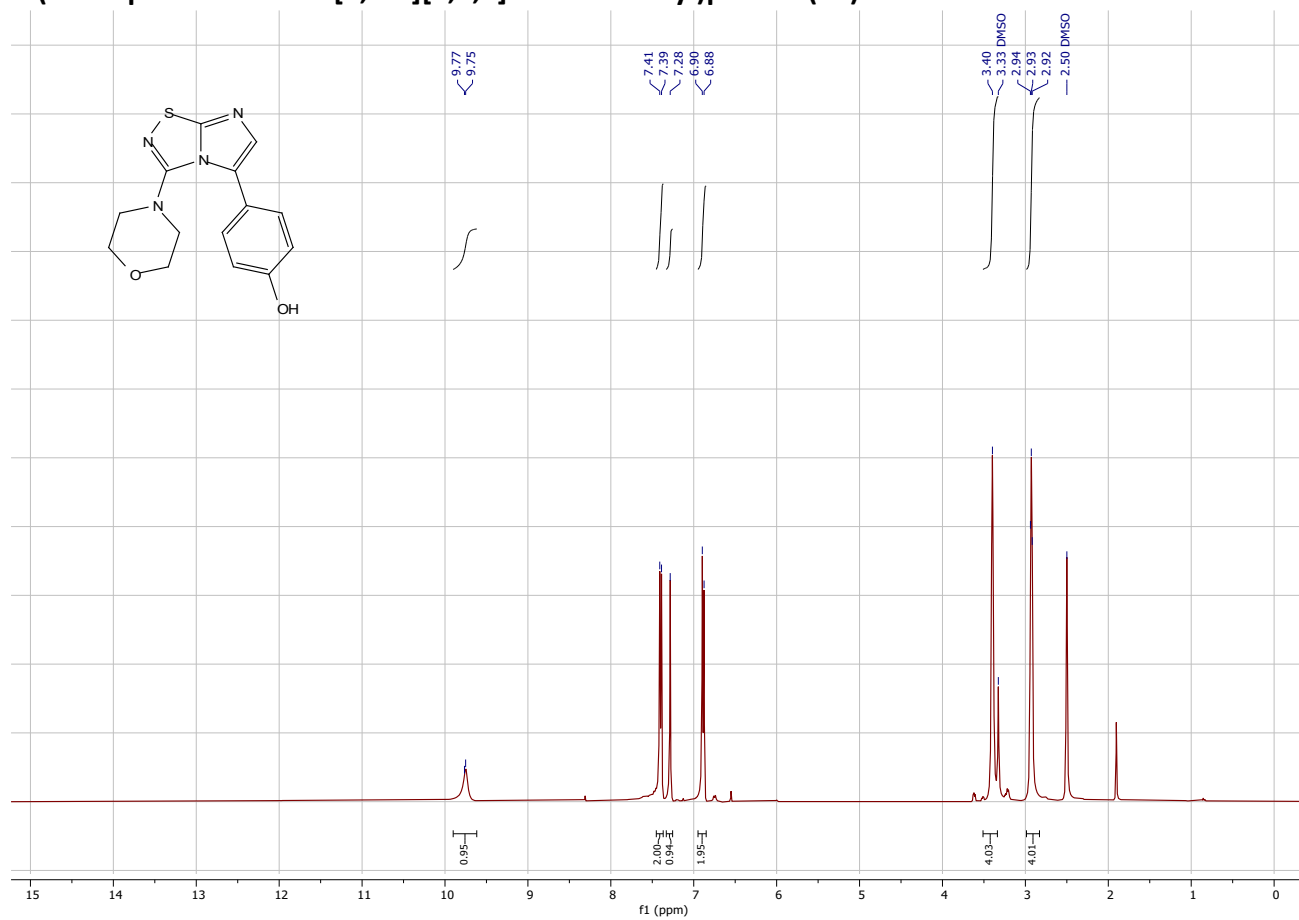
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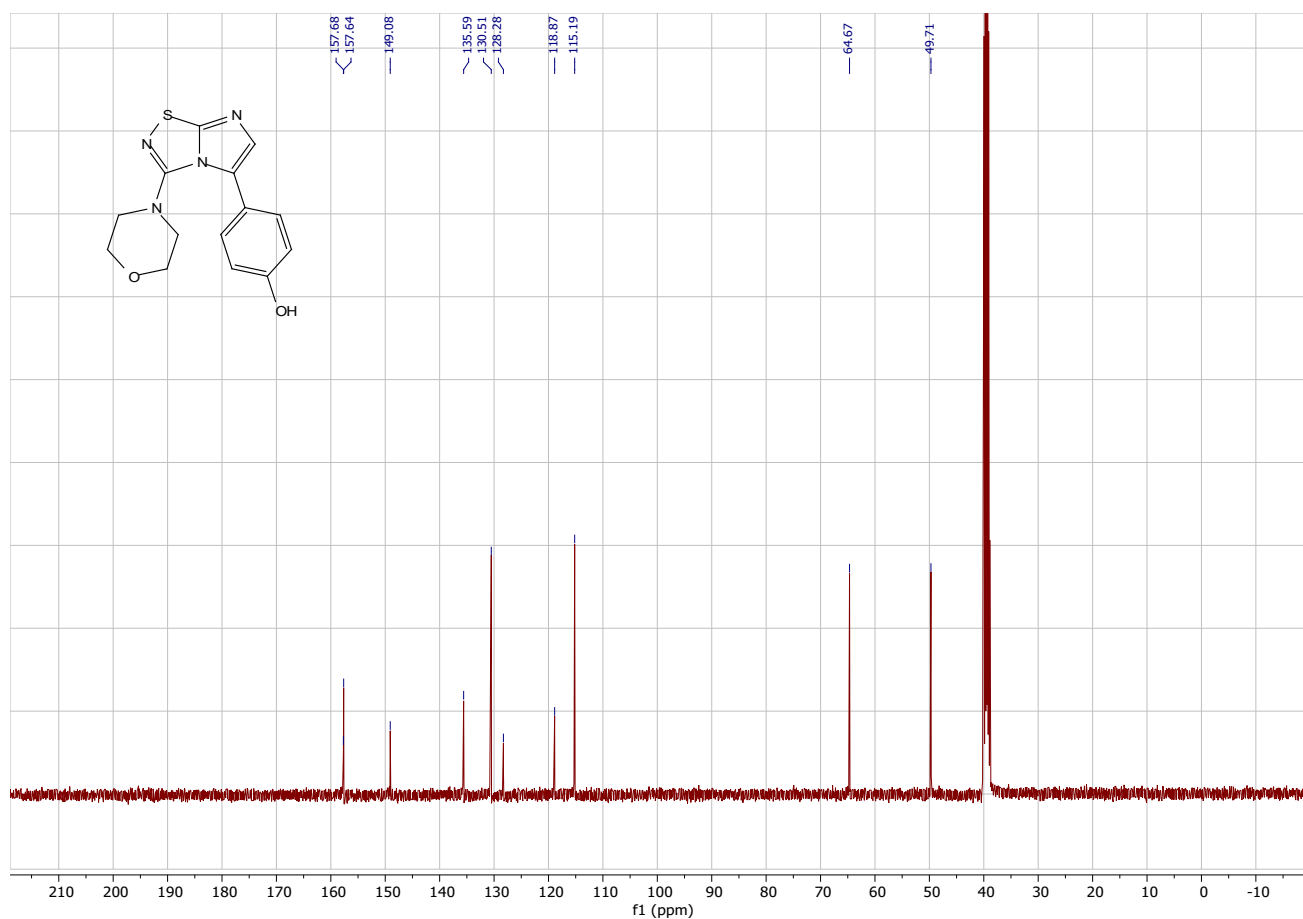


4-(5-(2-methoxyphenyl)imidazo[1,2-d][1,2,4]thiadiazol-3-yl)morpholine (32)

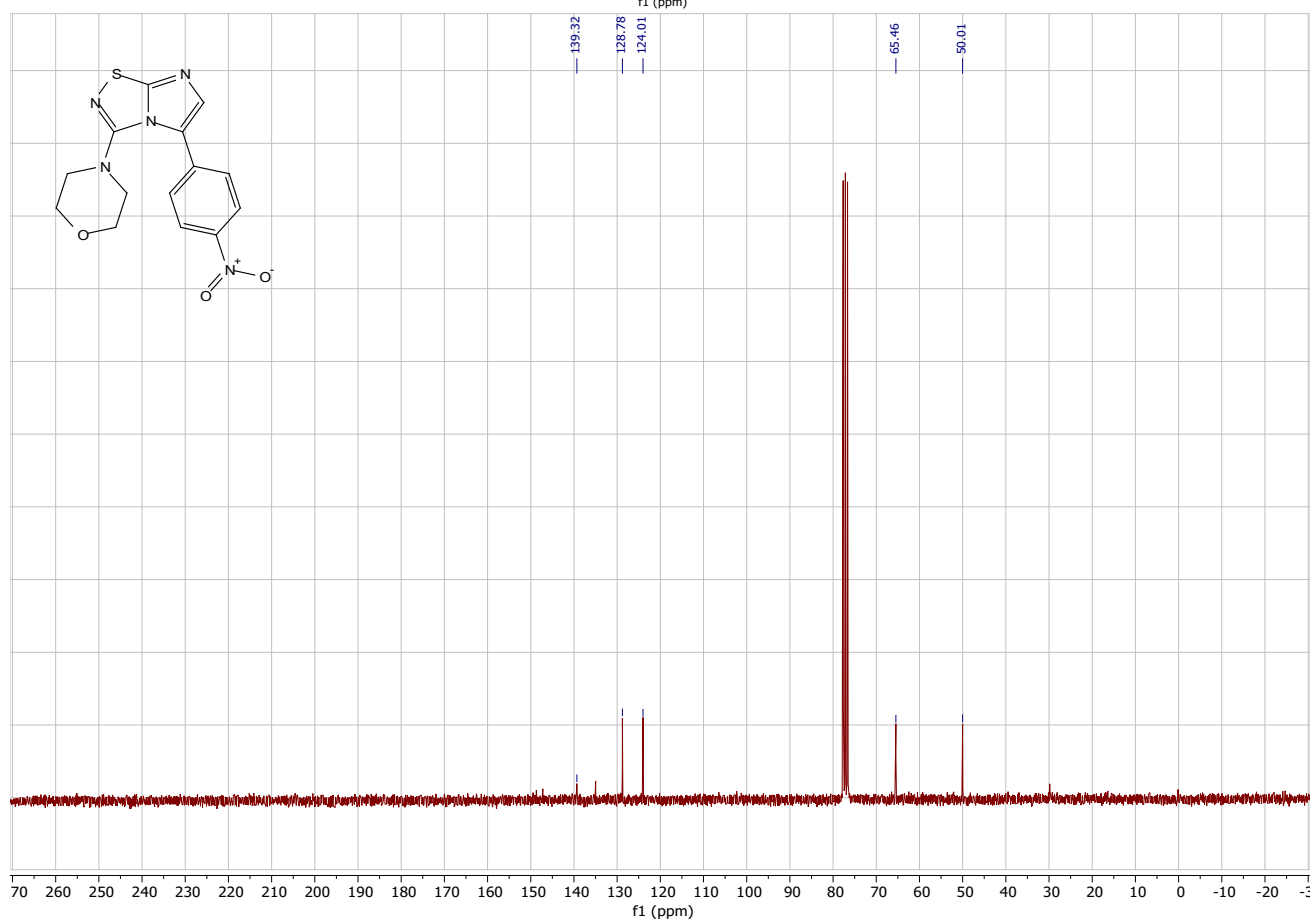
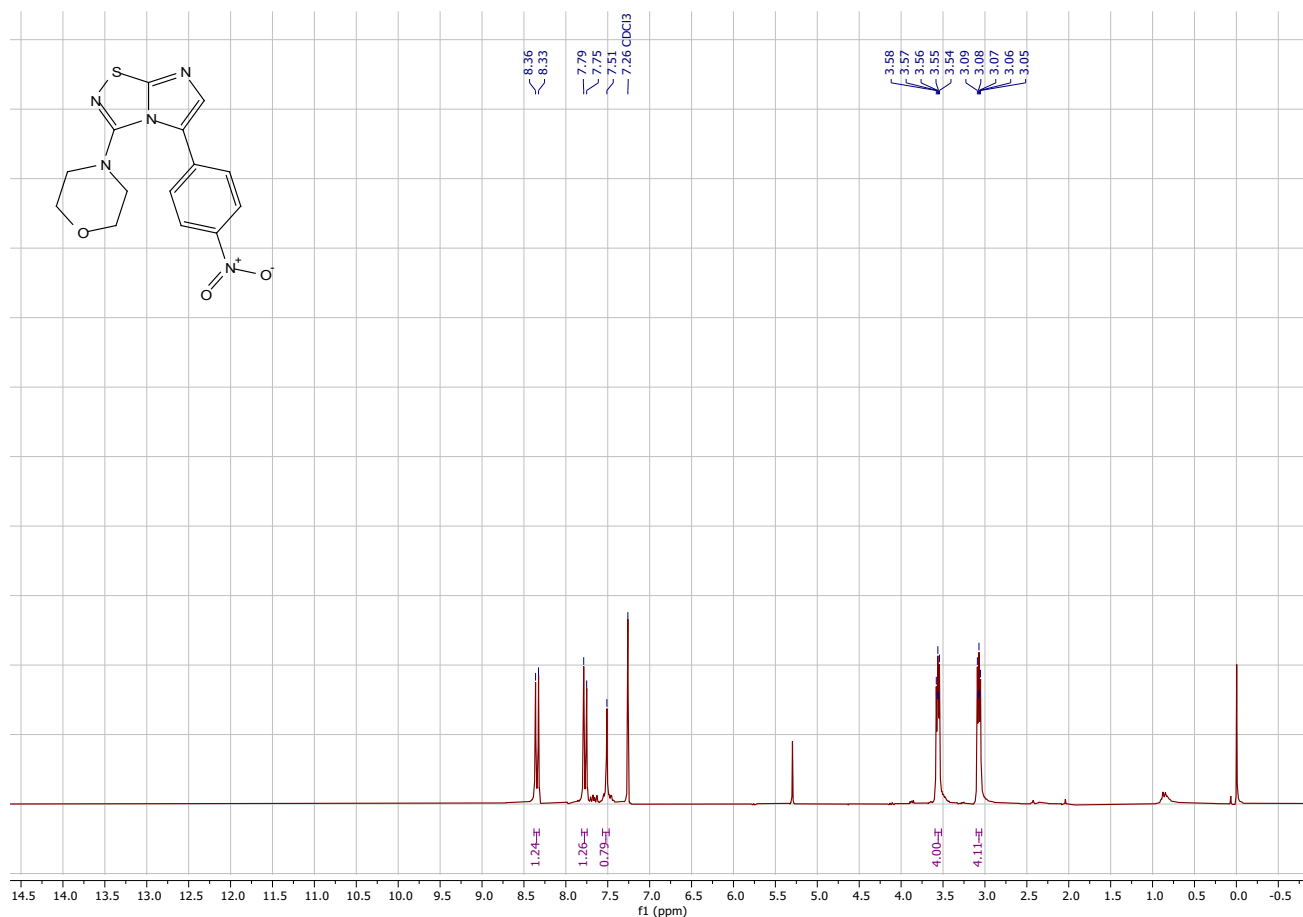


4-(3-morpholinoimidazo[1,2-d][1,2,4]thiadiazol-5-yl)phenol (33)

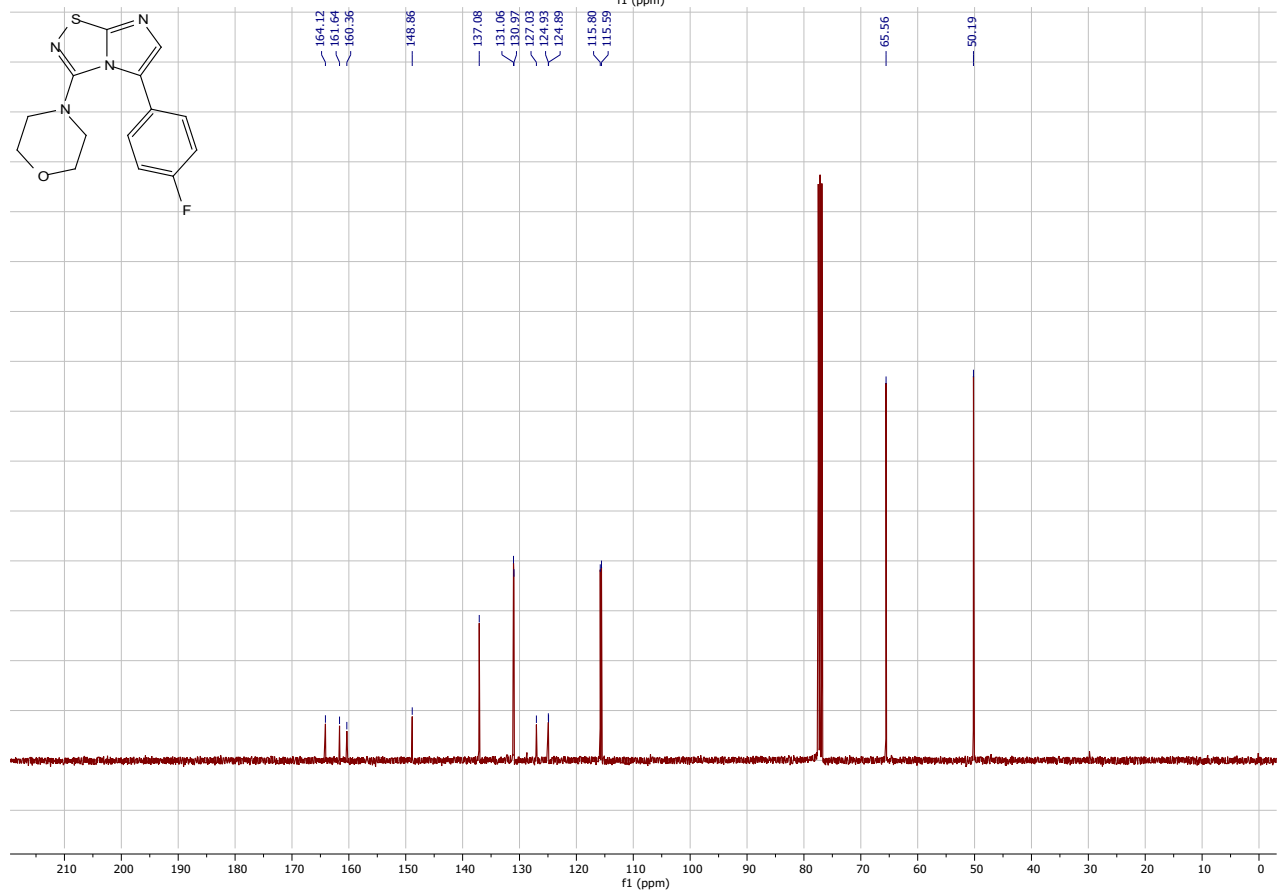
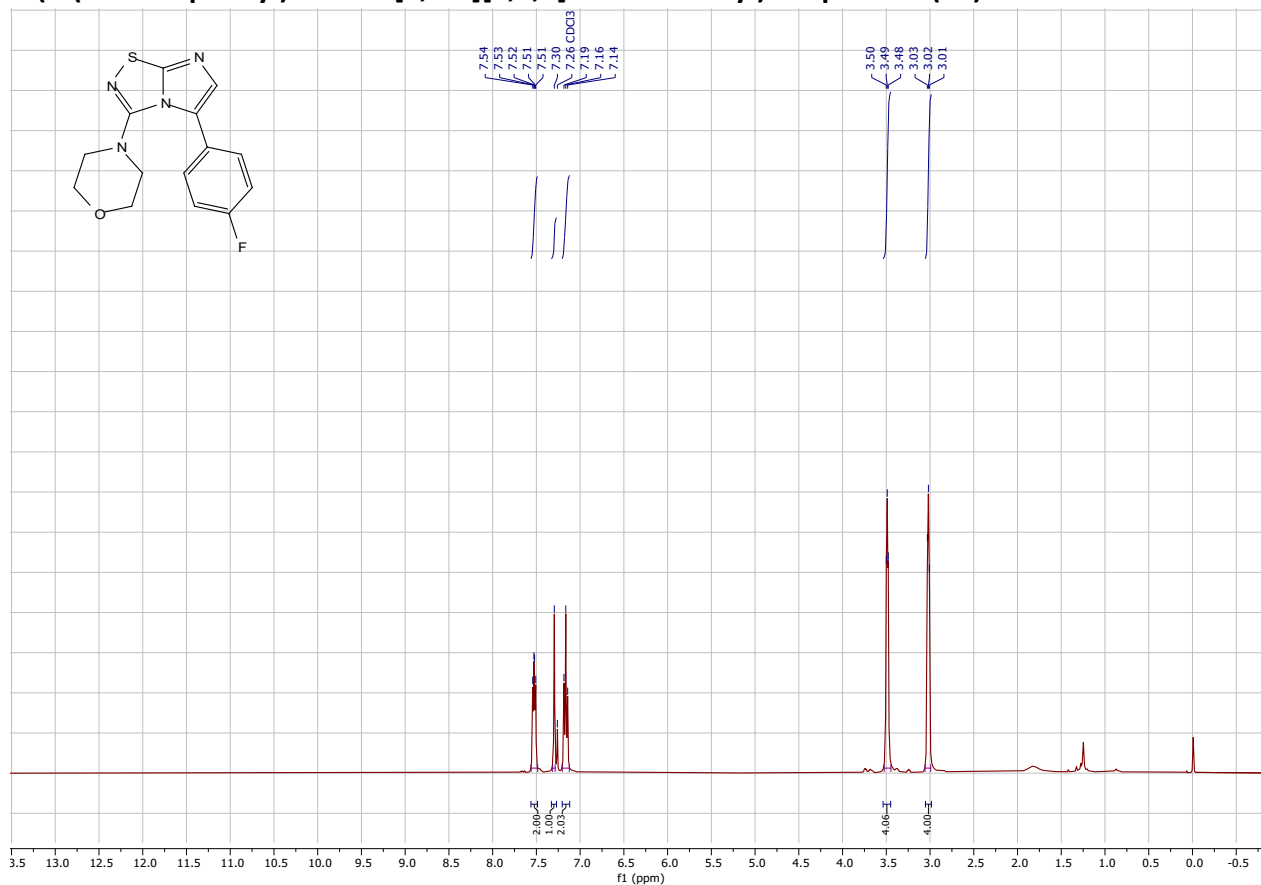


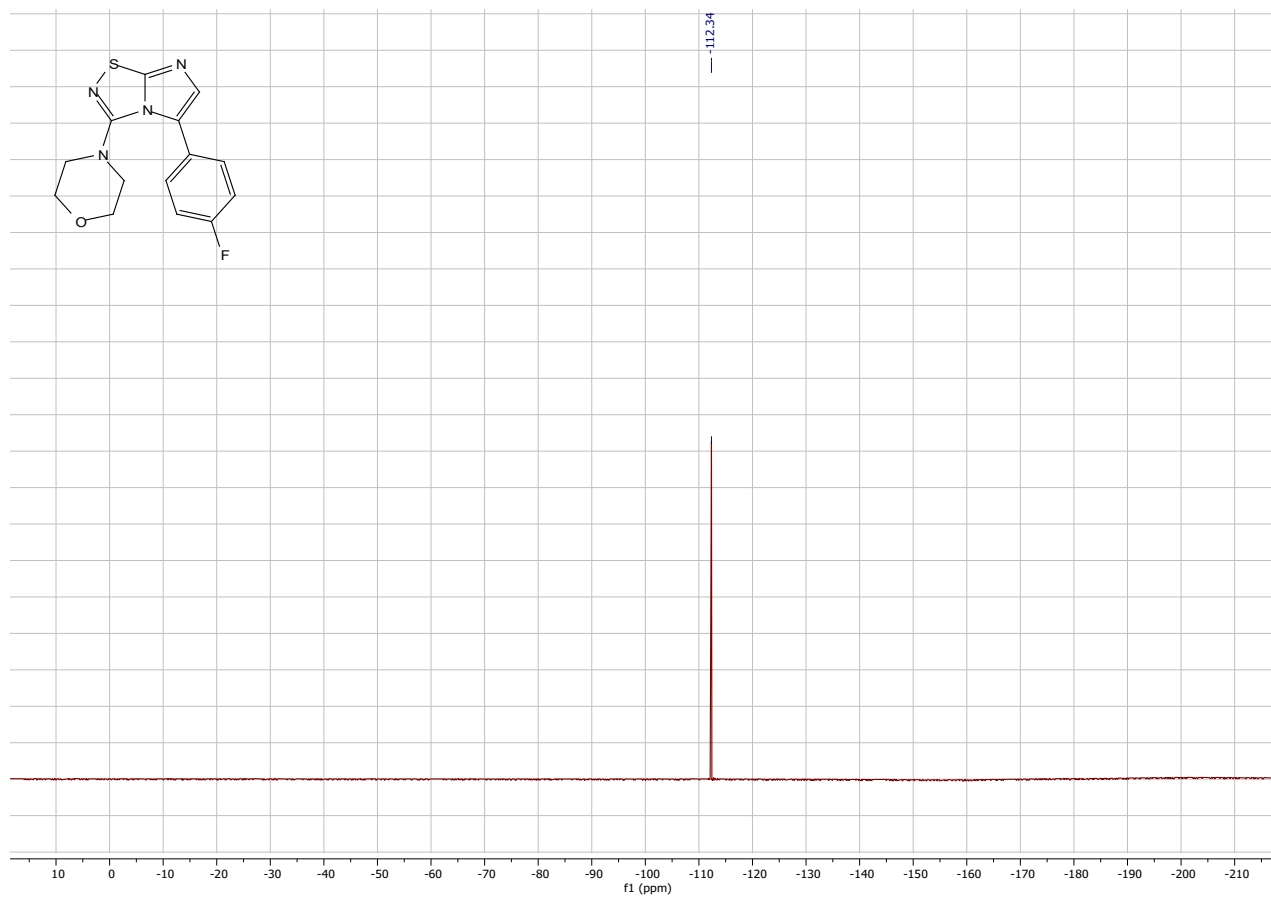
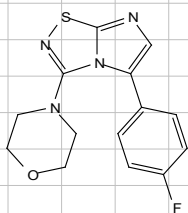


4-(5-(4-nitrophenyl)imidazo[1,2-*d*][1,2,4]thiadiazol-3-yl)morpholine (34)

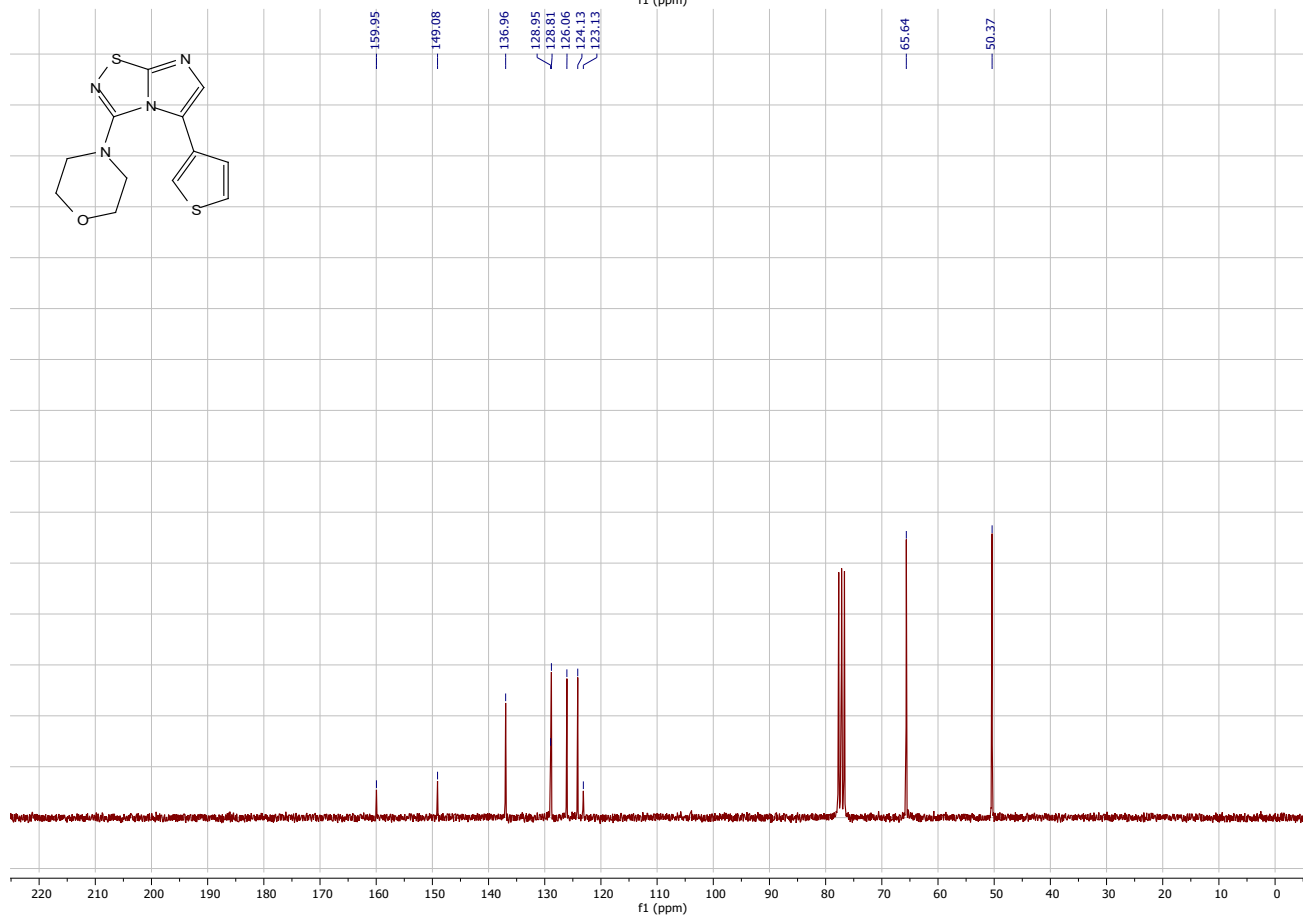
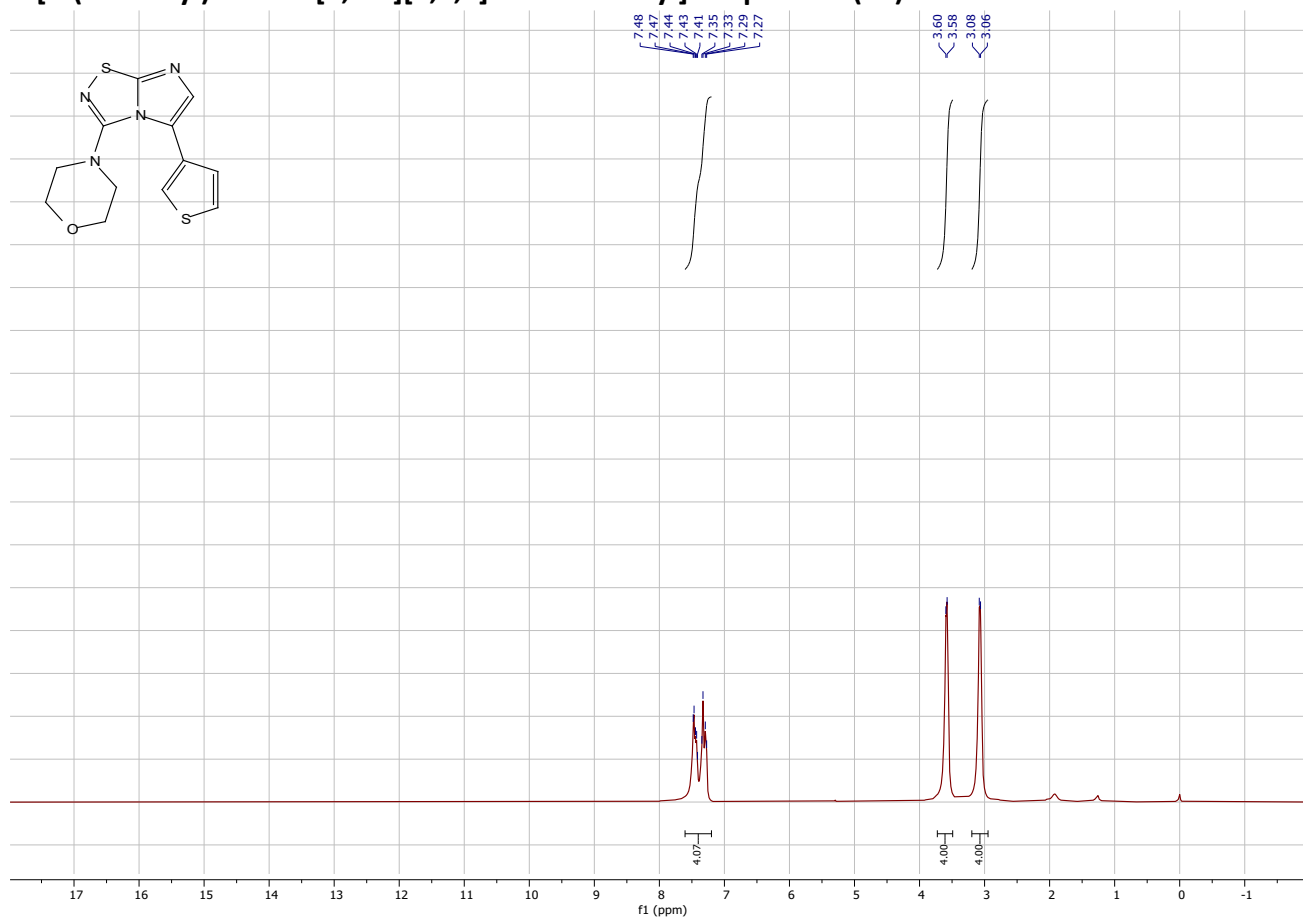


4-(5-(4-fluorophenyl)imidazo[1,2-d][1,2,4]thiadiazol-3-yl)morpholine (35)

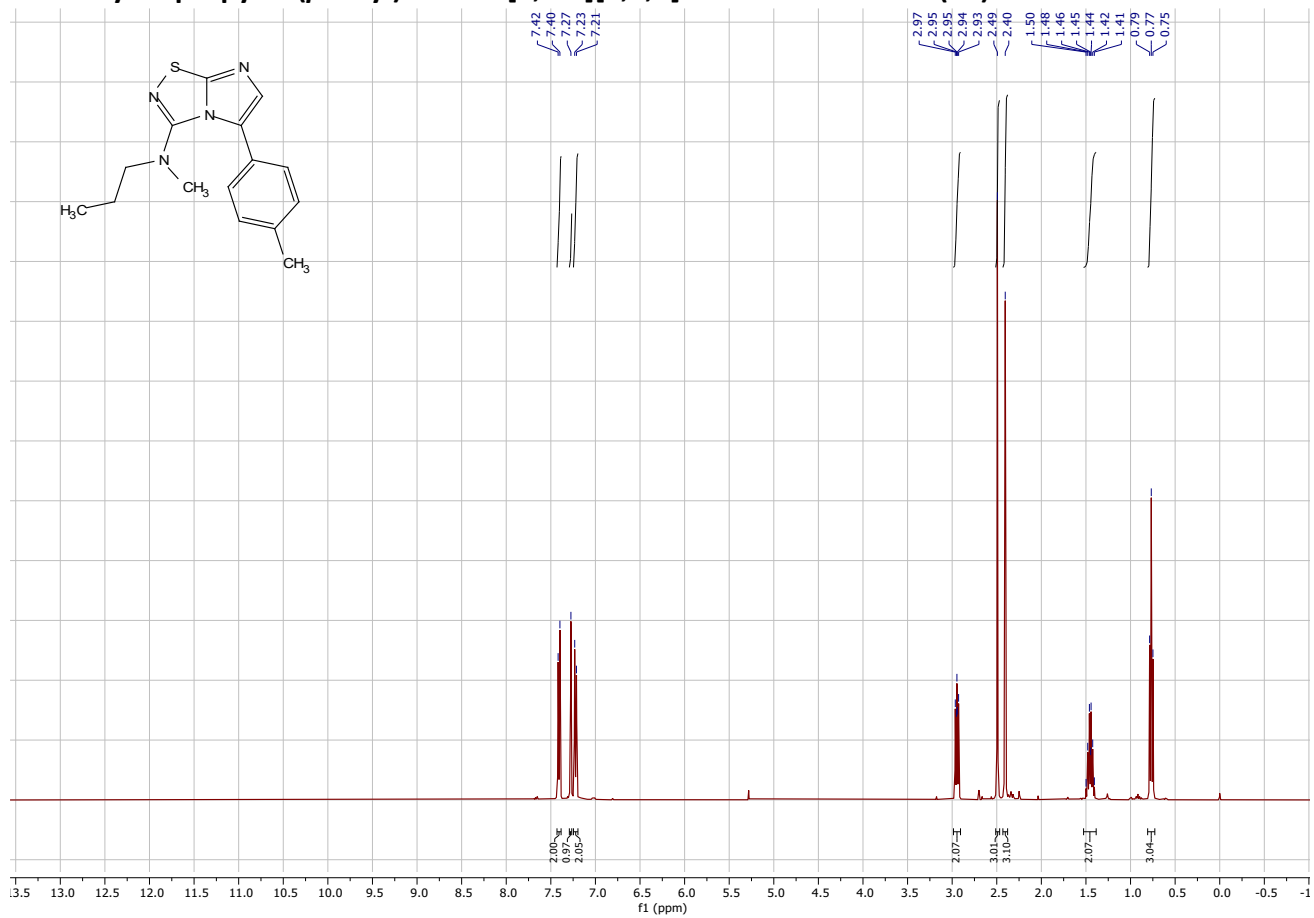


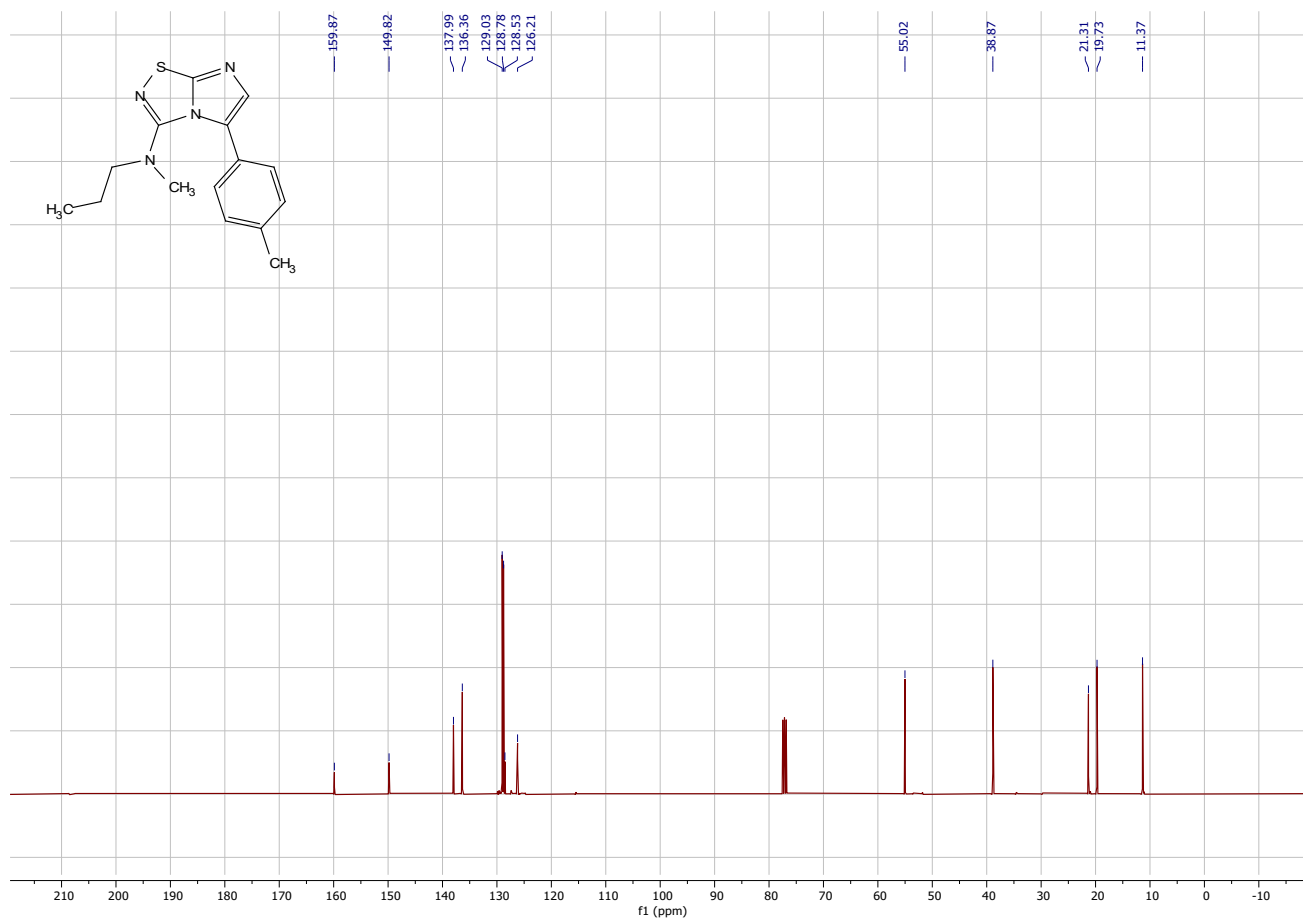


4-[5-(3-thienyl)imidazo[1,2-d][1,2,4]thiadiazol-3-yl]morpholine (36)

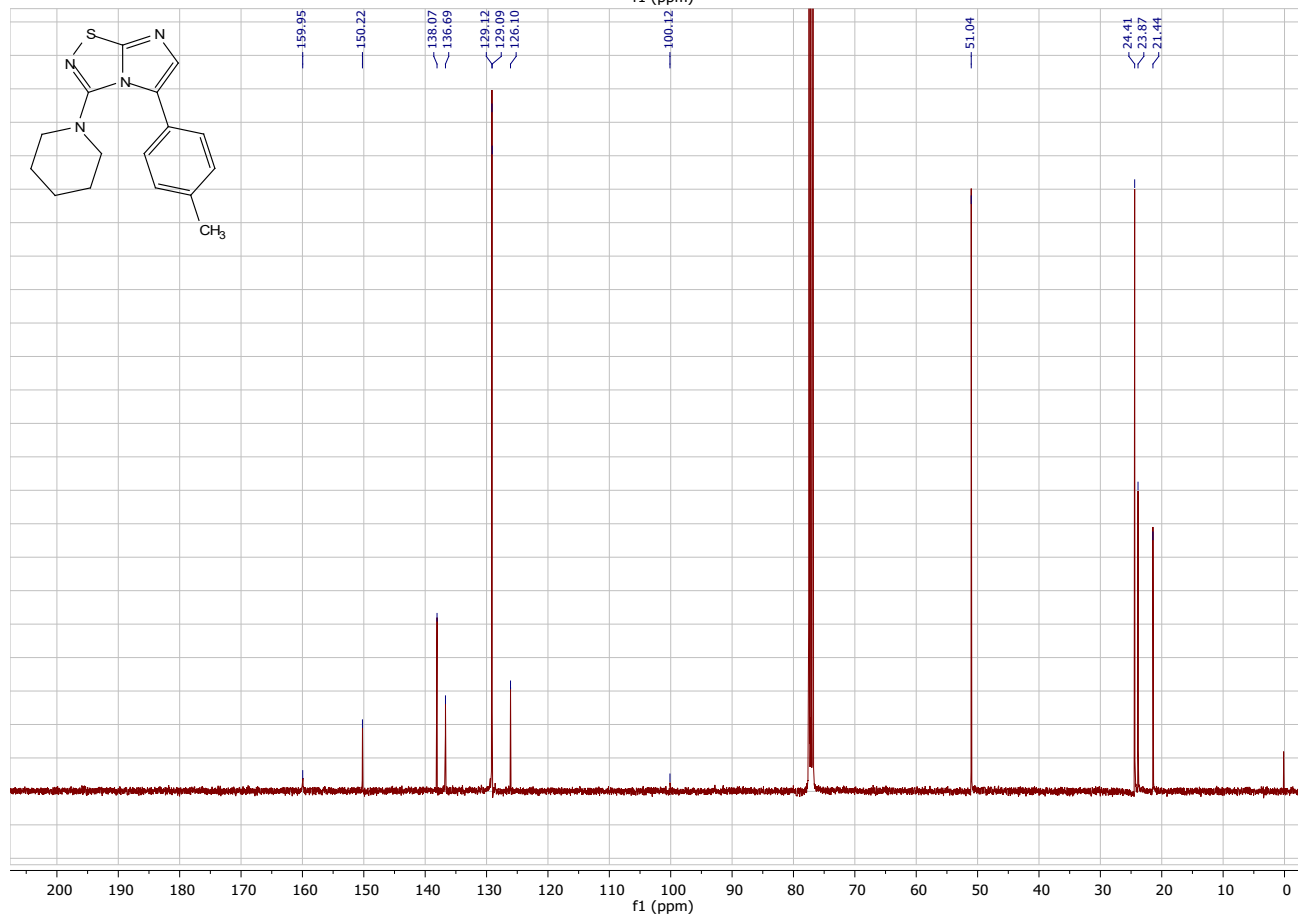
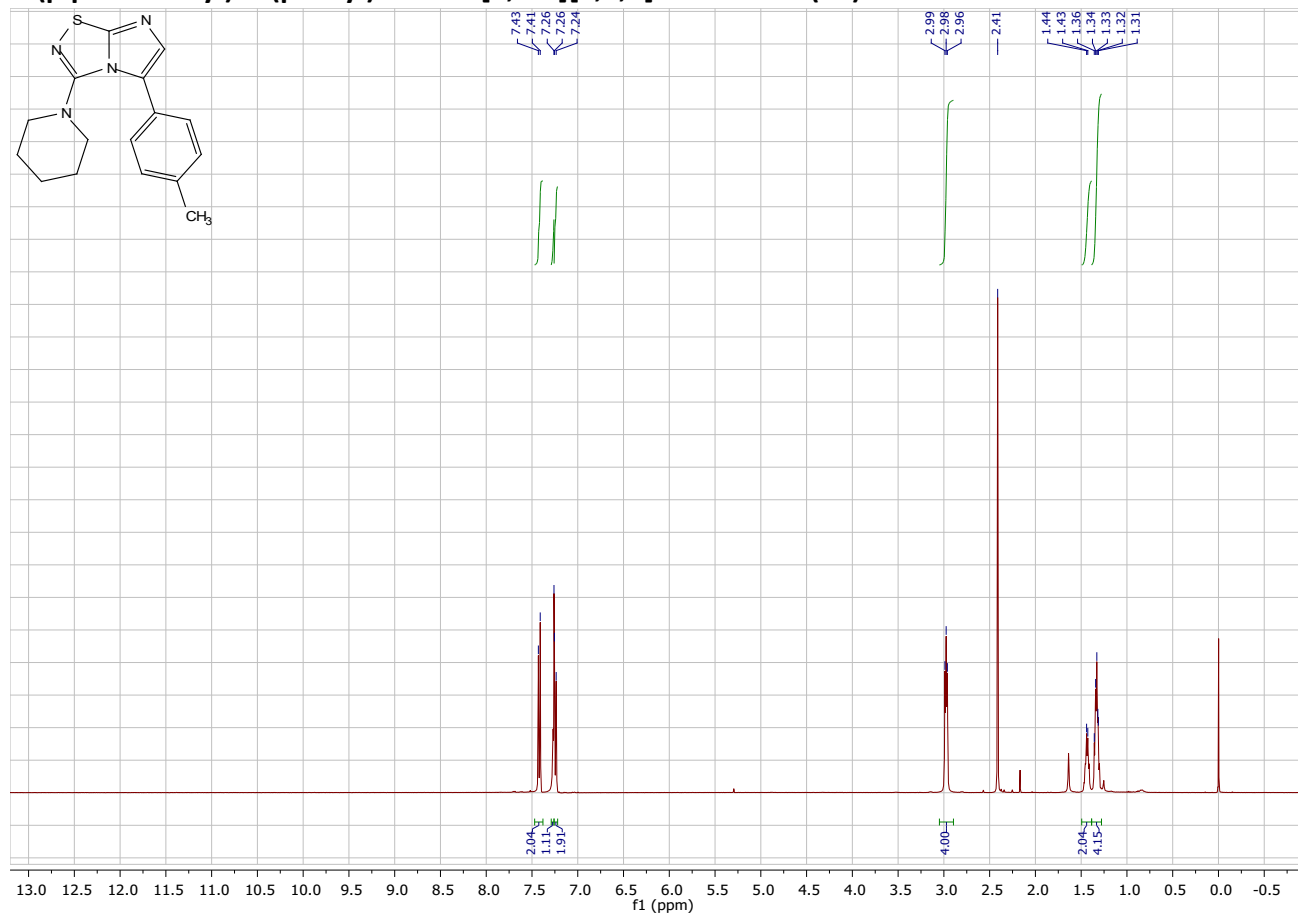


***N*-methyl-*N*-propyl-5-(*p*-tolyl)imidazo[1,2-*d*][1,2,4]thiadiazol-3-amine (40)**

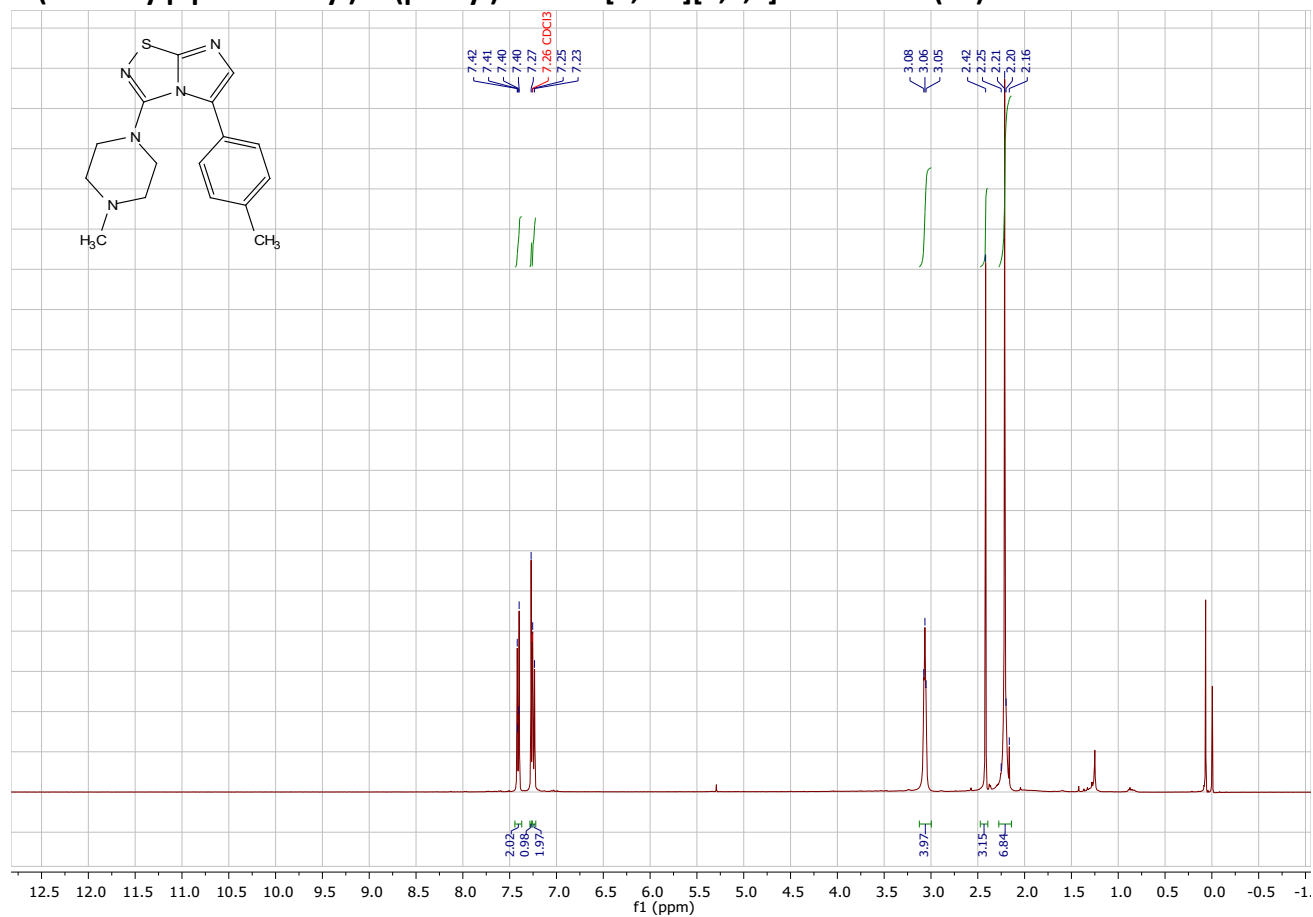


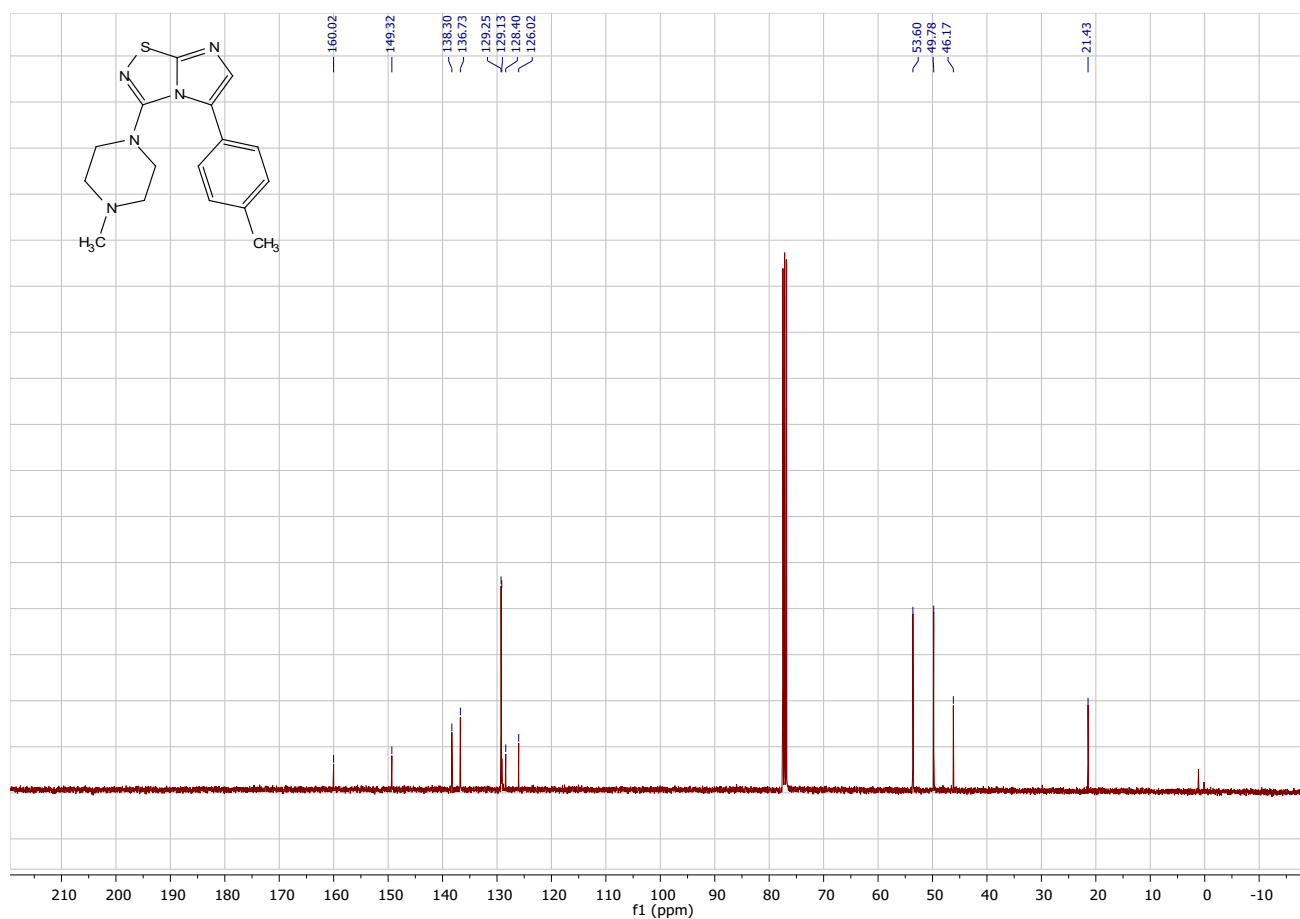


3-(piperidin-1-yl)-5-(p-tolyl)imidazo[1,2-d][1,2,4]thiadiazole (43)

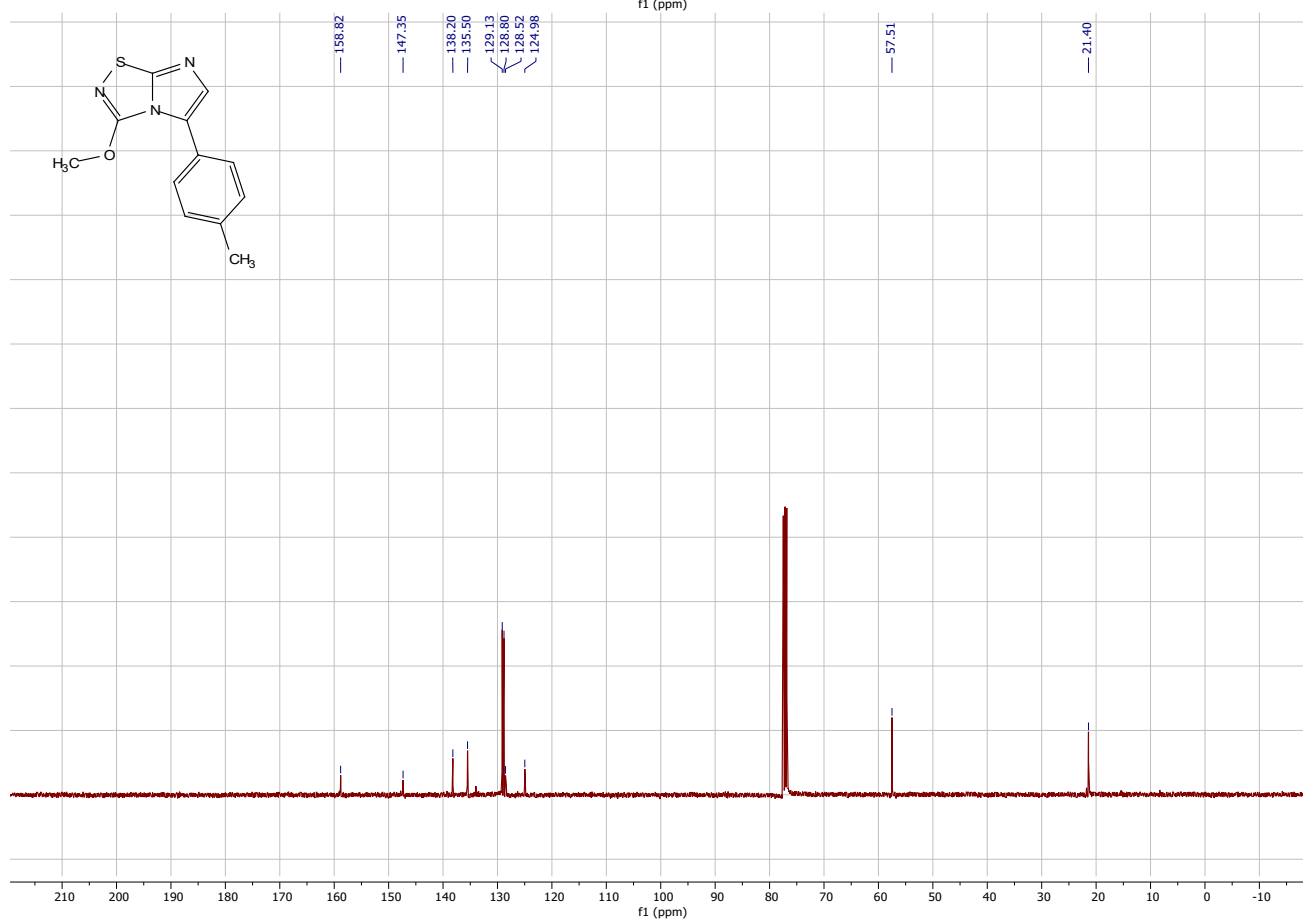
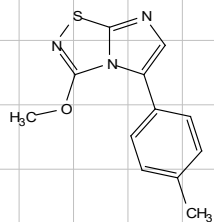
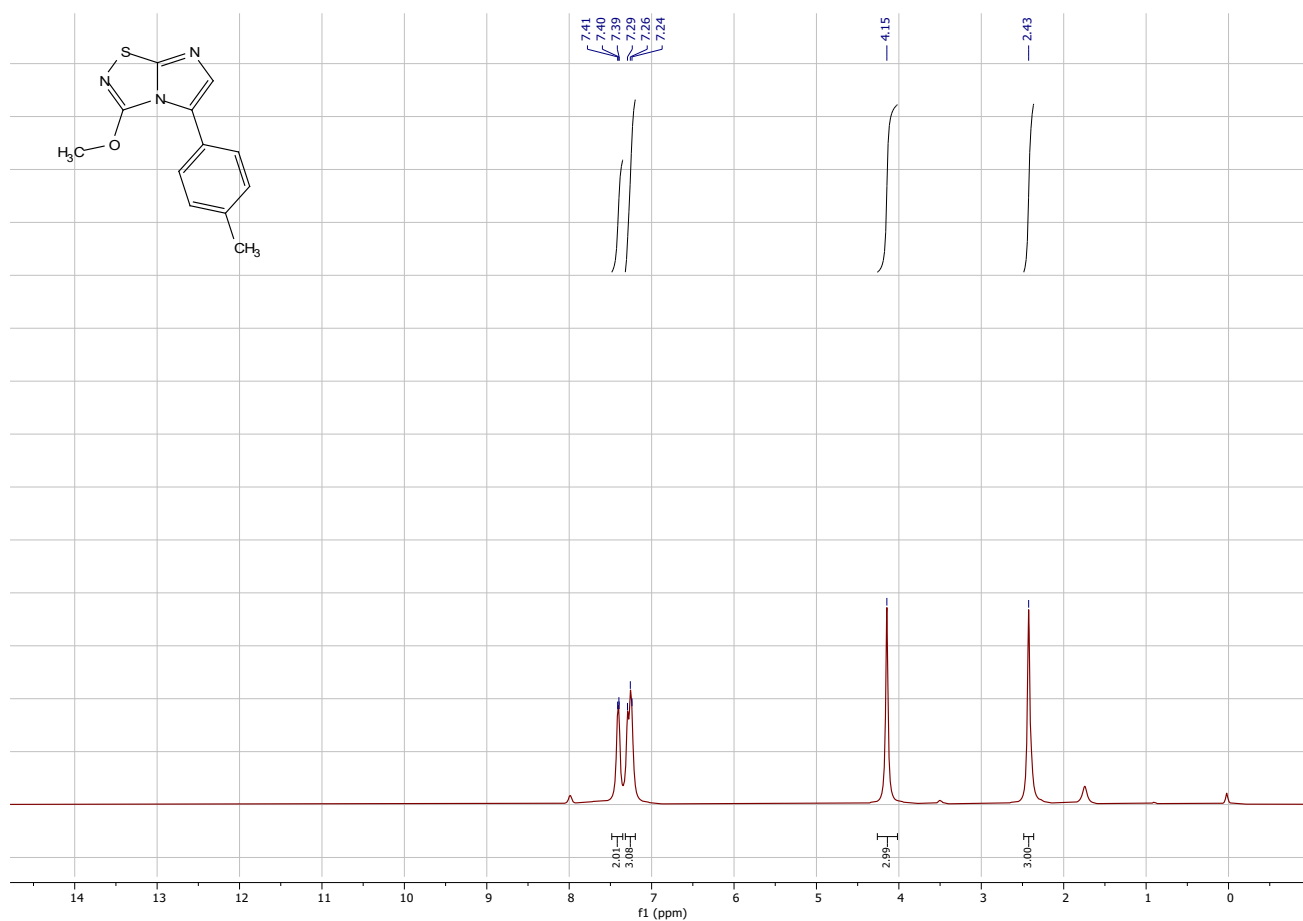
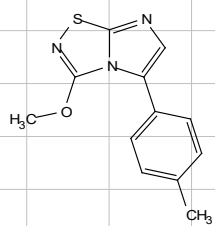


3-(4-methylpiperazin-1-yl)-5-(p-tolyl)imidazo[1,2-d][1,2,4]thiadiazole (44)





3-Methoxy-5-(*p*-tolyl)imidazo[1,2-*d*][1,2,4]thiadiazole (46)



3-Ethoxy-5-(*p*-tolyl)imidazo[1,2-*d*][1,2,4]thiadiazole (47)

