

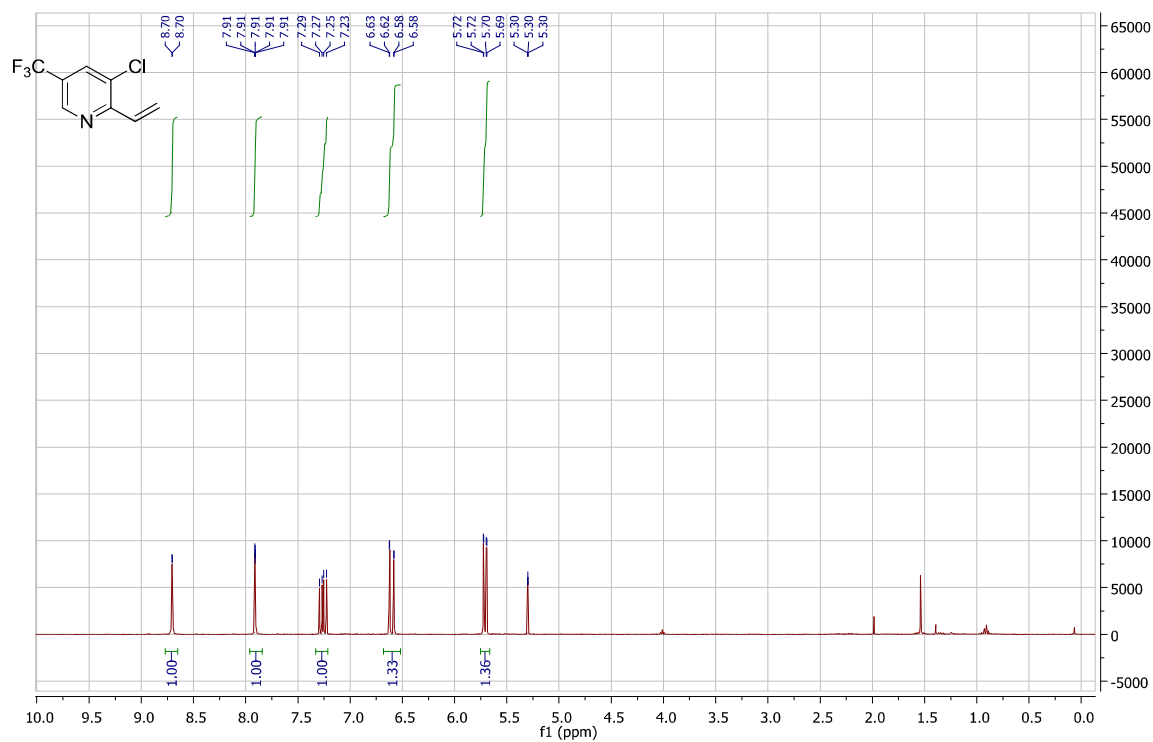
Multicomponent-Multicatalyst Reactions (MC)²R: Efficient Dibenzazepine Synthesis

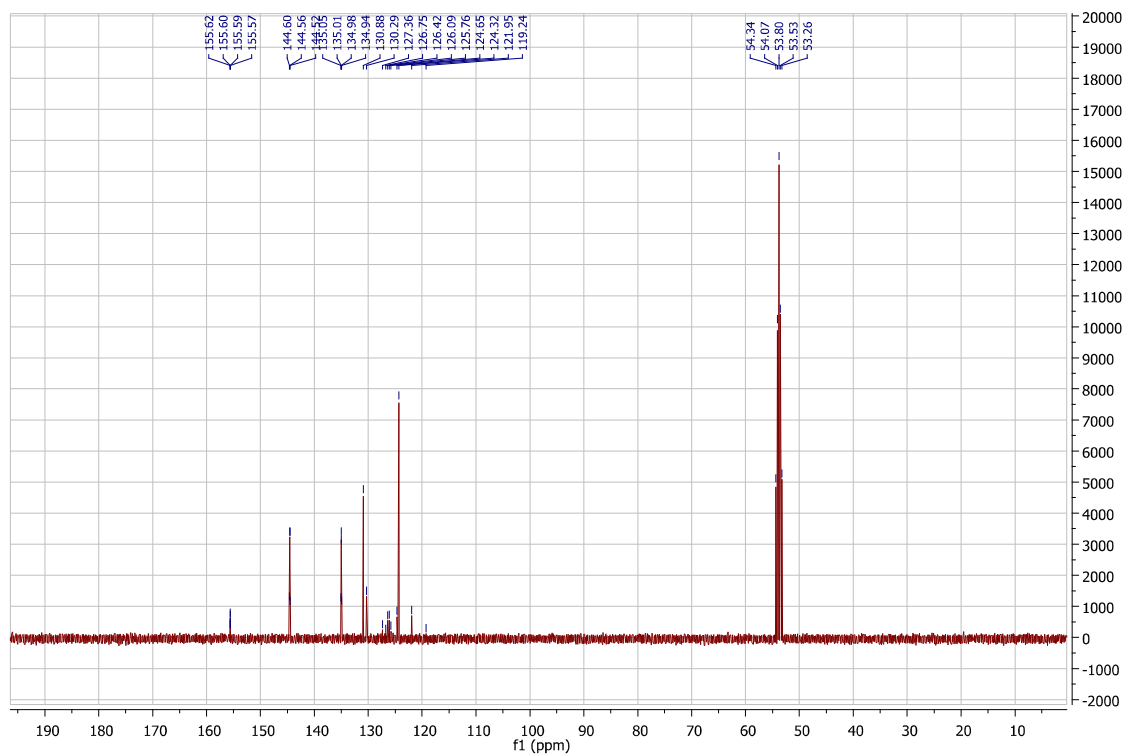
Jennifer Tsoung, Jane Panteleev, Matthias Tesch, Mark Lautens

Supporting information

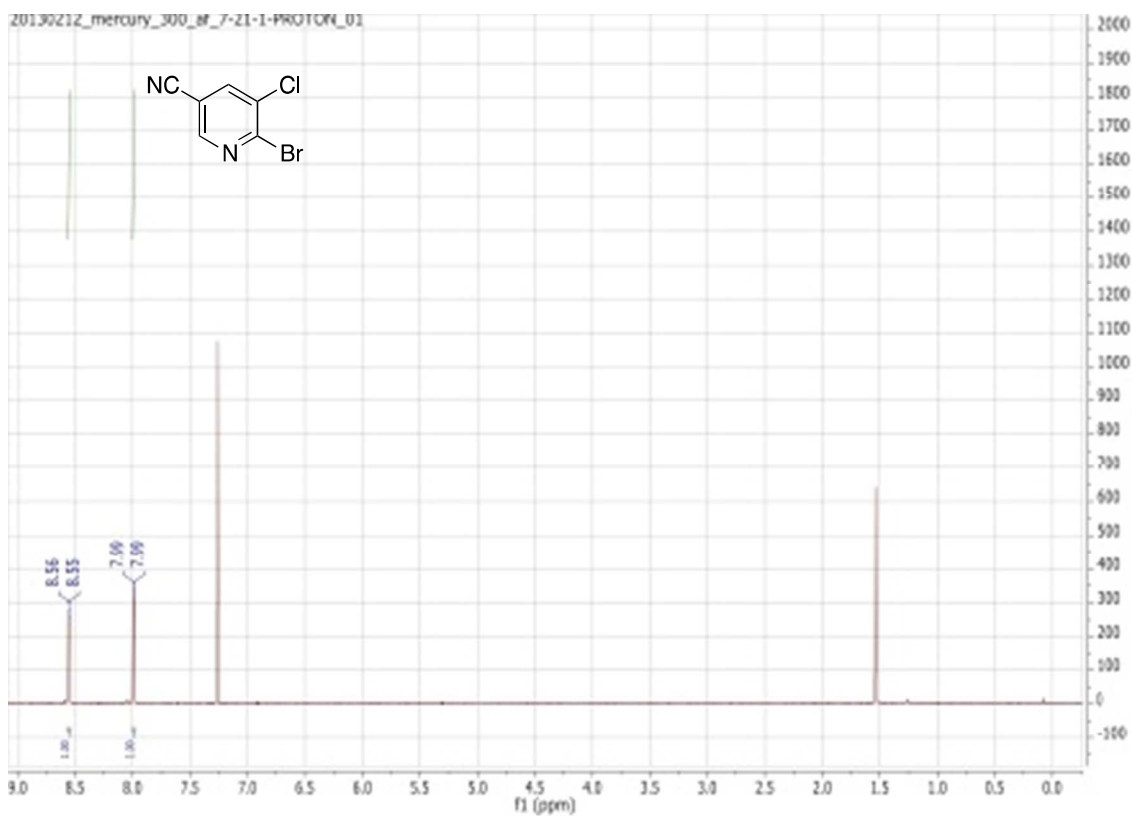
NMR Spectral Data

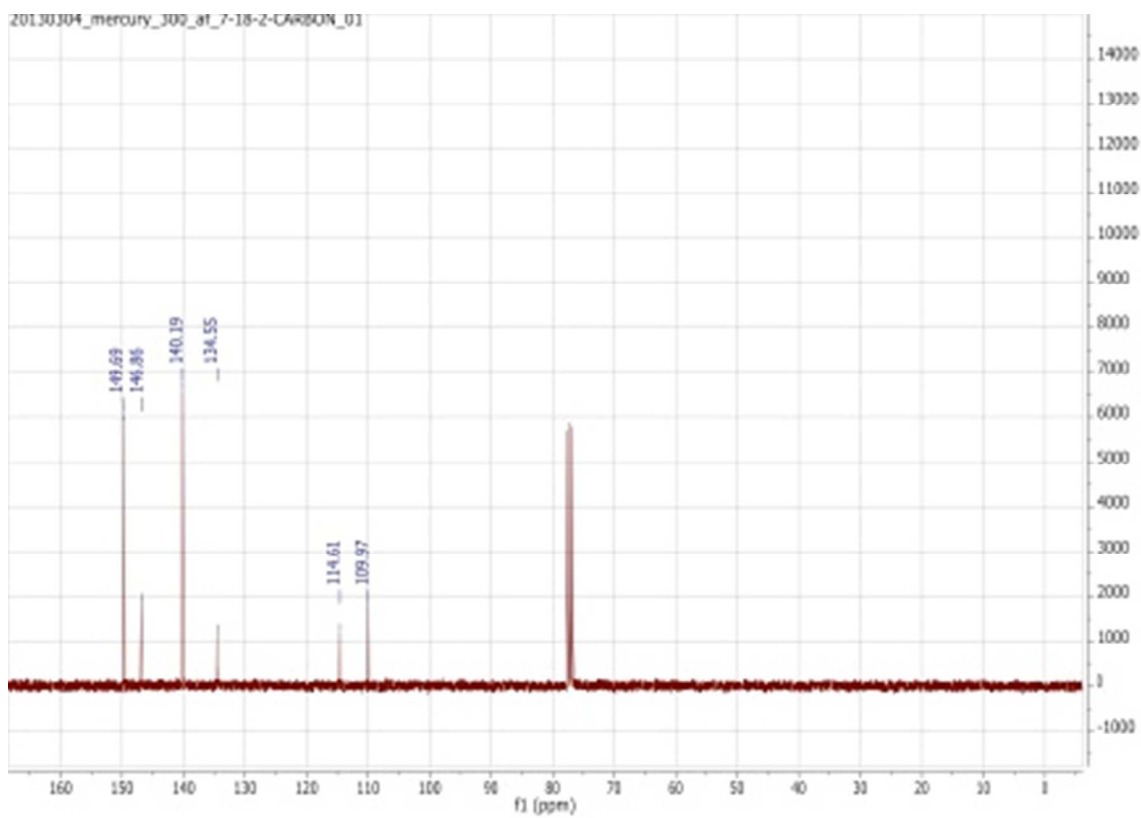
3-chloro-5-(trifluoromethyl)-2-vinylpyridine (1a)



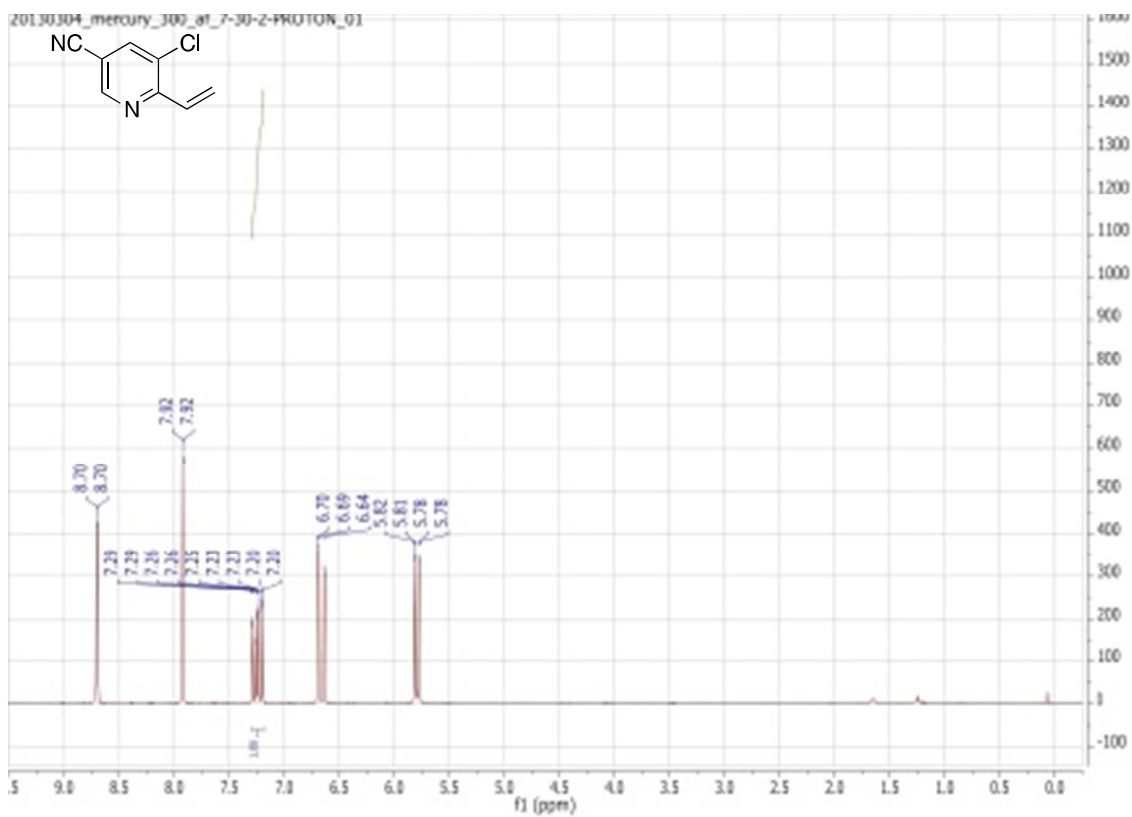


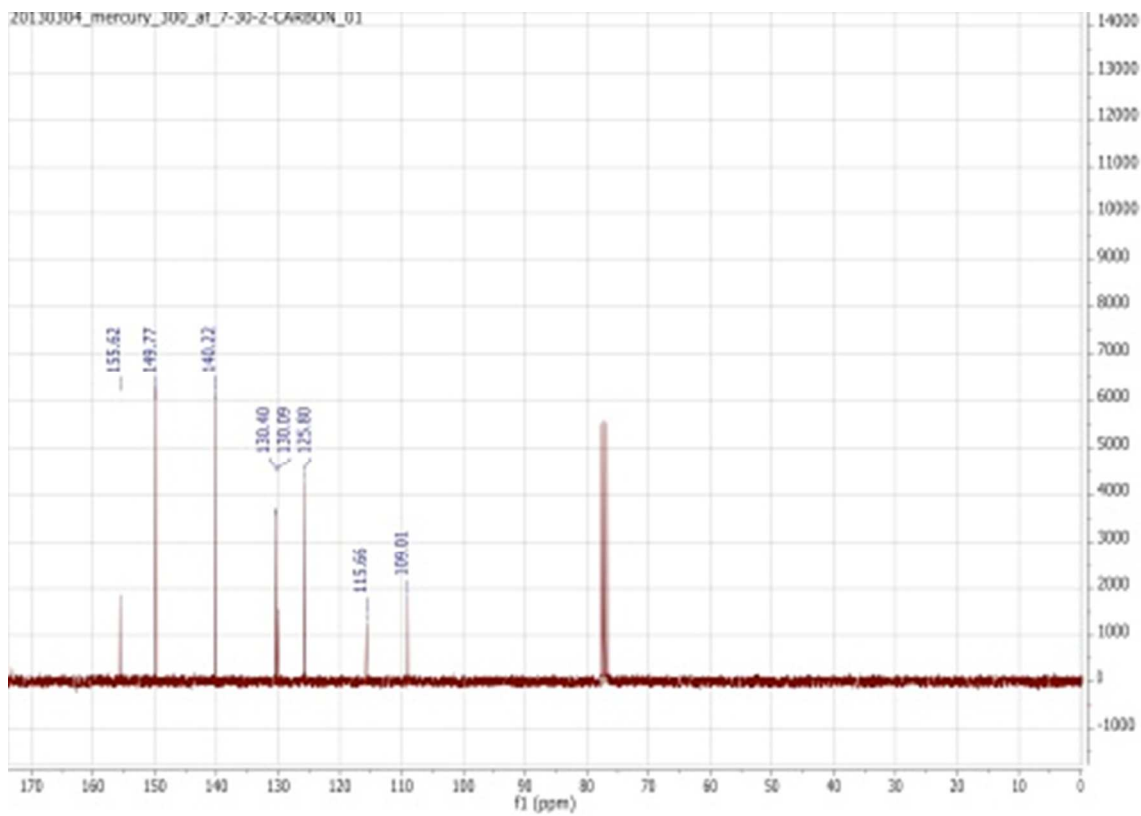
6-bromo-5-chloronicotinonitrile



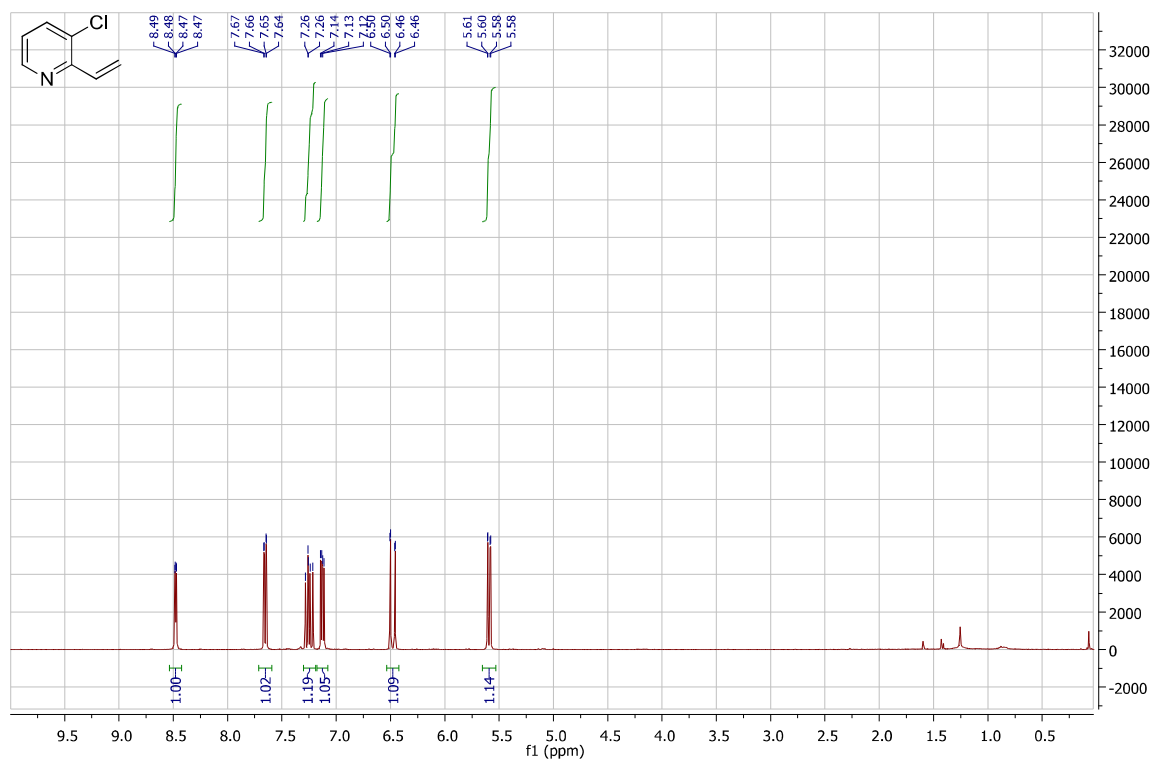


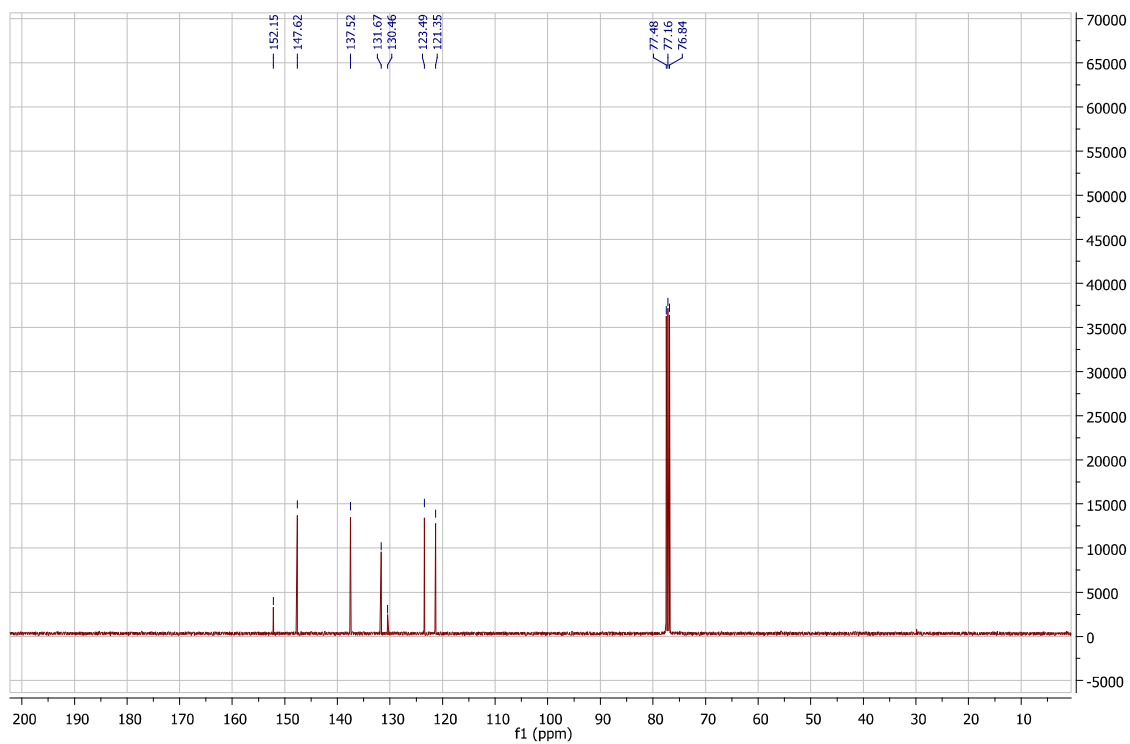
5-chloro-6-vinylnicotinonitrile (1b)



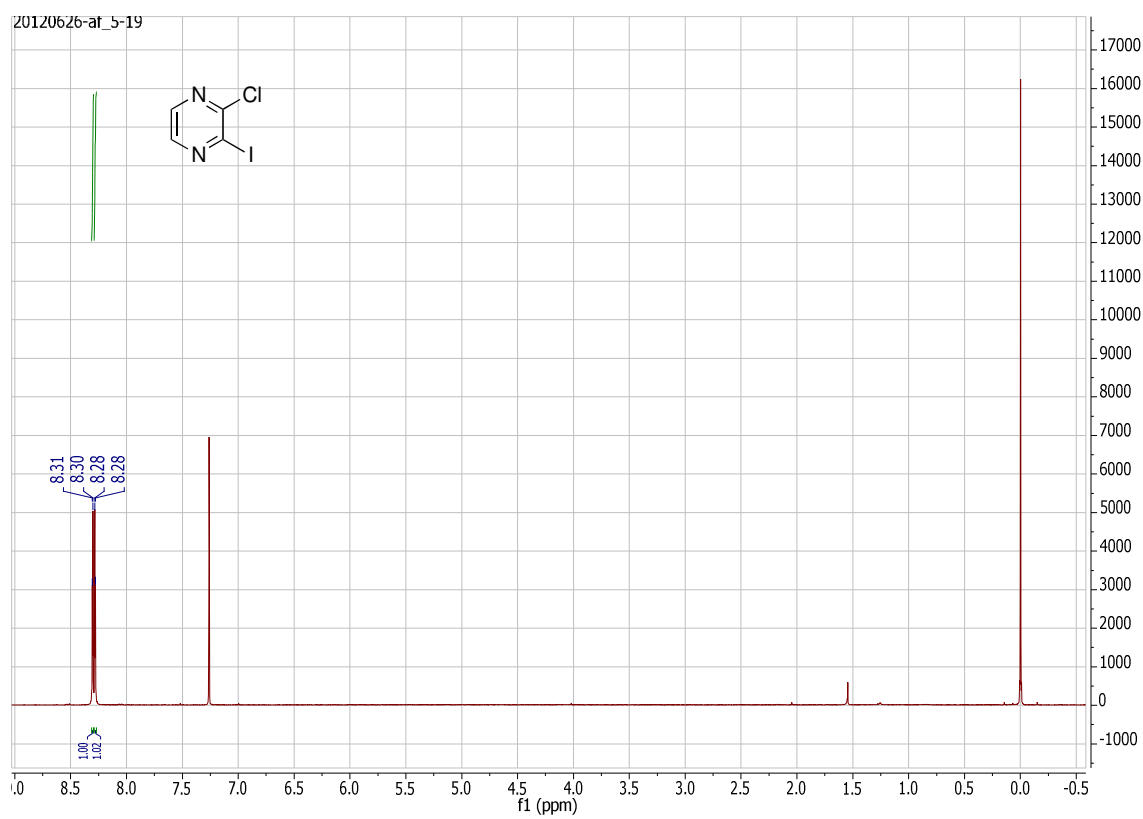


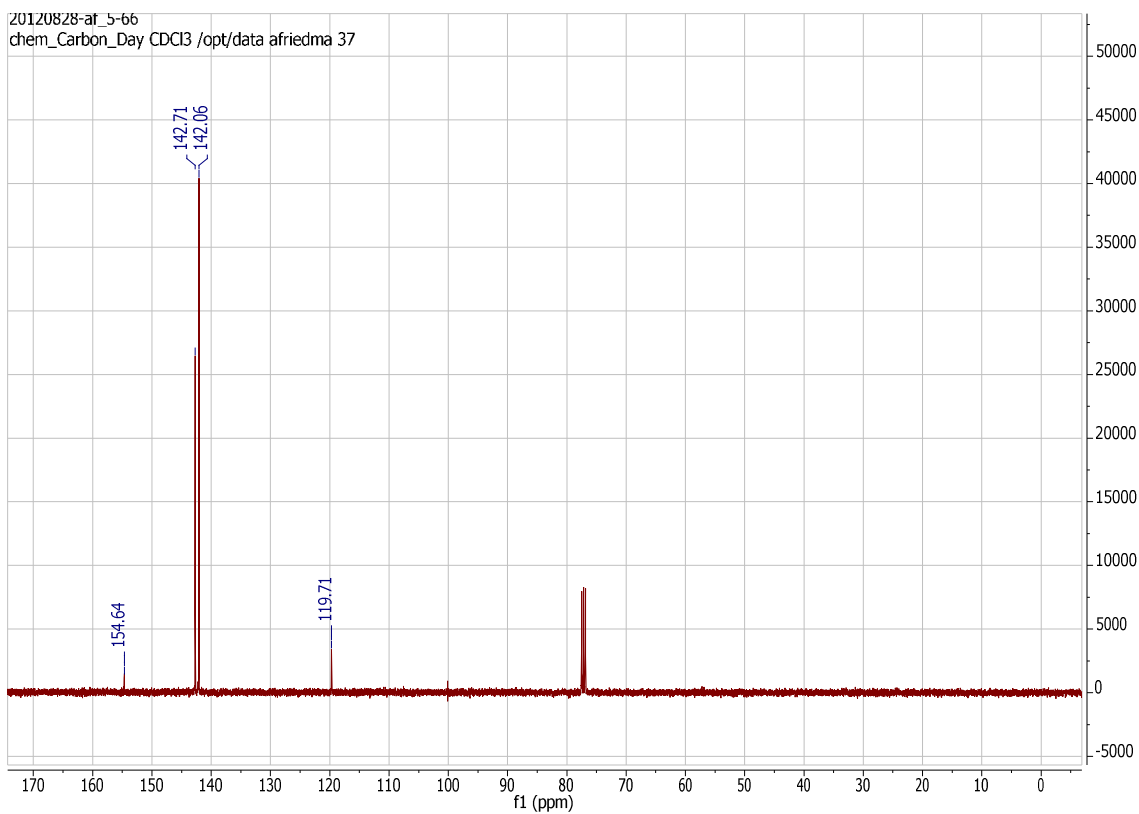
3-chloro-2-vinylpyridine (1c)



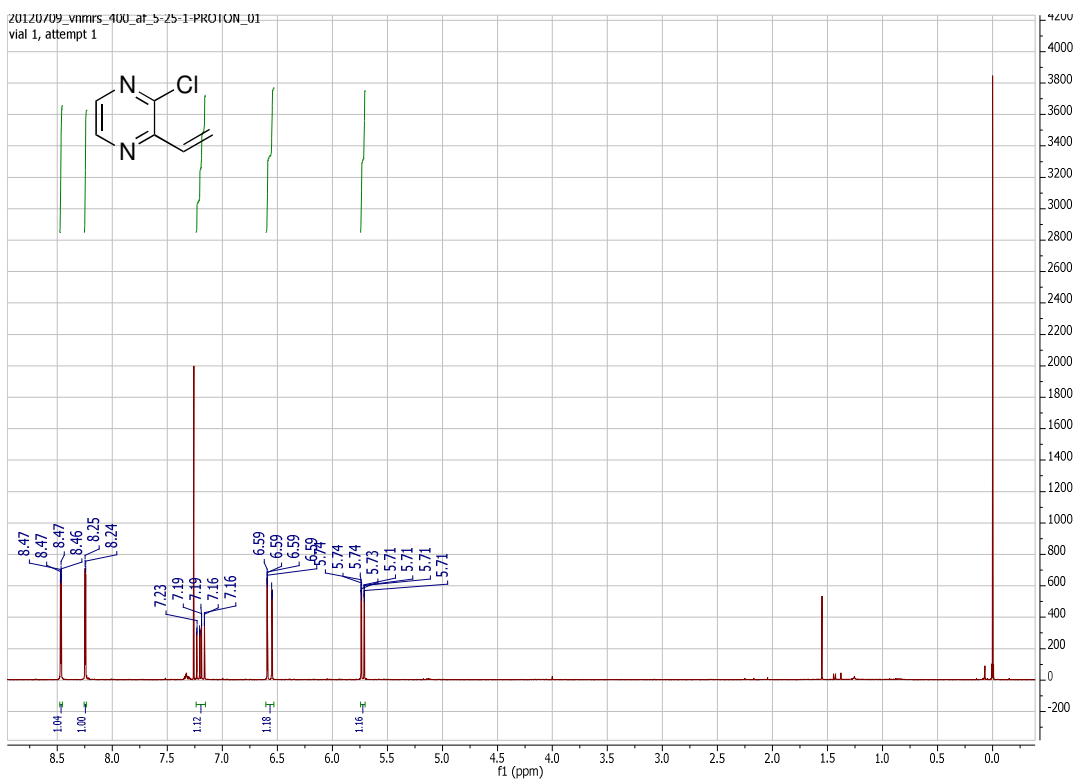


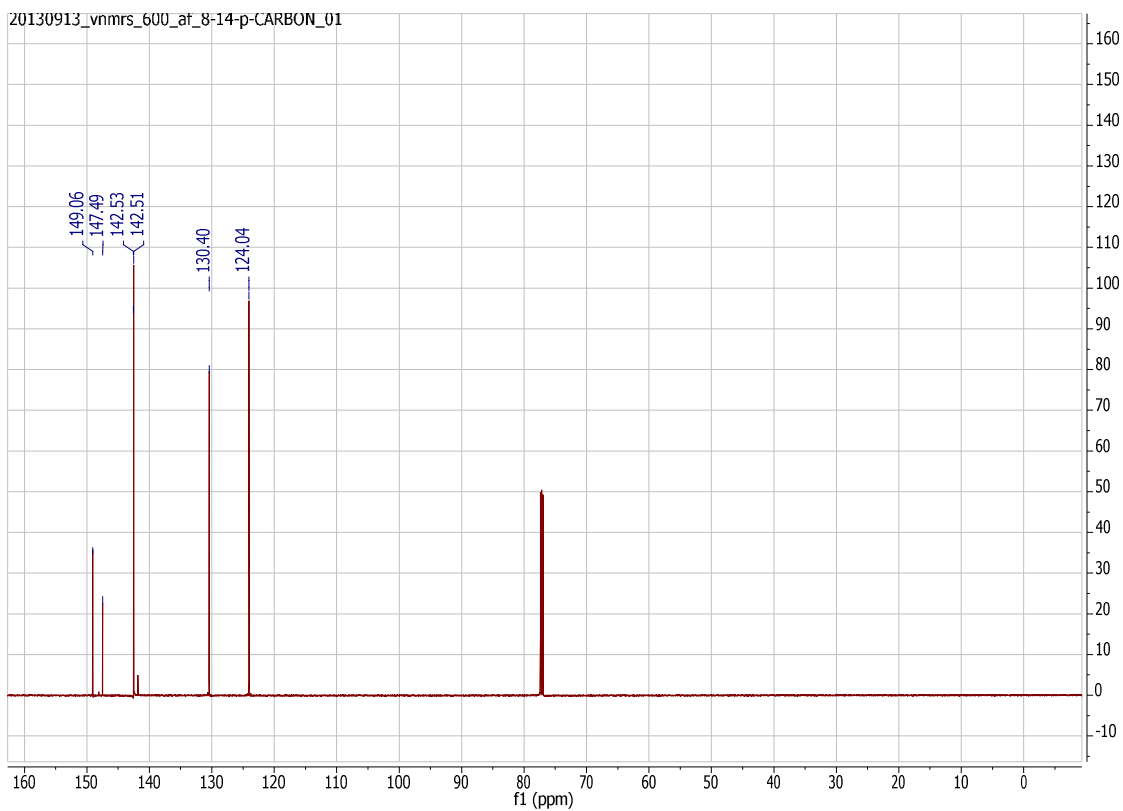
2-chloro-3-iodopyrazine



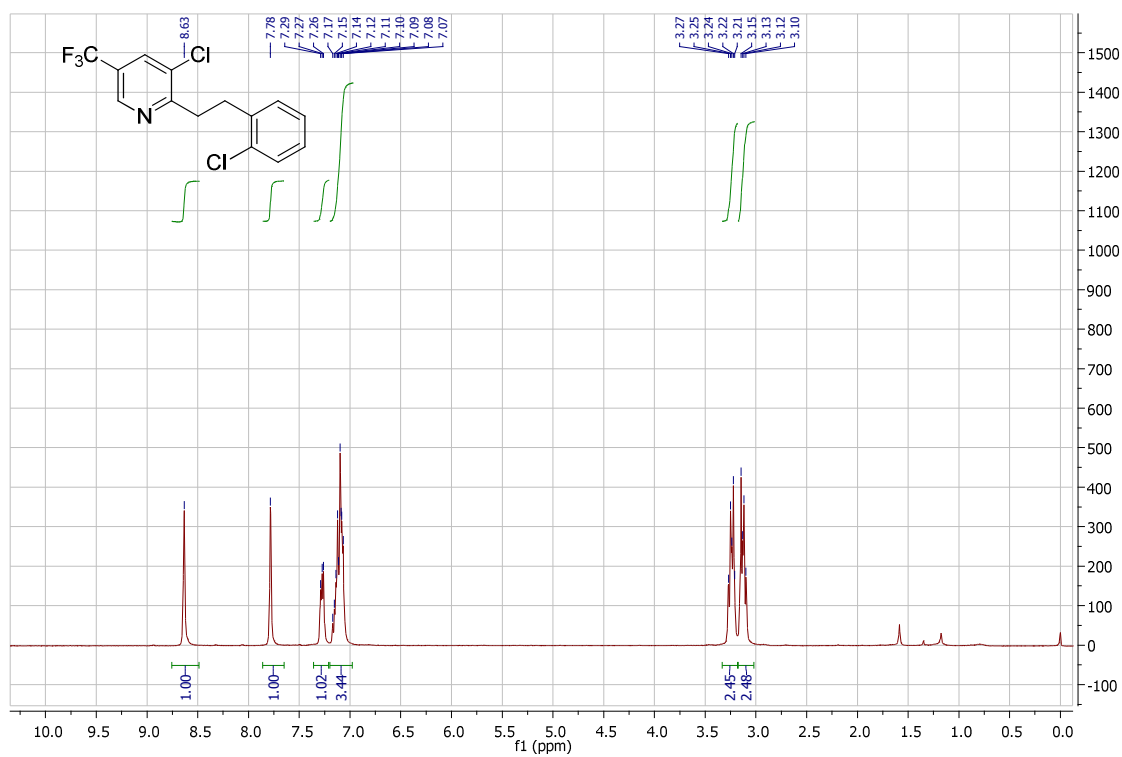


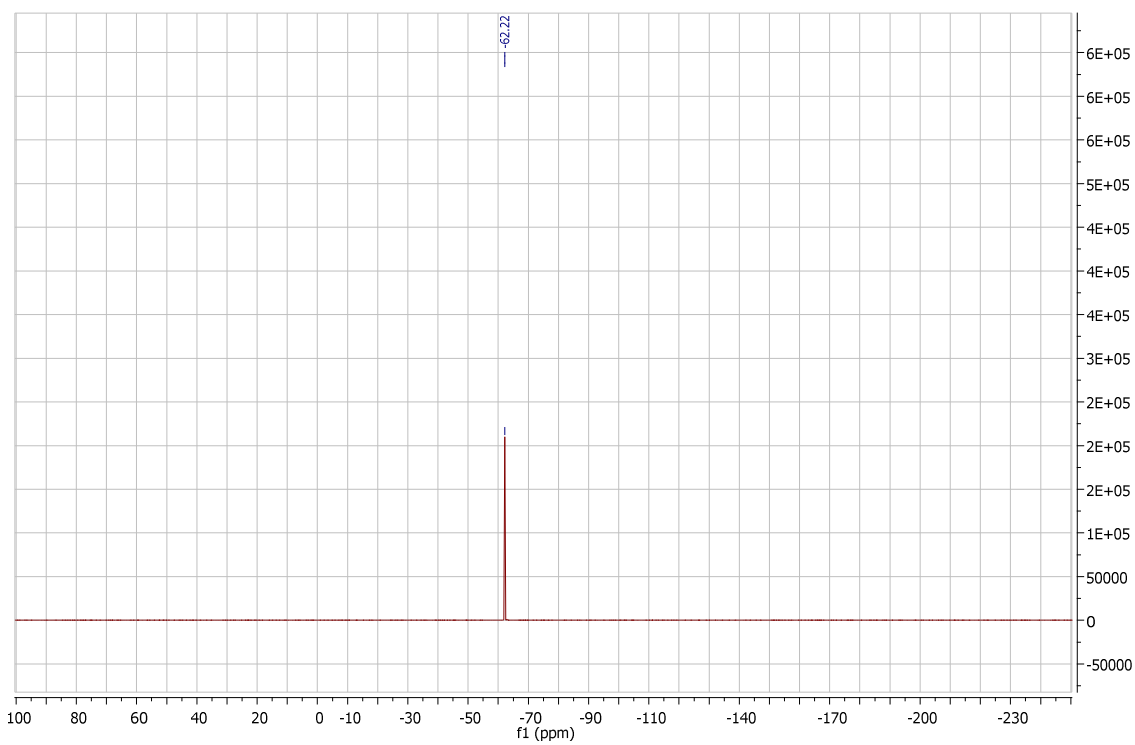
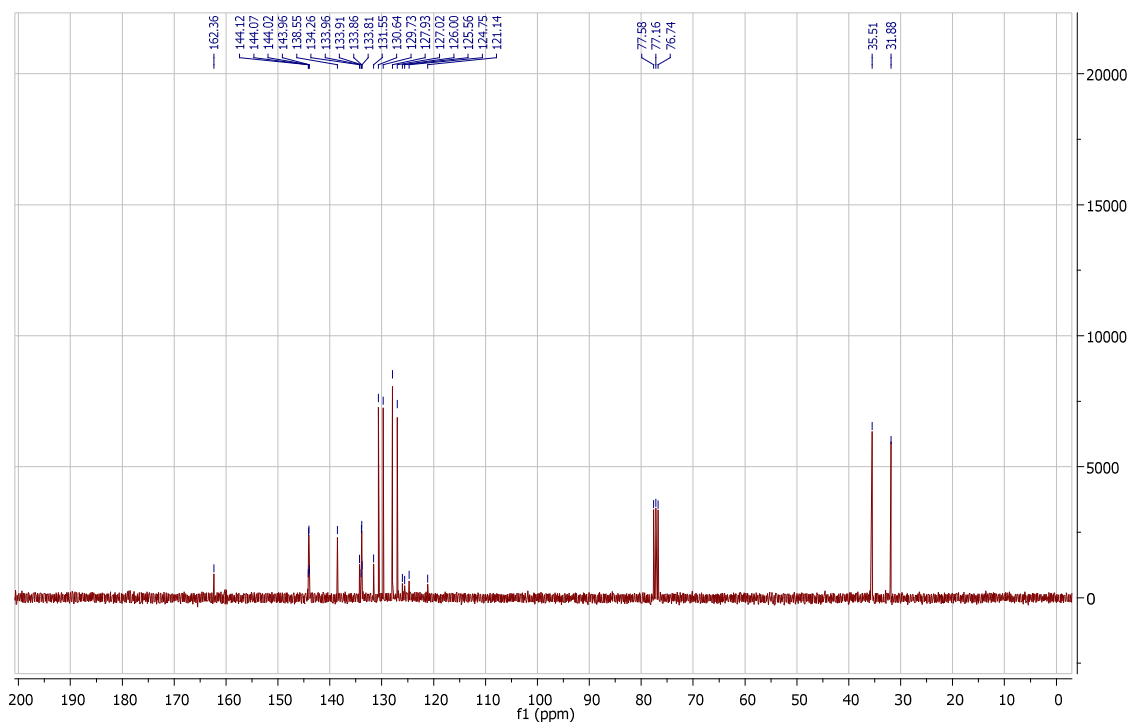
2-Chloro-3-vinylpyrazine (1d)



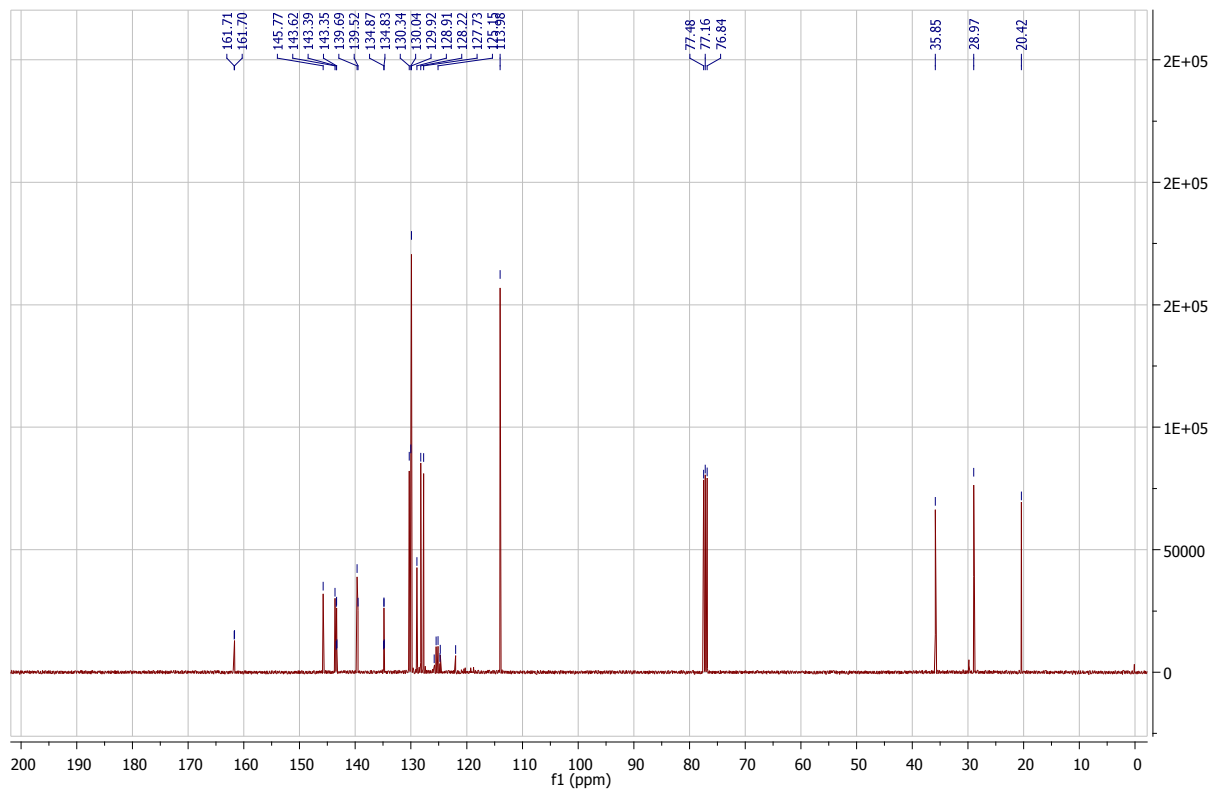
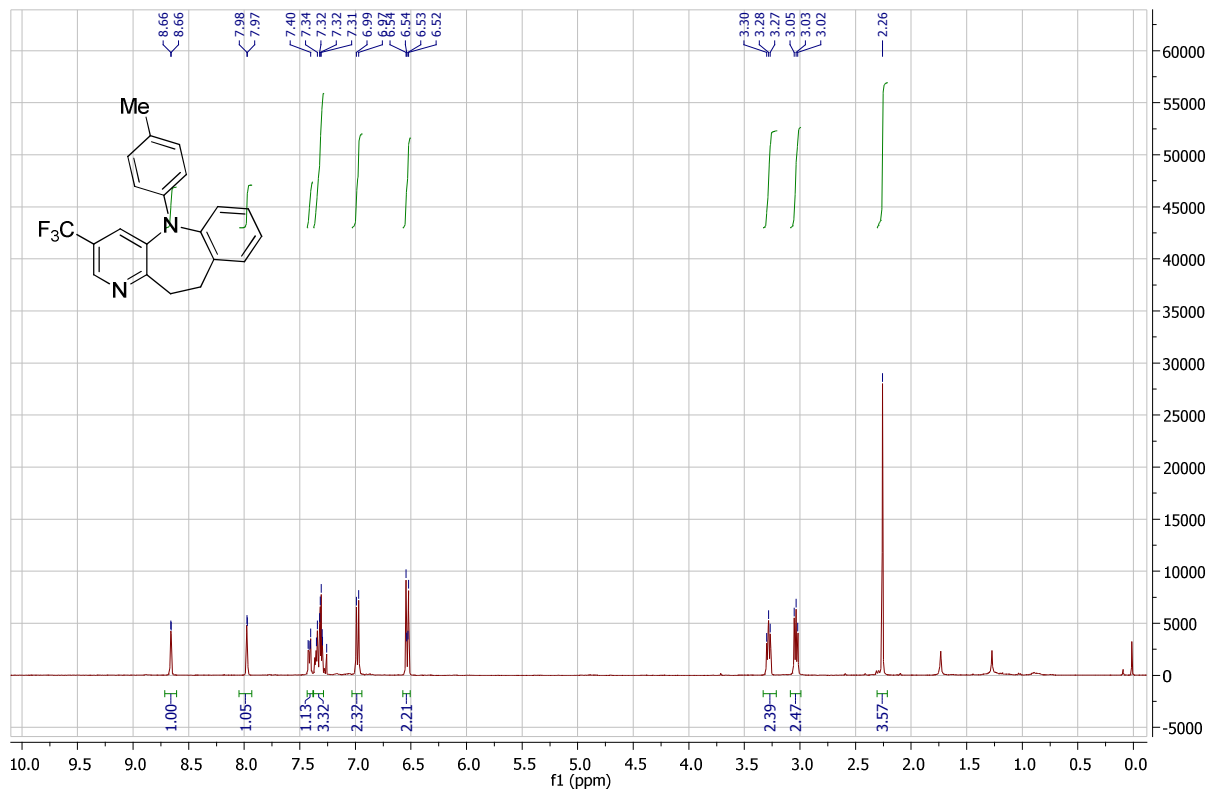


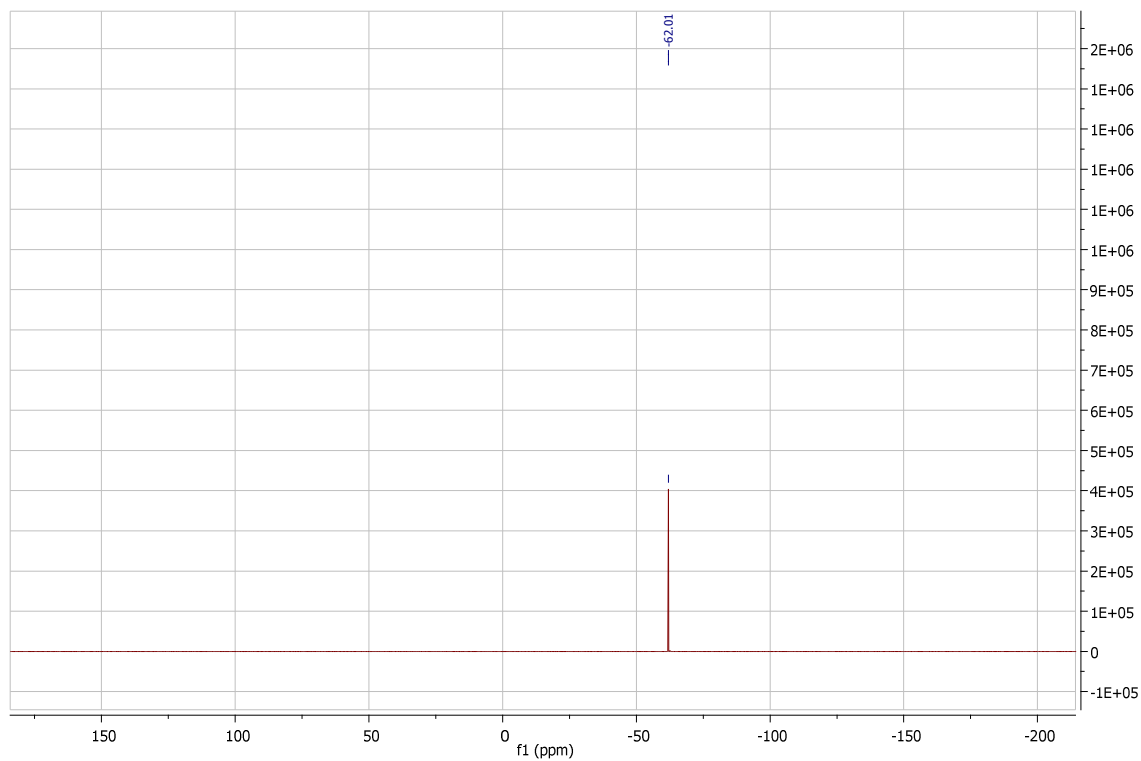
3-Chloro-2-(2-chlorophenethyl)-5-(trifluoromethyl)pyridine (3a)



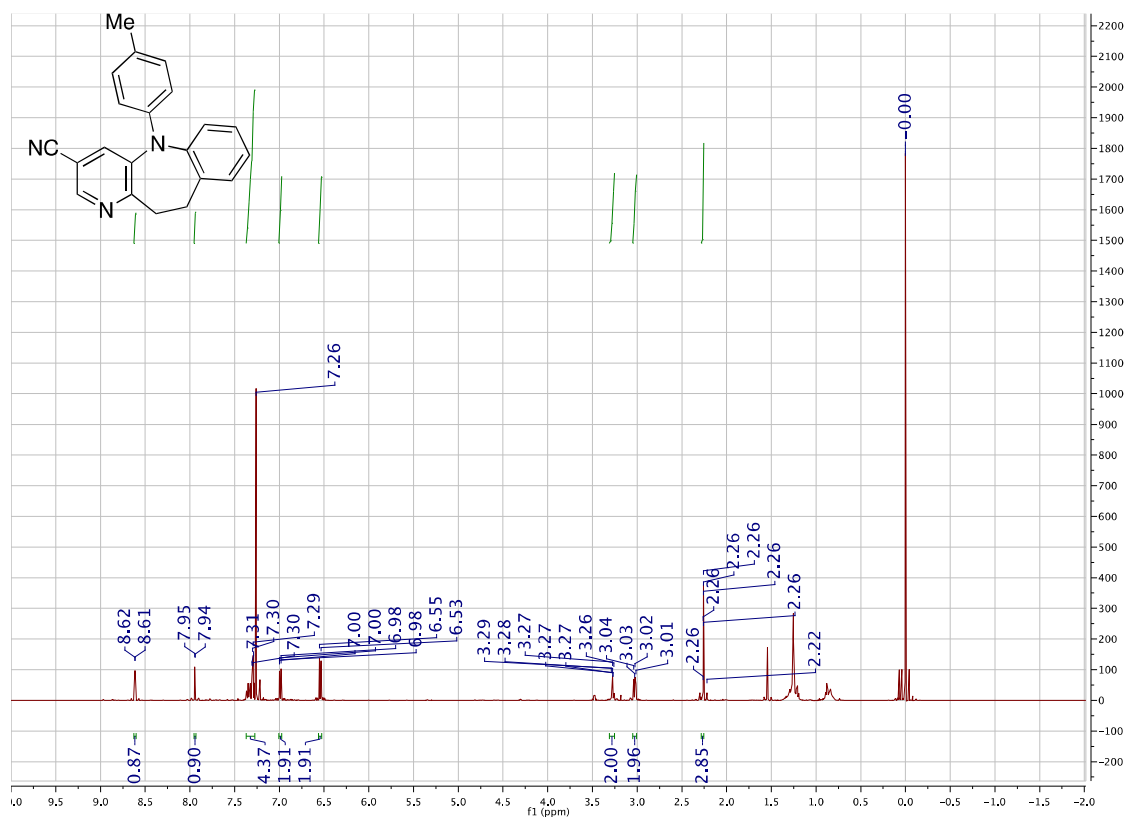


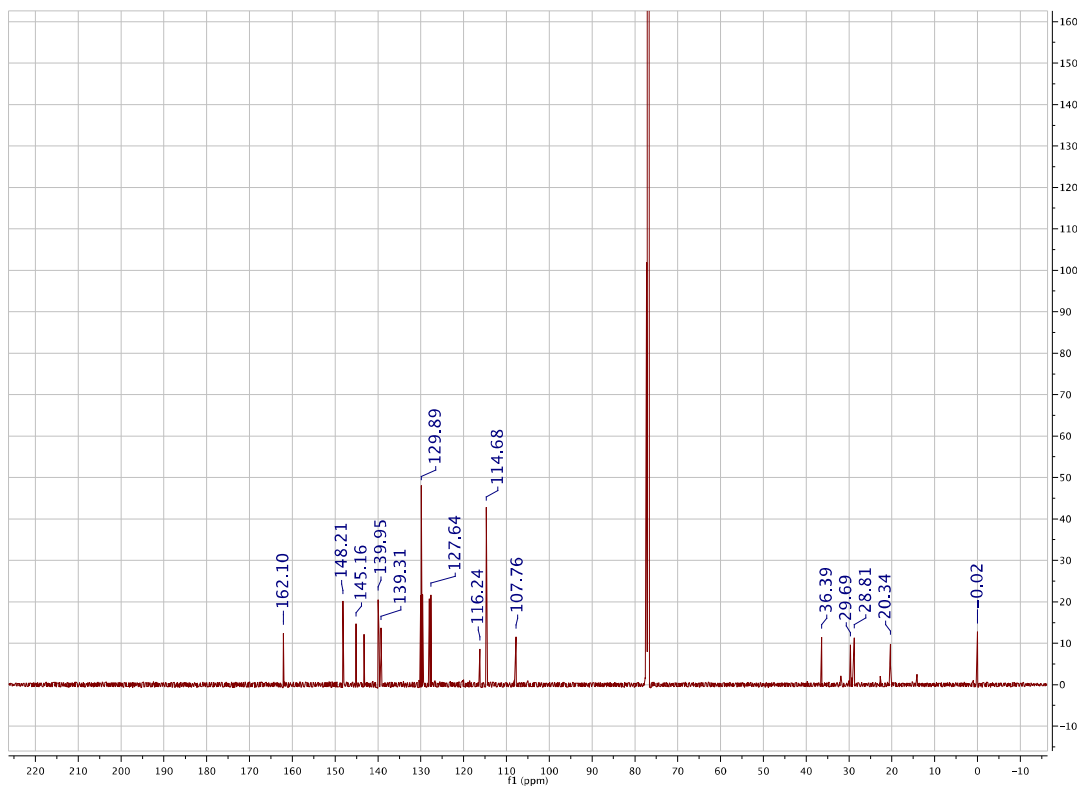
5-(p-tolyl)-3-(trifluoromethyl)-10,11-dihydro-5H-benzo[b]pyrido[2,3-f]azepine (4a)



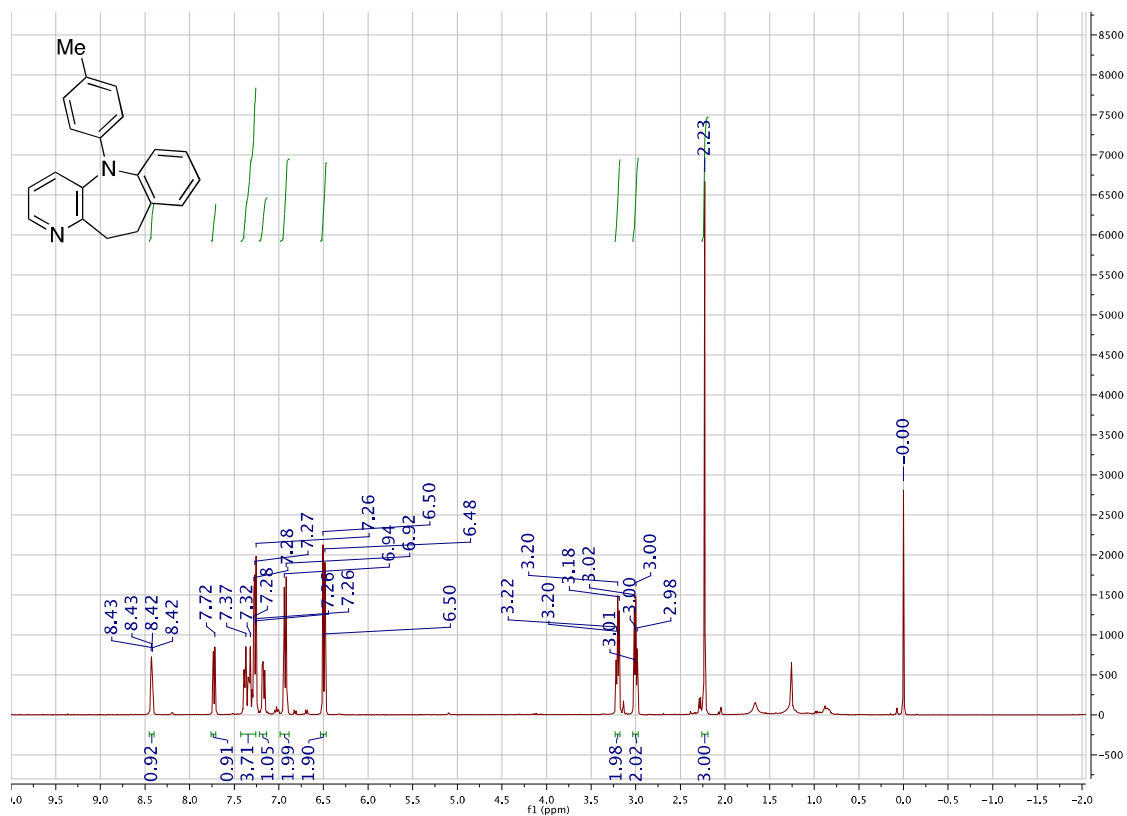


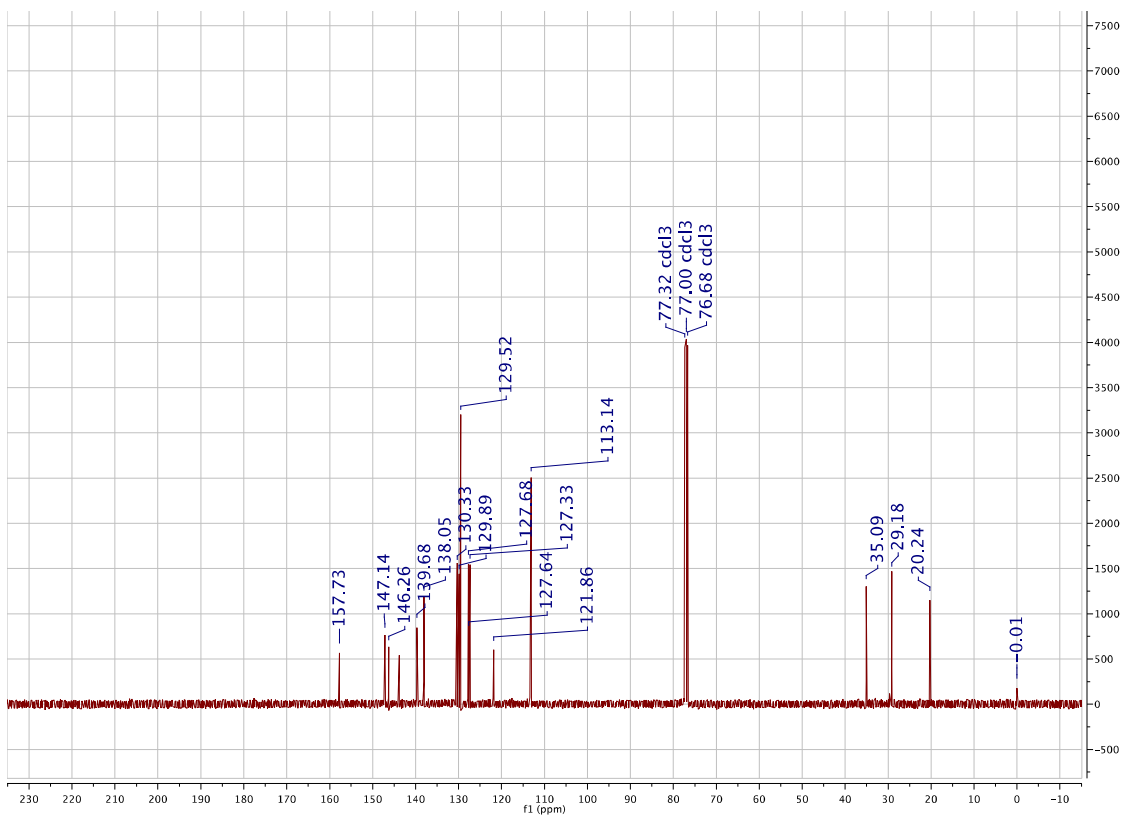
5-(*p*-tolyl)-10,11-dihydro-5*H*-benzo[*b*]pyrido[2,3-*f*]azepine-3-carbonitrile (4b)



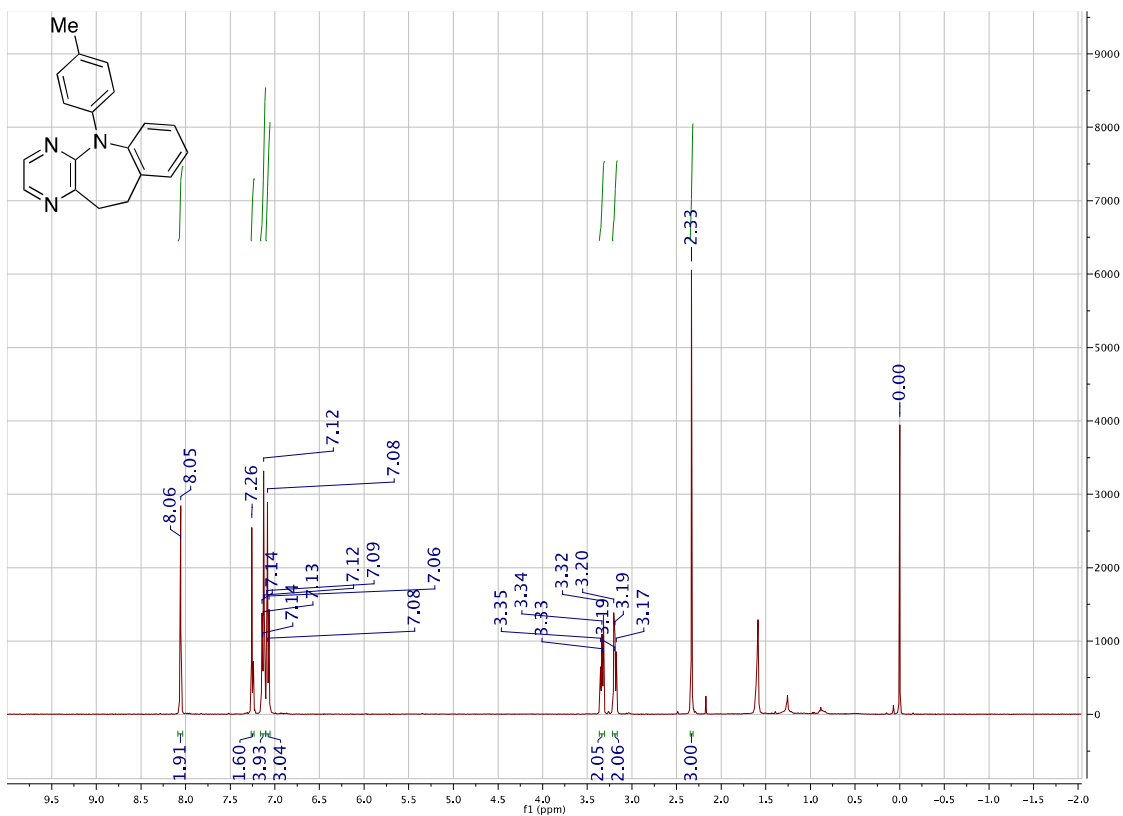


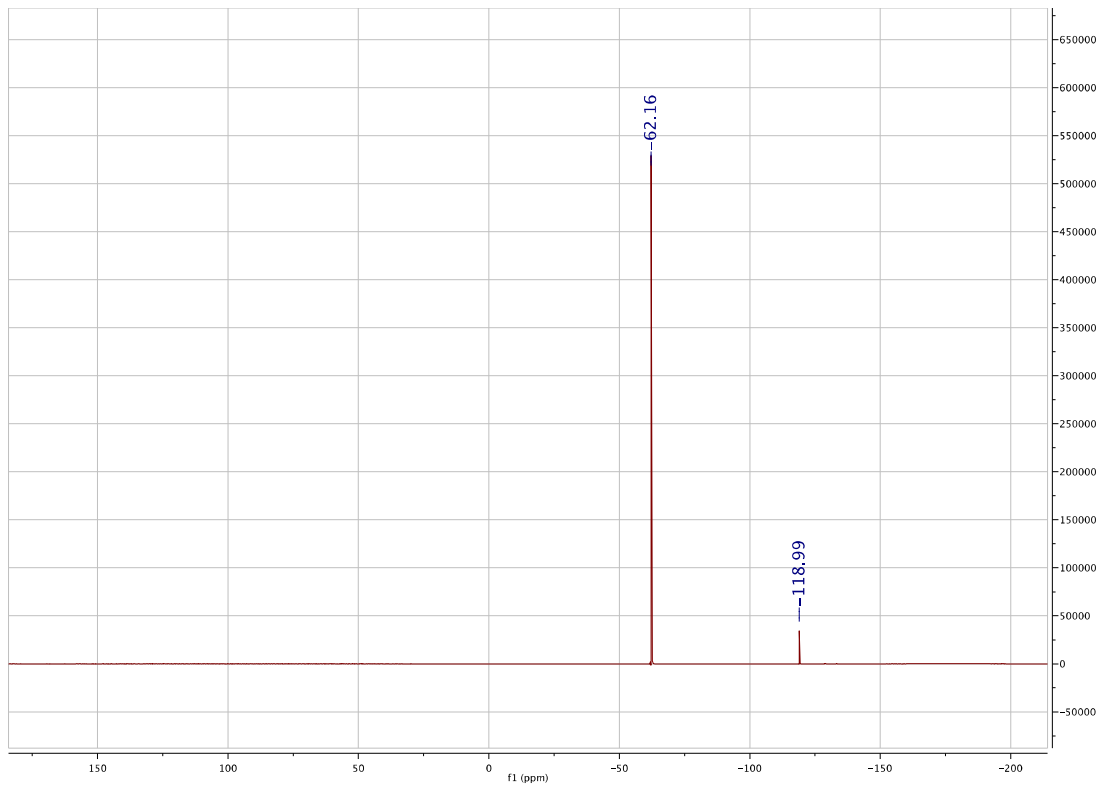
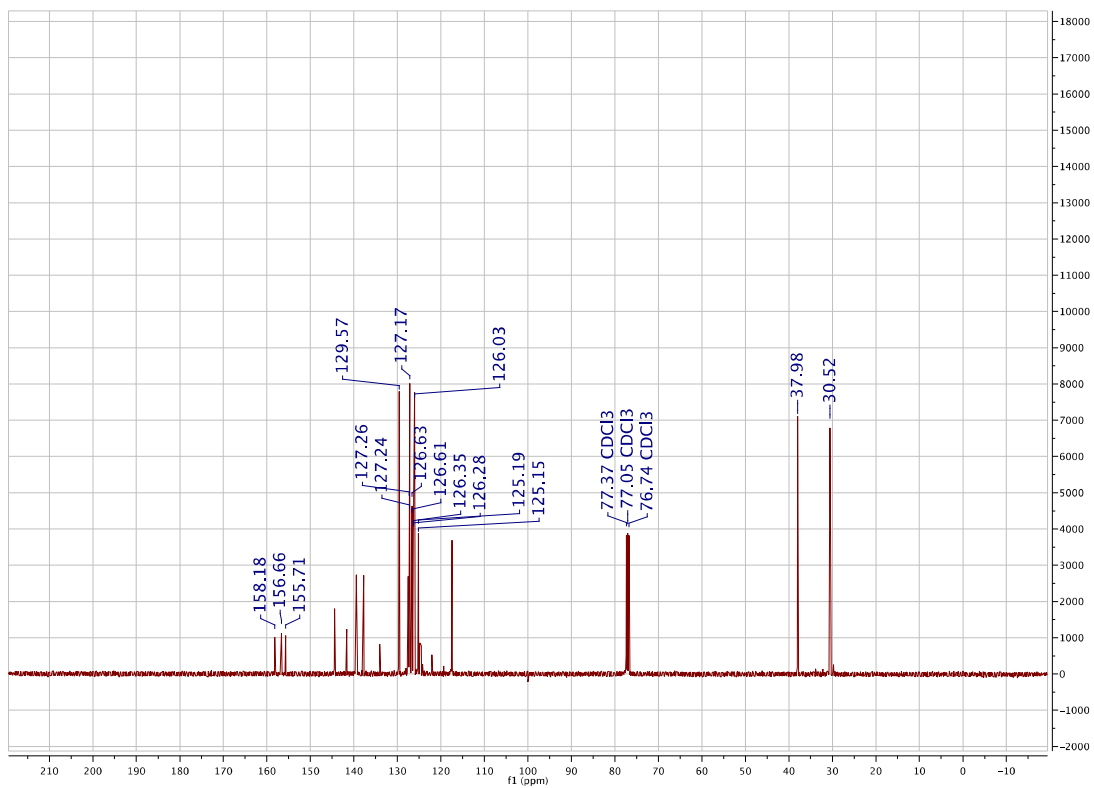
5-(*p*-tolyl)-10,11-dihydro-5*H*-benzo[*b*]pyrido[2,3-*f*]azepine (4c)



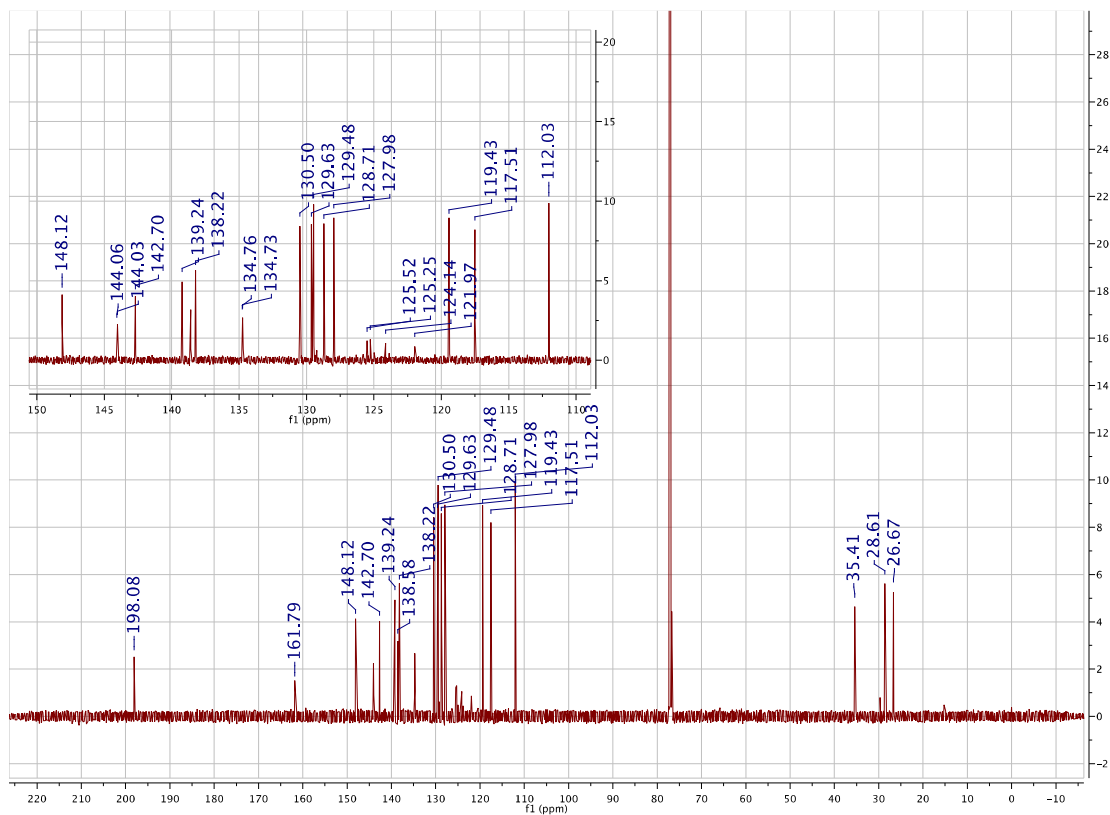
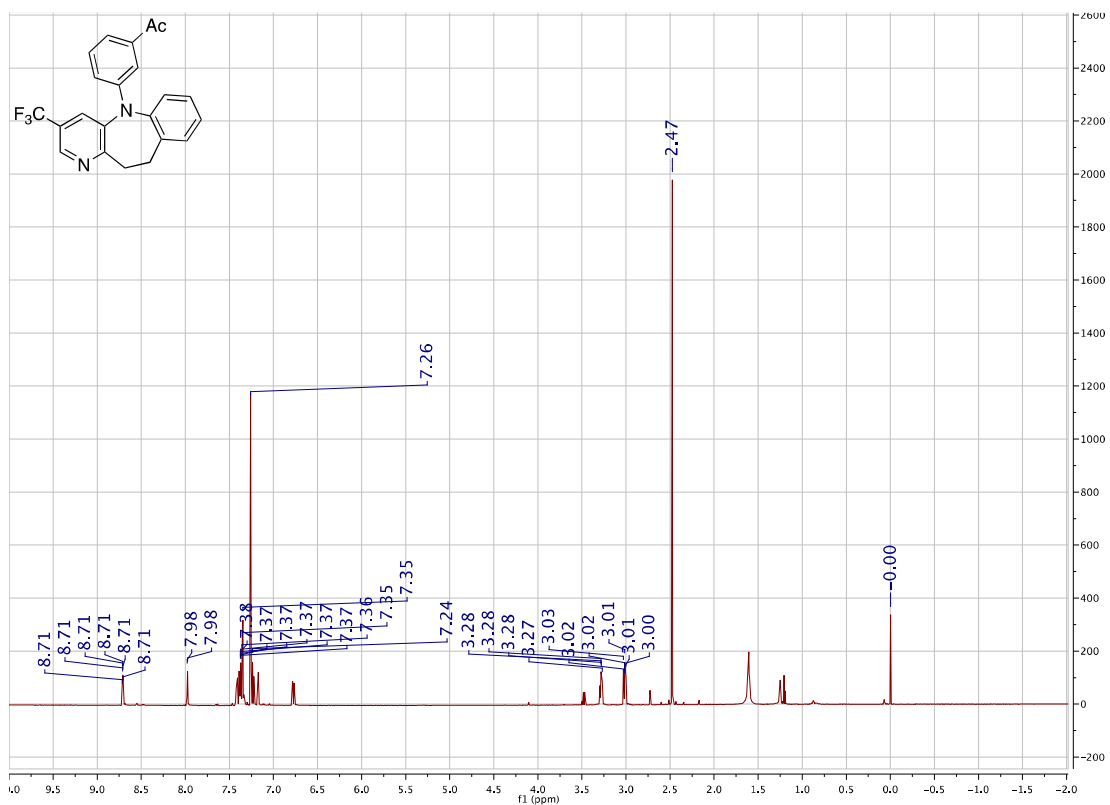


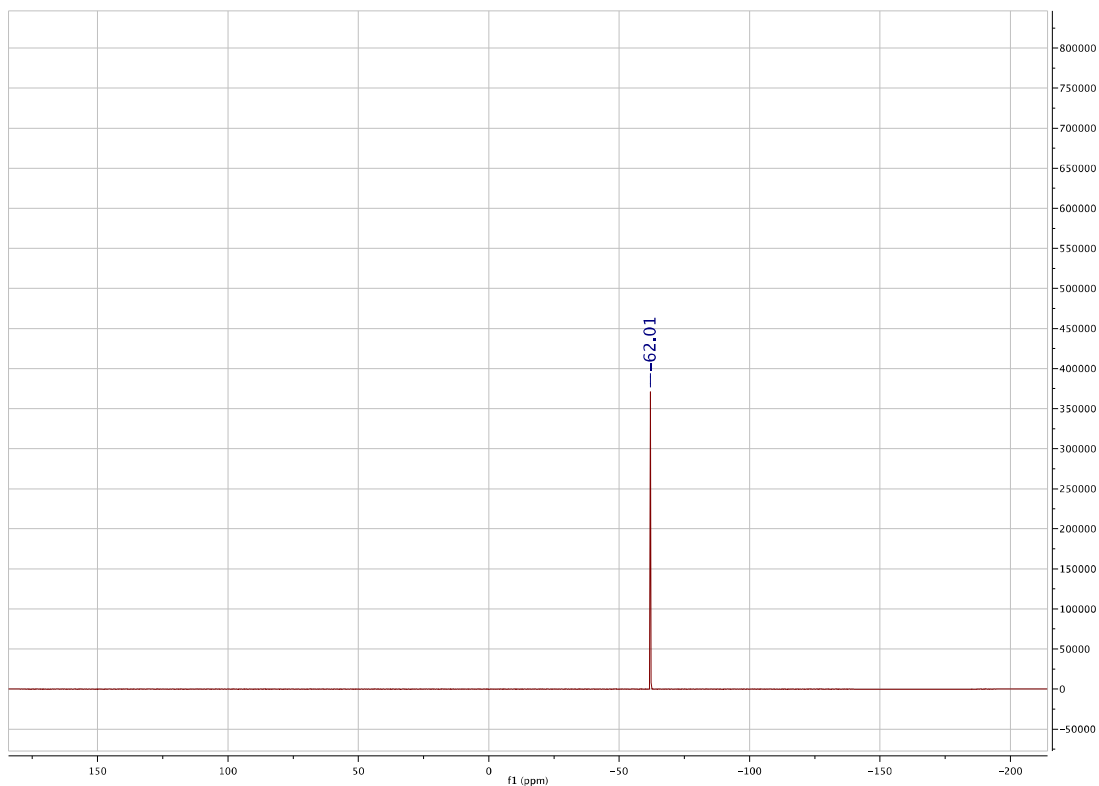
5-(p-tolyl)-10,11-dihydro-5H-benzo[b]pyrazino[2,3-f]azepine (4d)



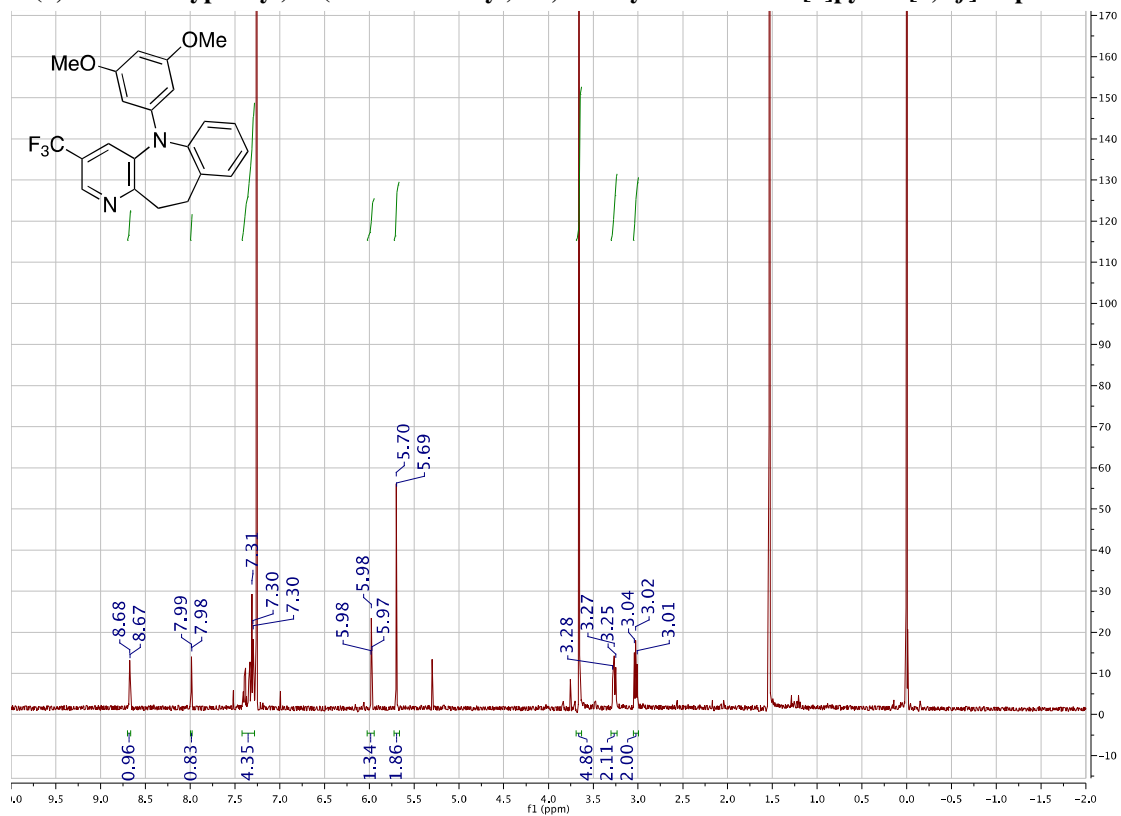


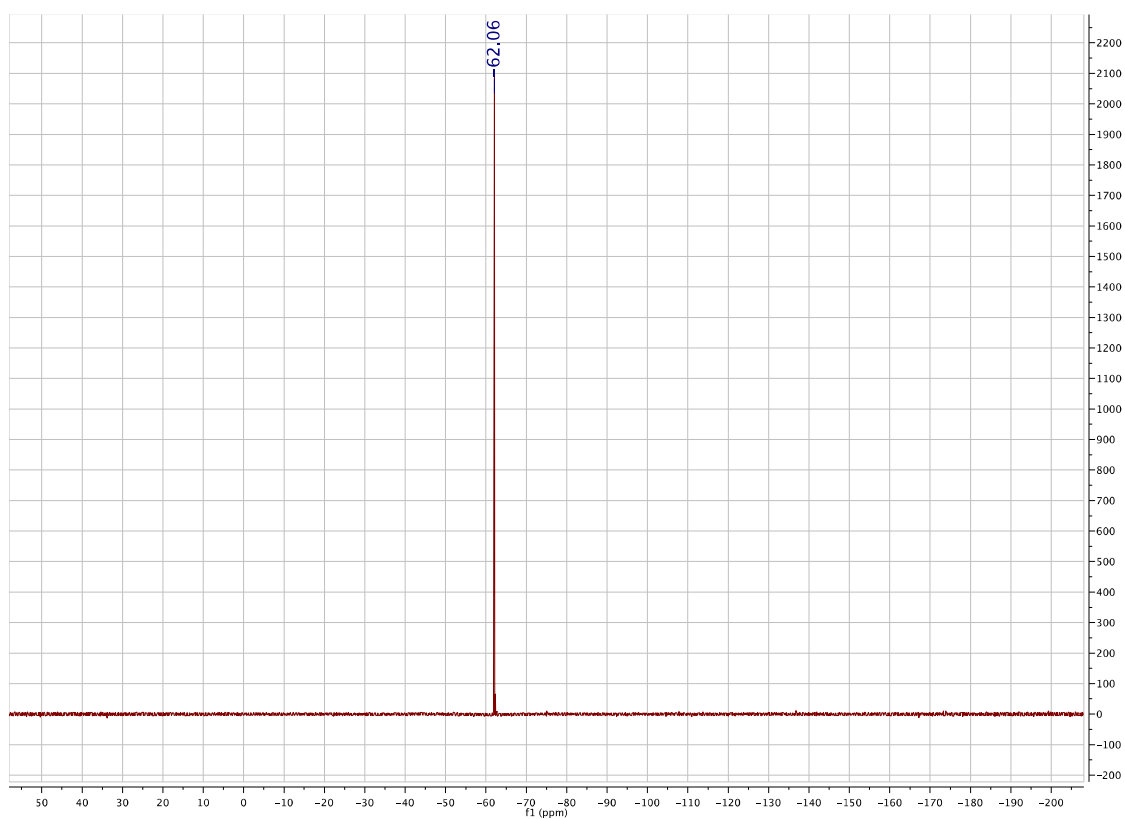
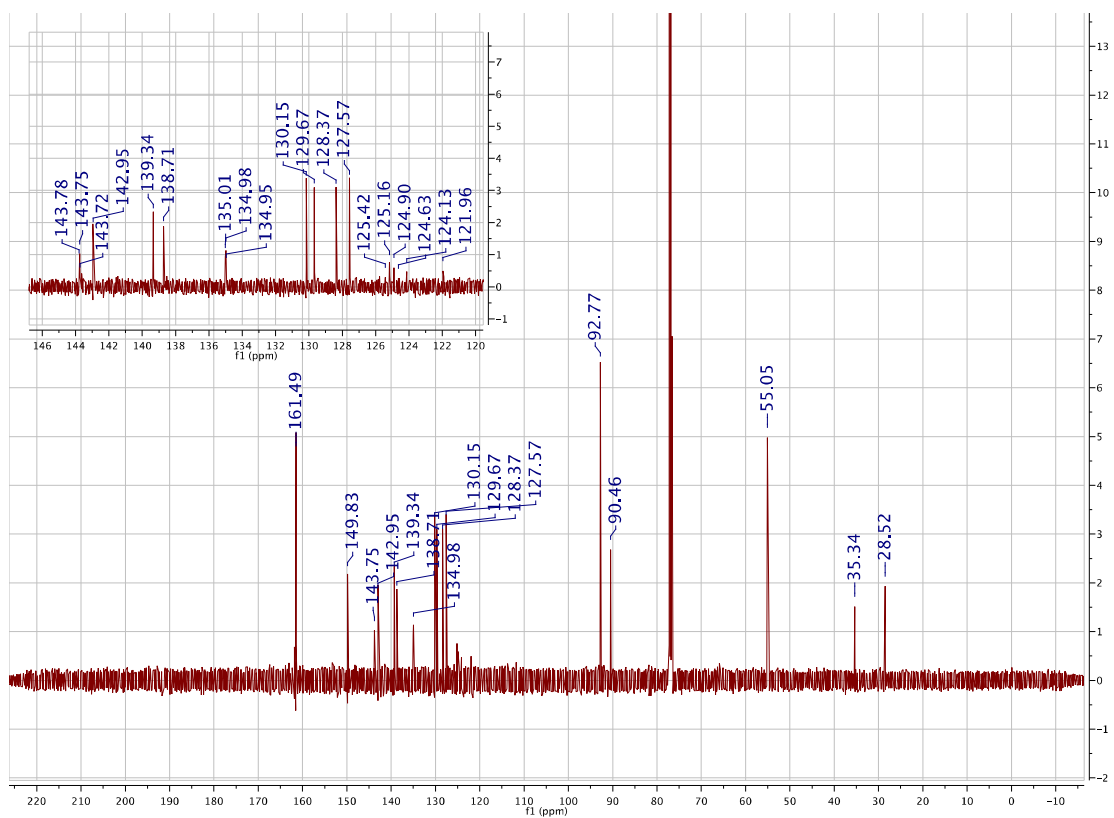
1-(3-(3-(trifluoromethyl)-10,11-dihydro-5H-benzo[b]pyrido[2,3-f]azepin-5-yl)phenyl)ethanone (4f)



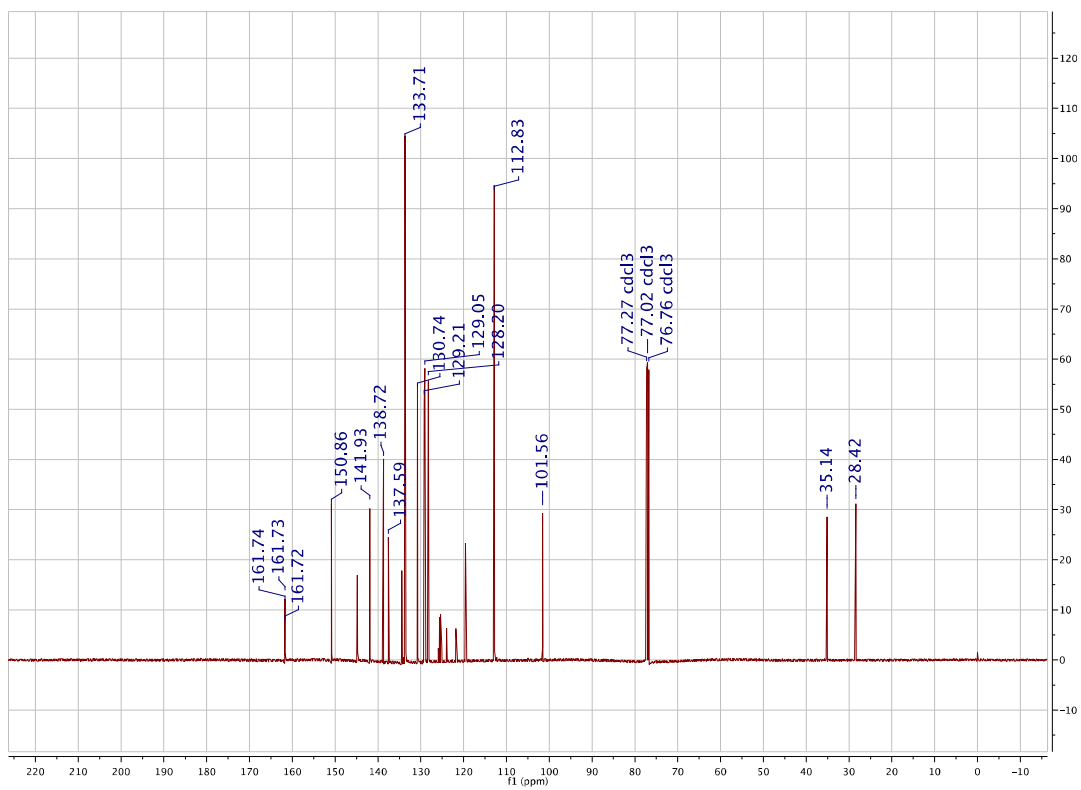
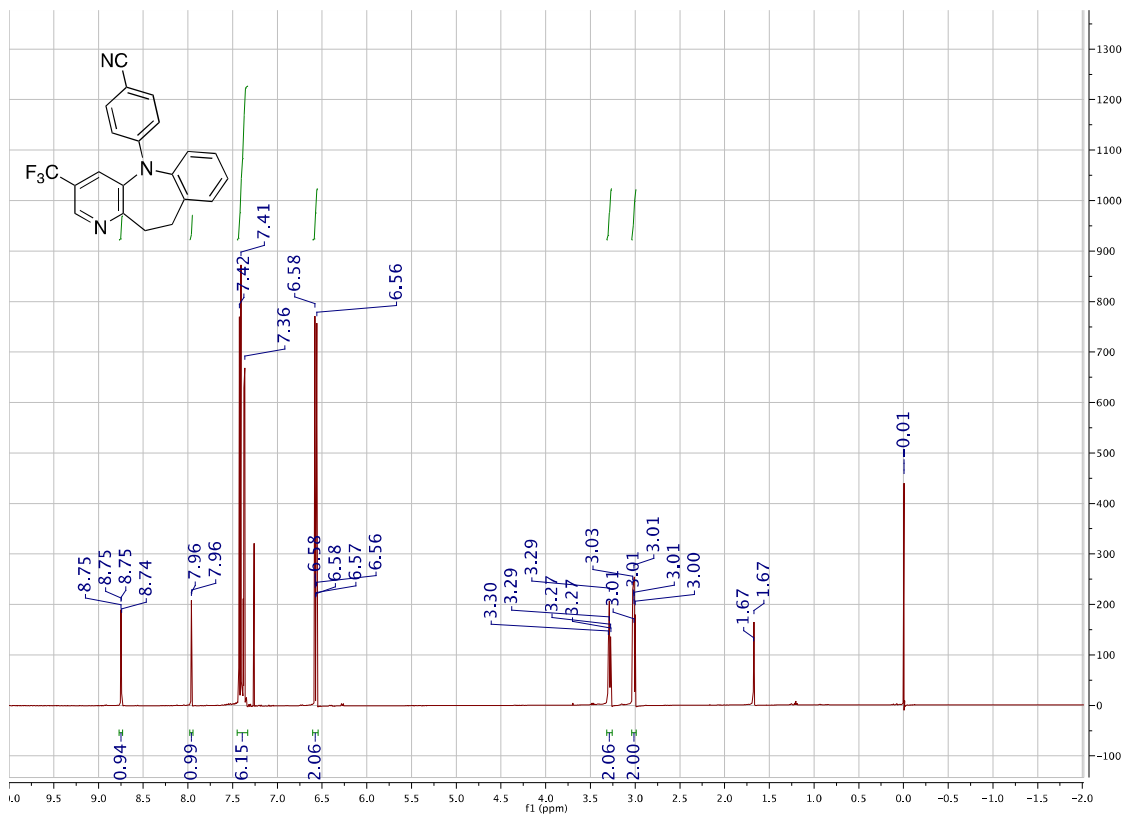


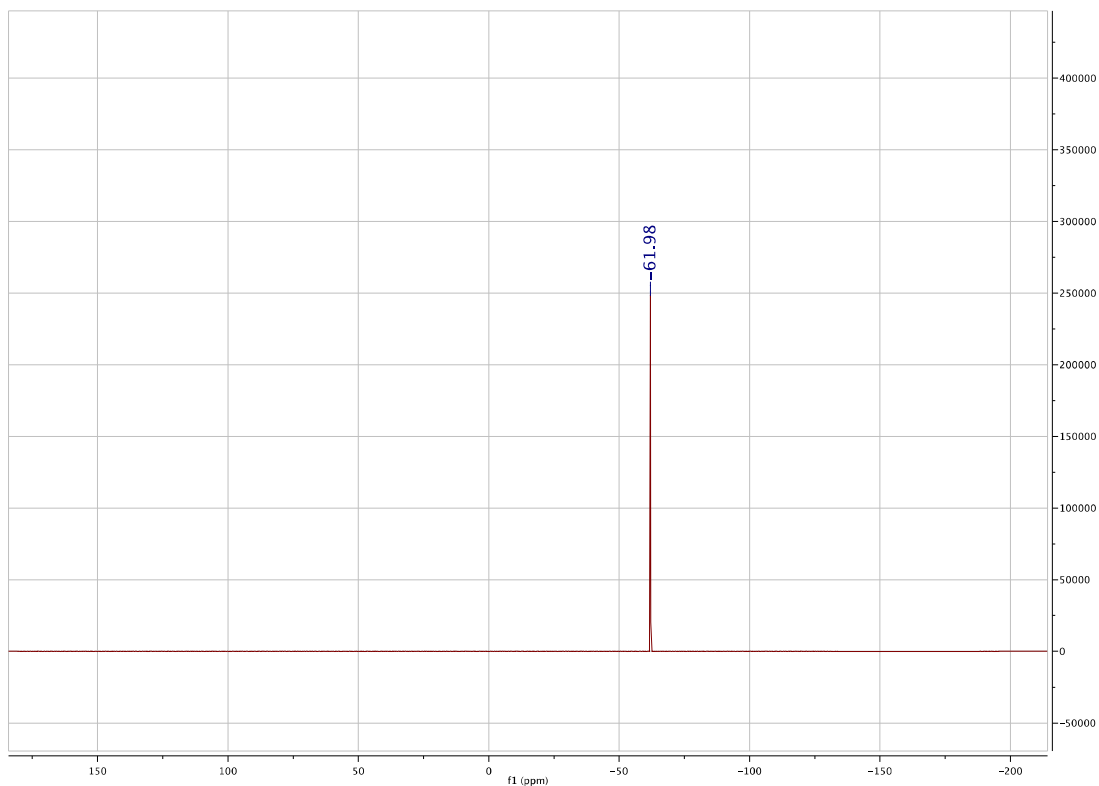
5-(3,5-dimethoxyphenyl)-3-(trifluoromethyl)-10,11-dihydro-5H-benzo[*b*]pyrido[2,3-*f*]azepine (4g)



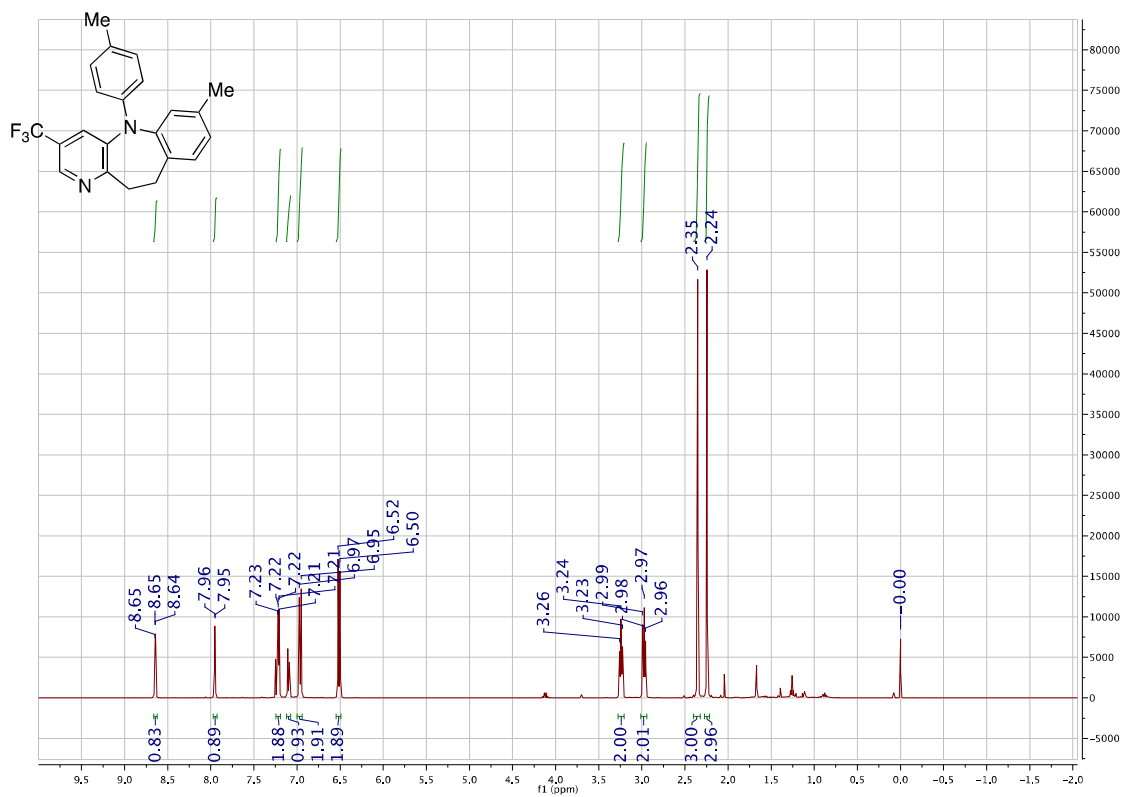


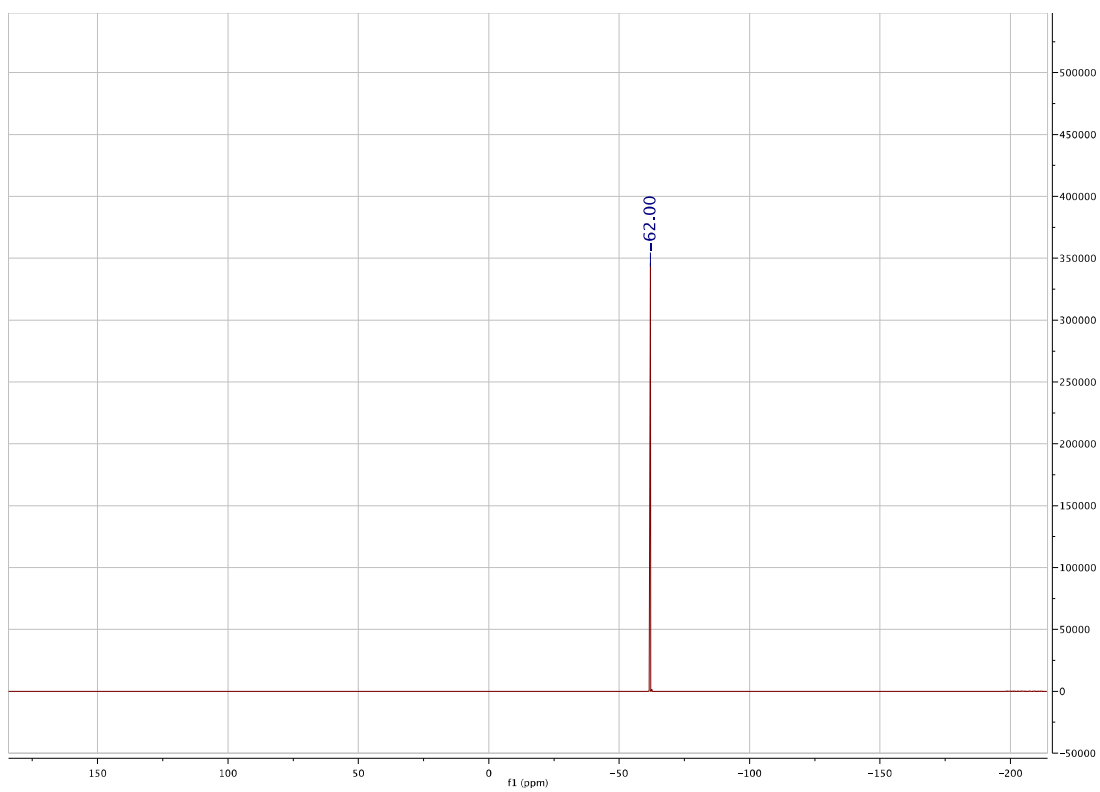
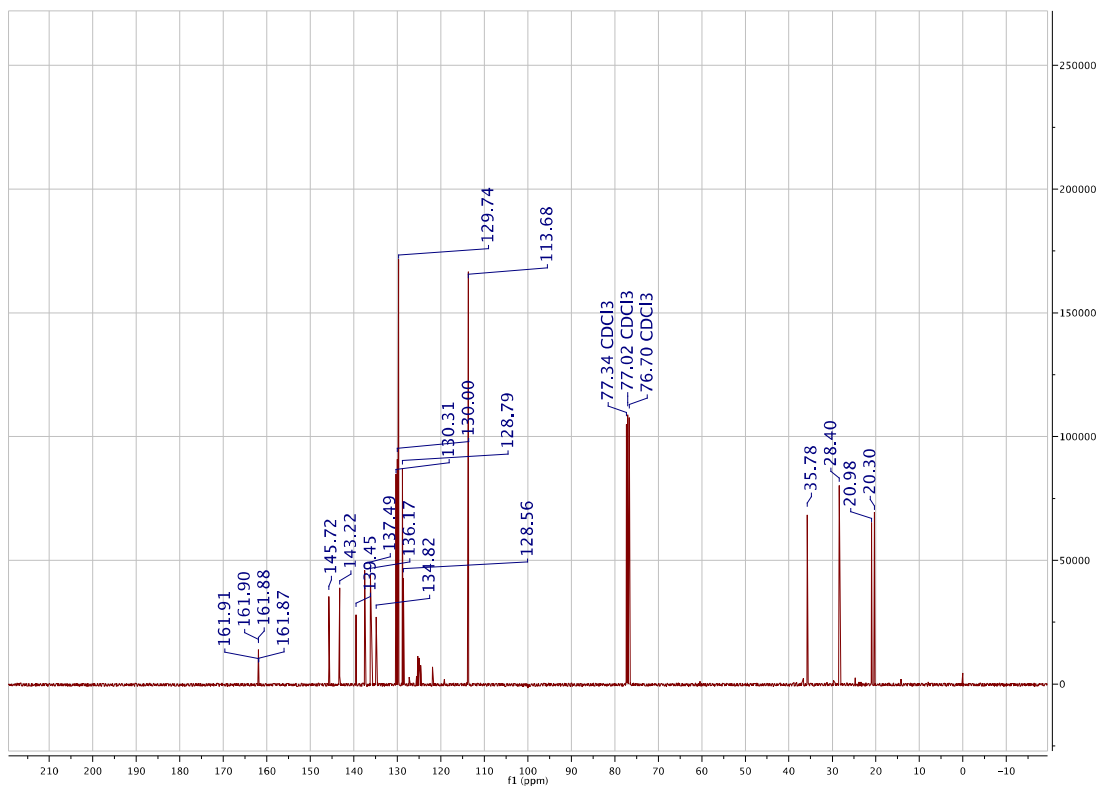
4-(3-(trifluoromethyl)-10,11-dihydro-5H-benzo[b]pyrido[2,3-f]azepin-5-yl)benzonitrile (4h)



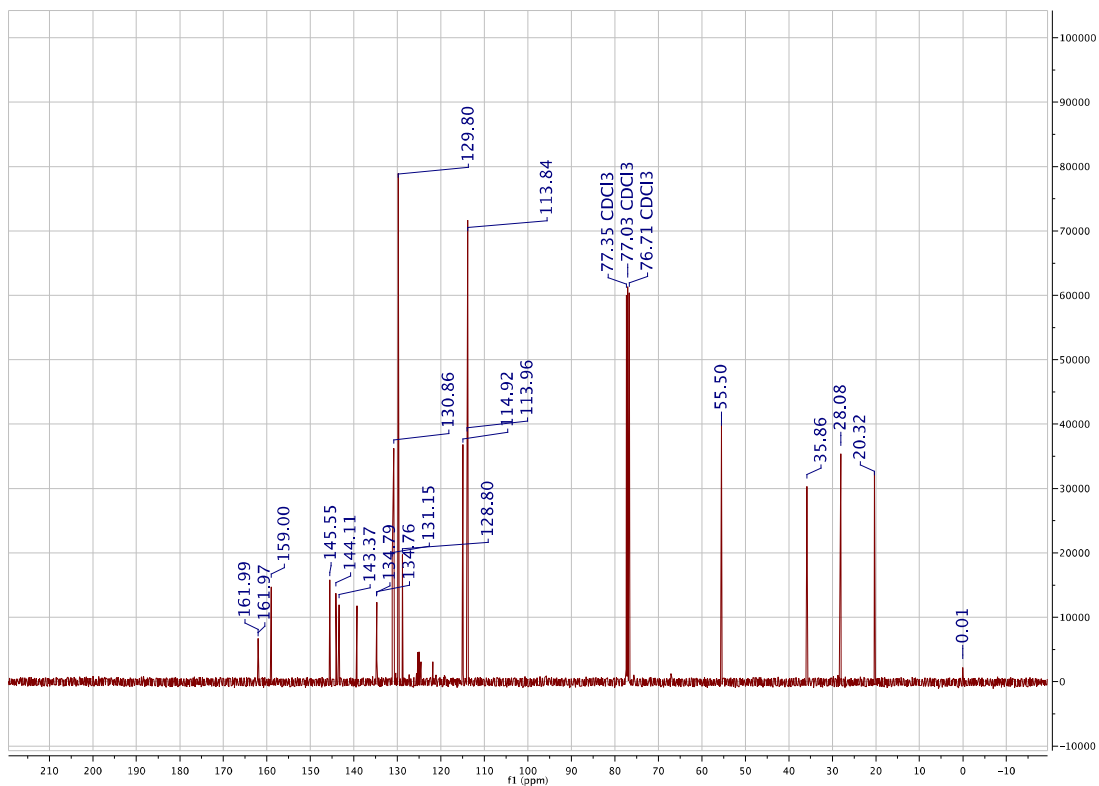
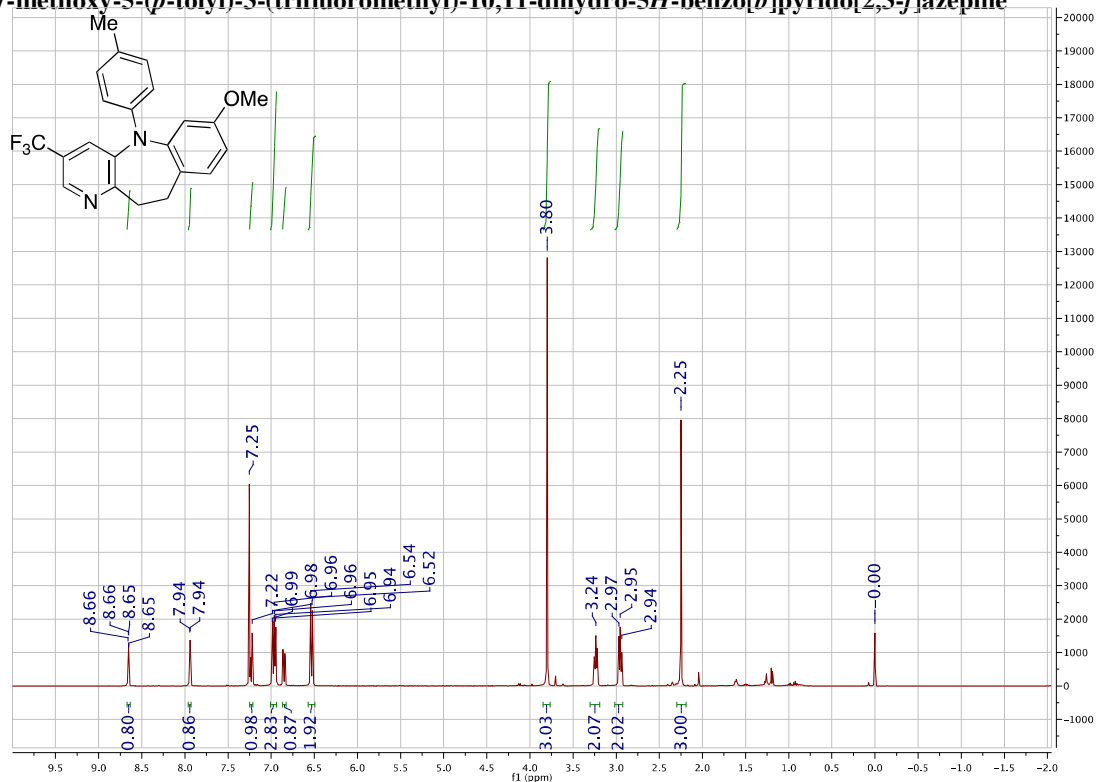


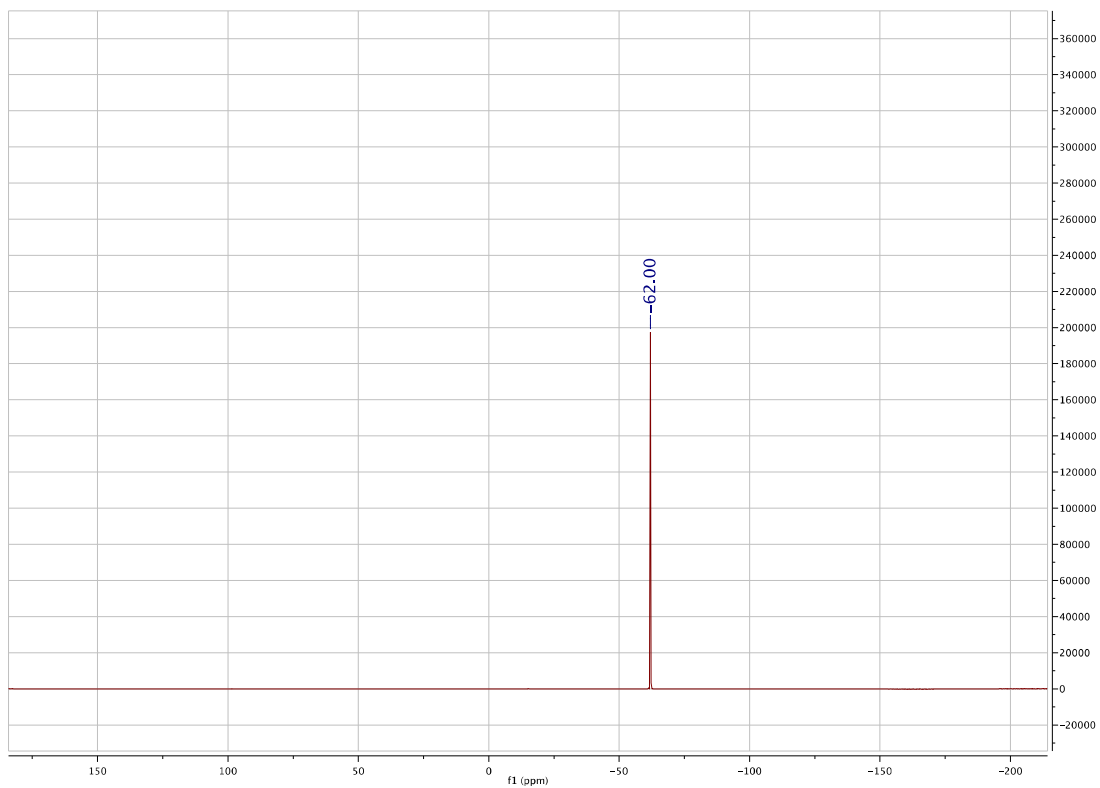
7-methyl-5-(*p*-tolyl)-3-(trifluoromethyl)-10,11-dihydro-5*H*-benzo[*b*]pyrido[2,3-*f*]azepine (4i)



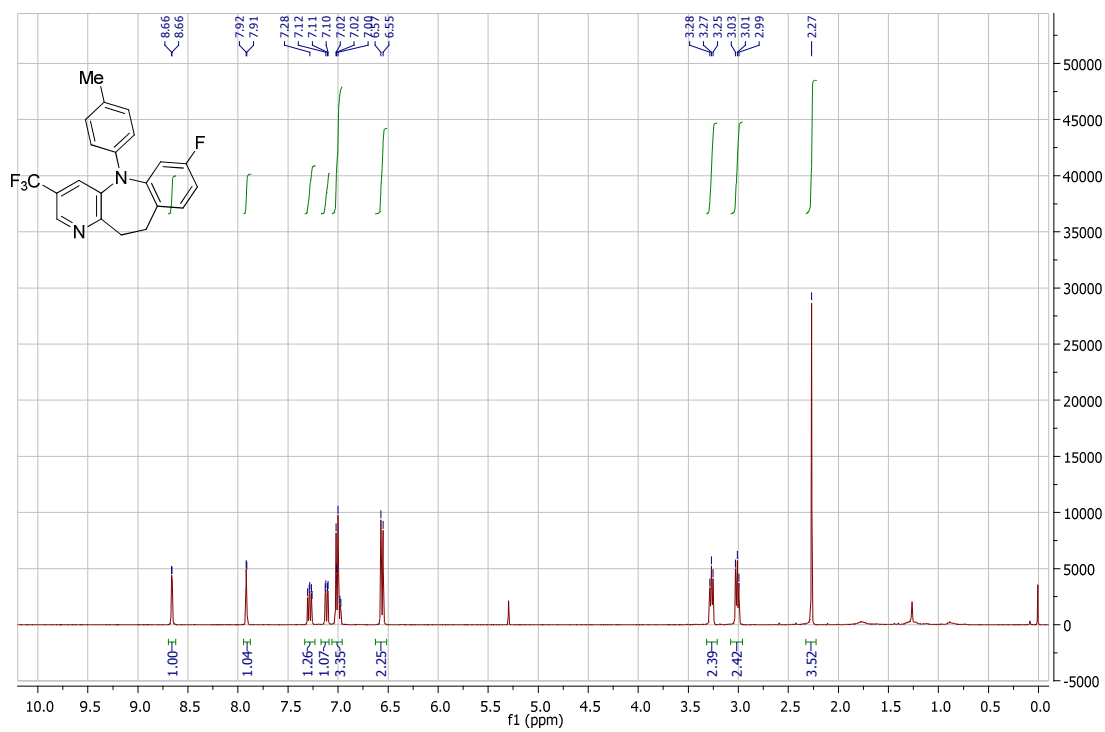


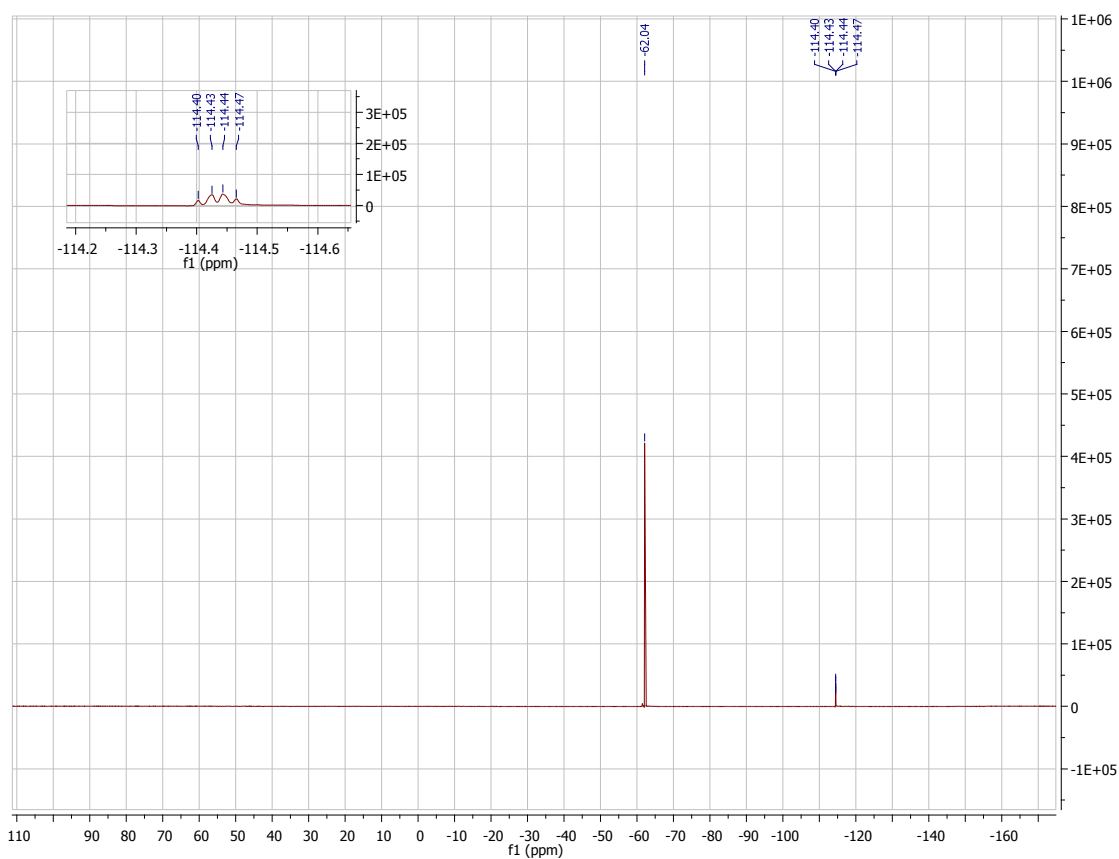
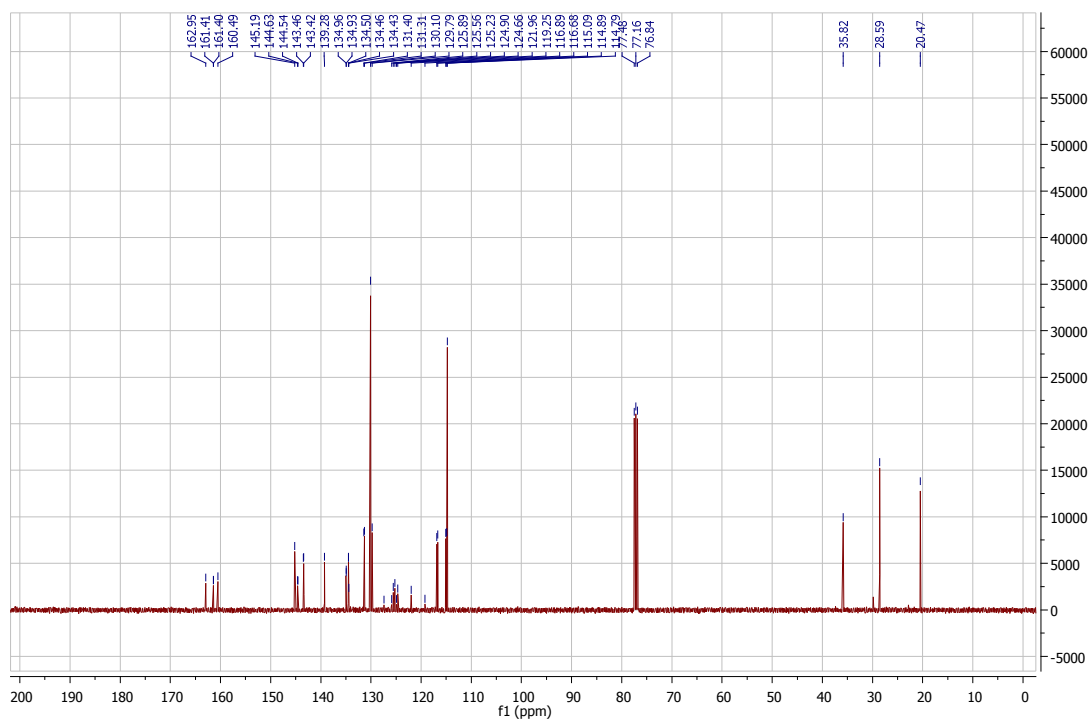
7-methoxy-5-(*p*-tolyl)-3-(trifluoromethyl)-10,11-dihydro-5*H*-benzo[*b*]pyrido[2,3-*f*]azepine (4j)



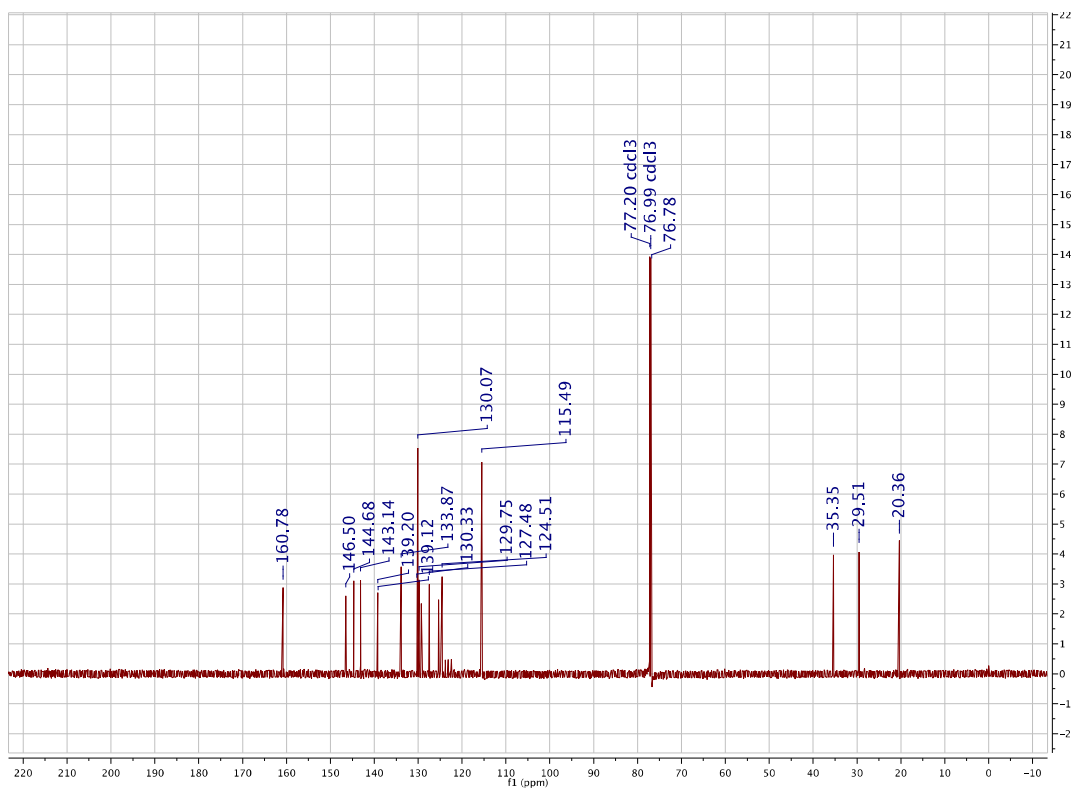
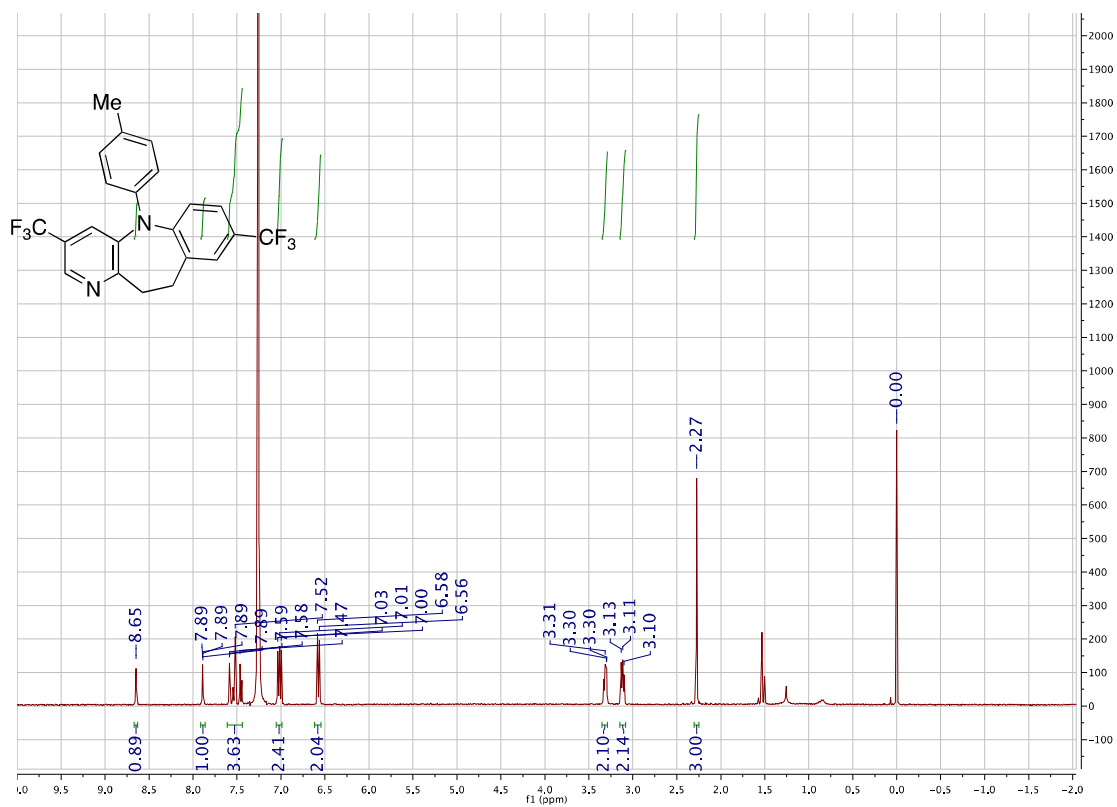


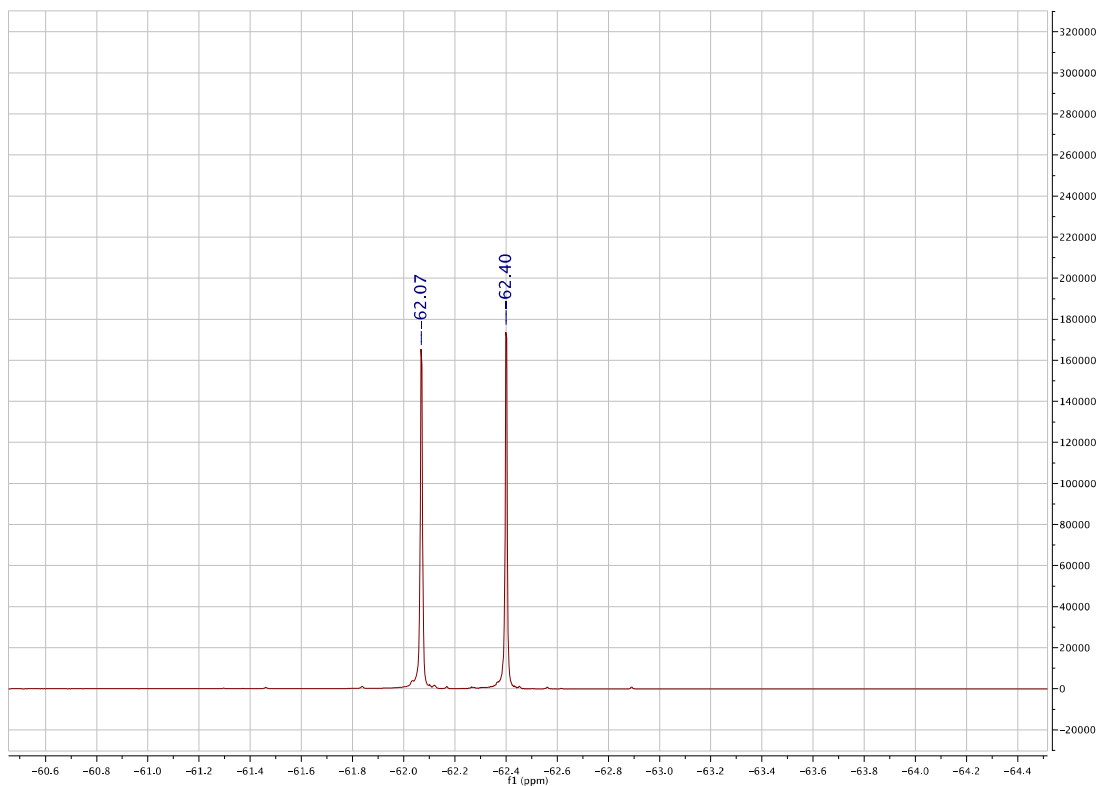
8-fluoro-5-(p-tolyl)-3-(trifluoromethyl)-10,11-dihydro-5H-benzo[b]pyrido[2,3-f]azepine (4k)



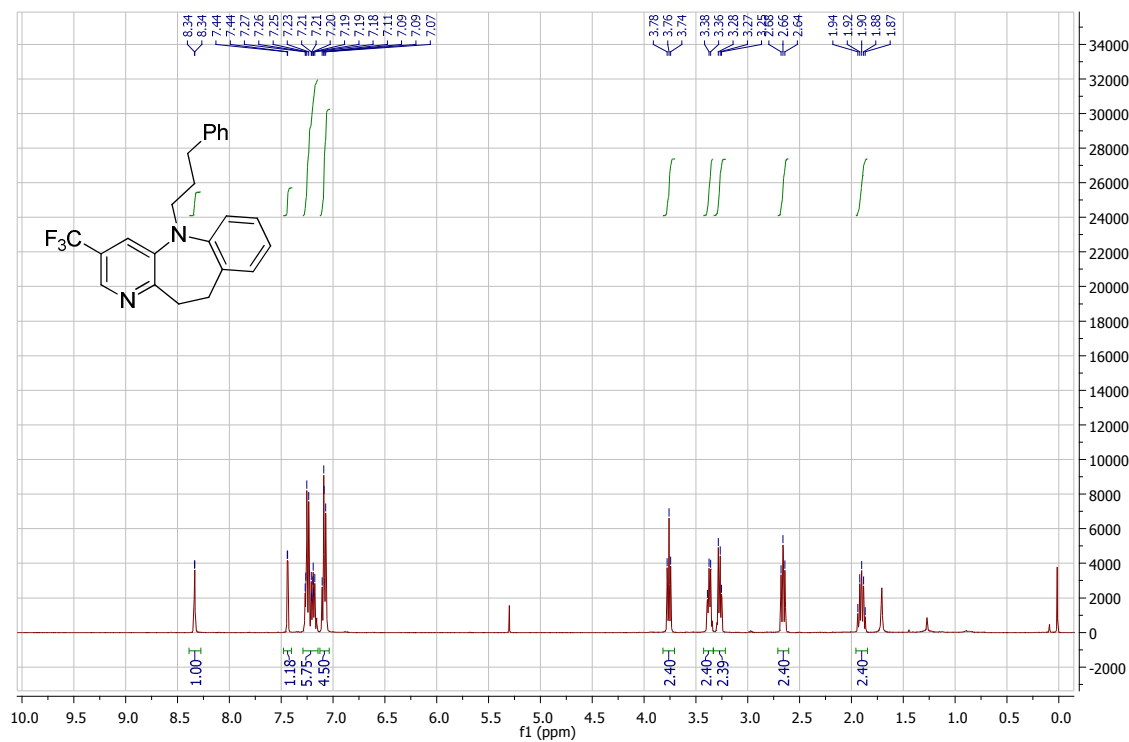


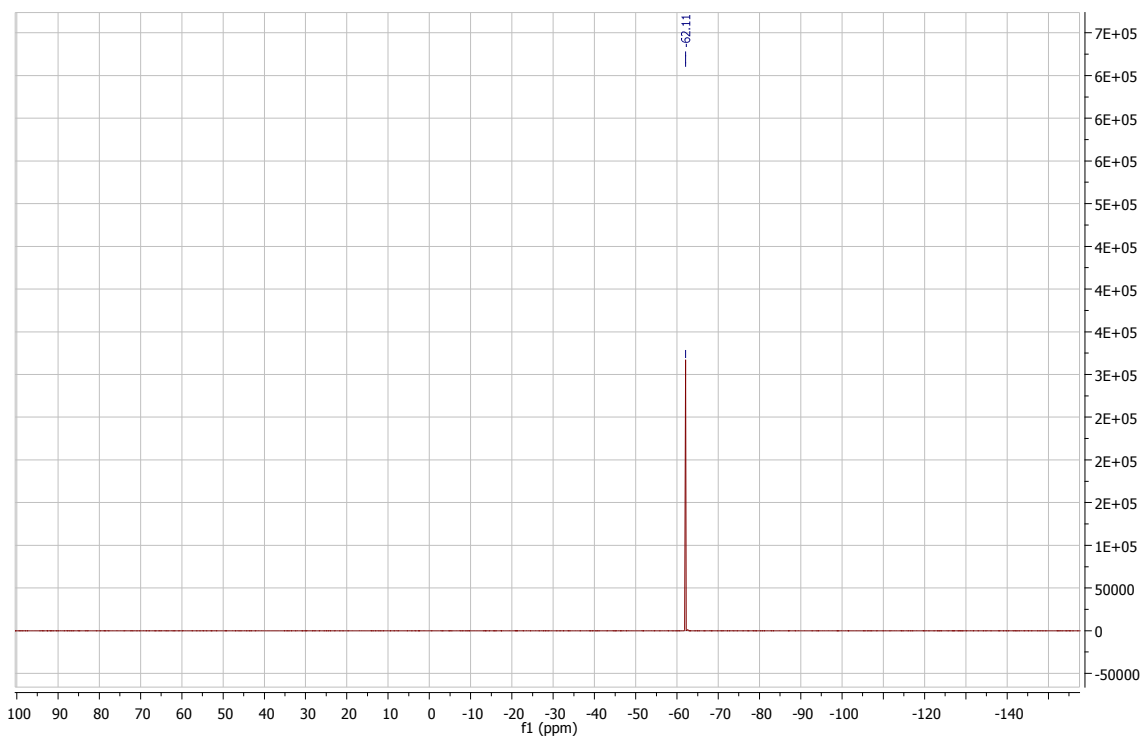
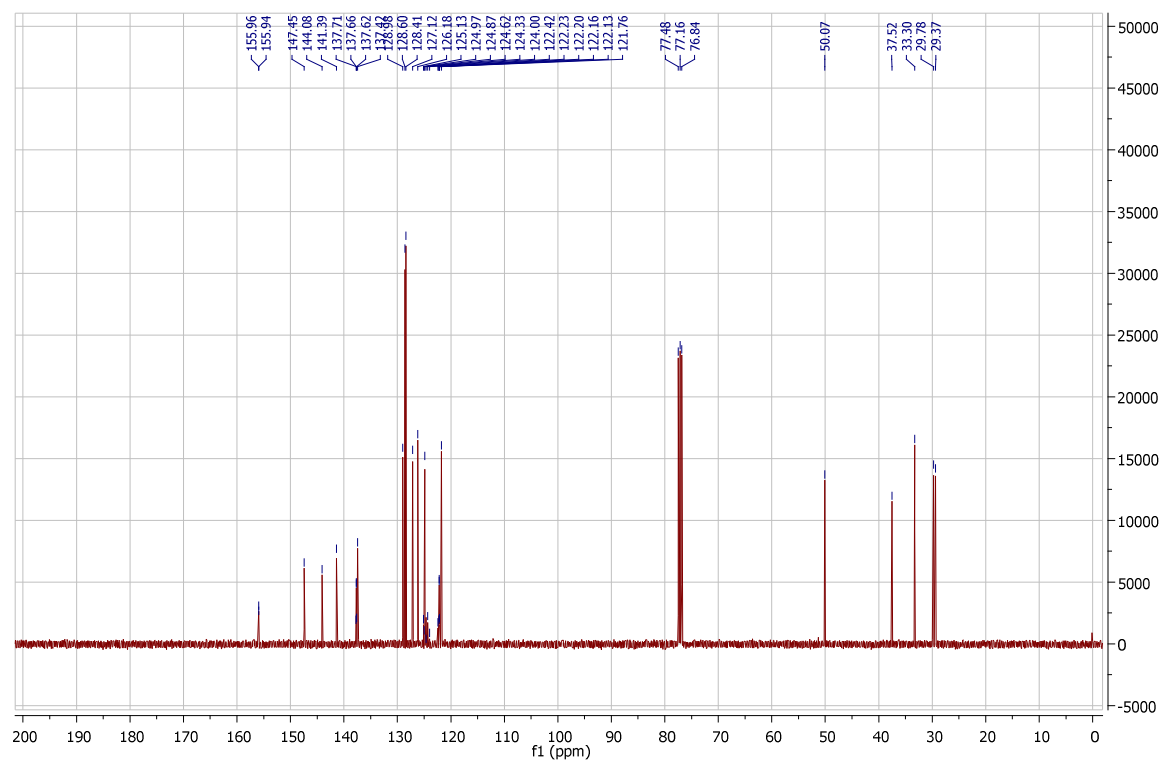
5-(*p*-tolyl)-3,8-bis(trifluoromethyl)-10,11-dihydro-5*H*-benzo[*b*]pyrido[2,3-*f*]azepine (4l)



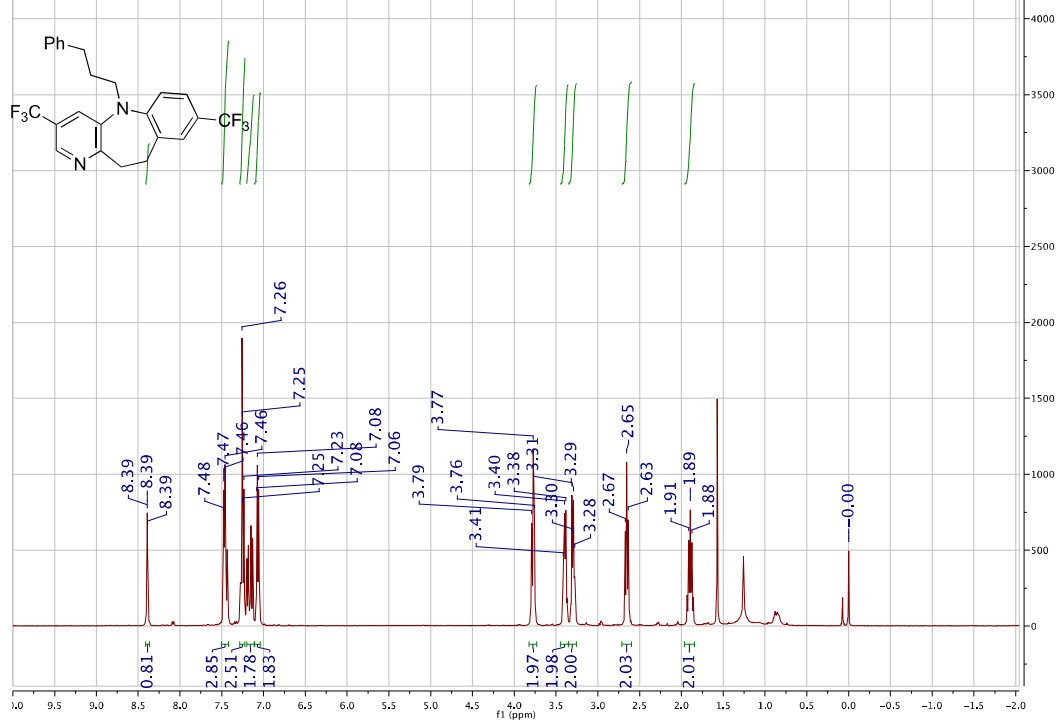


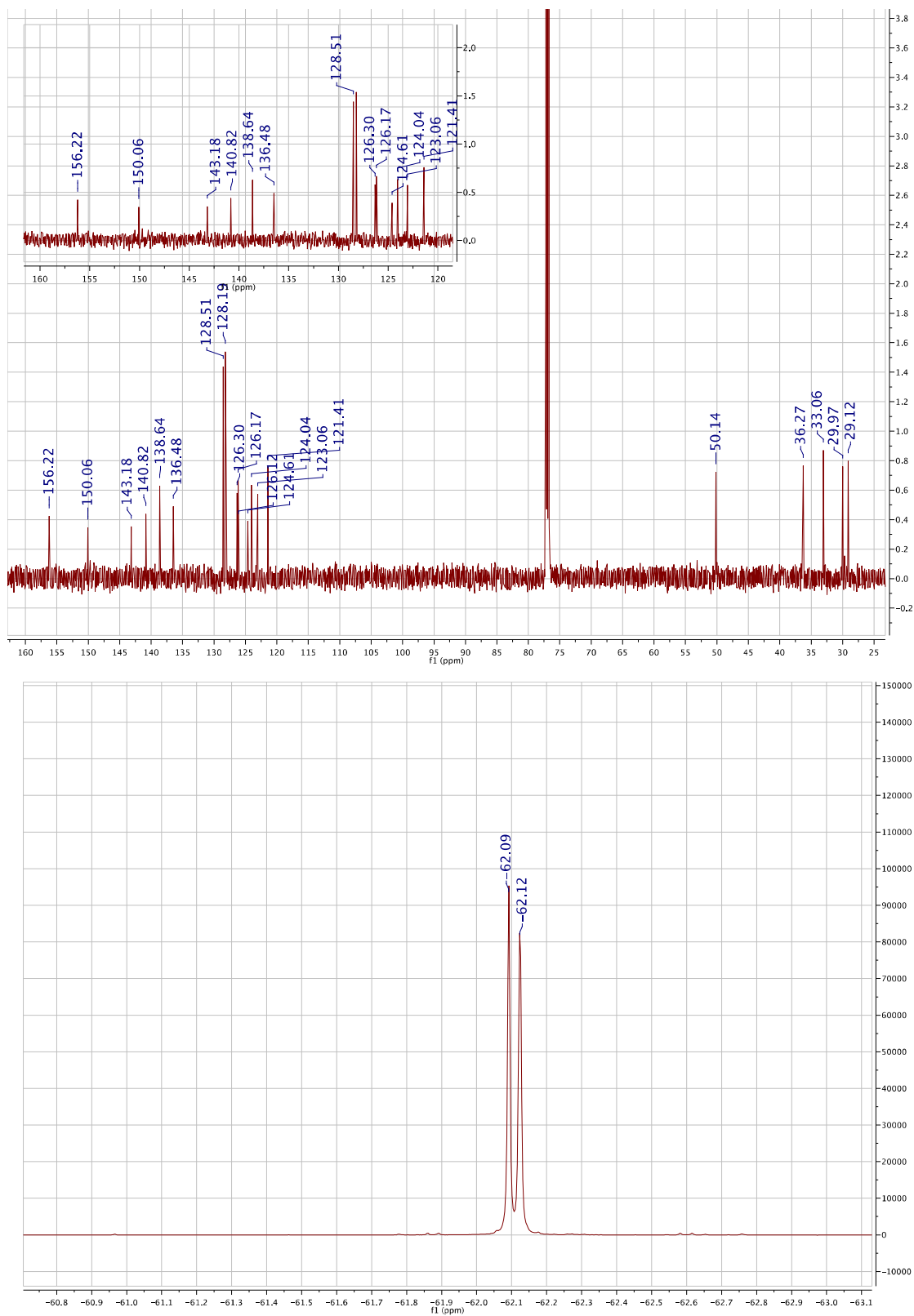
5-(3-phenylpropyl)-3-(trifluoromethyl)-10,11-dihydro-5H-benzo[b]pyrido[2,3-f]azepine (9a)



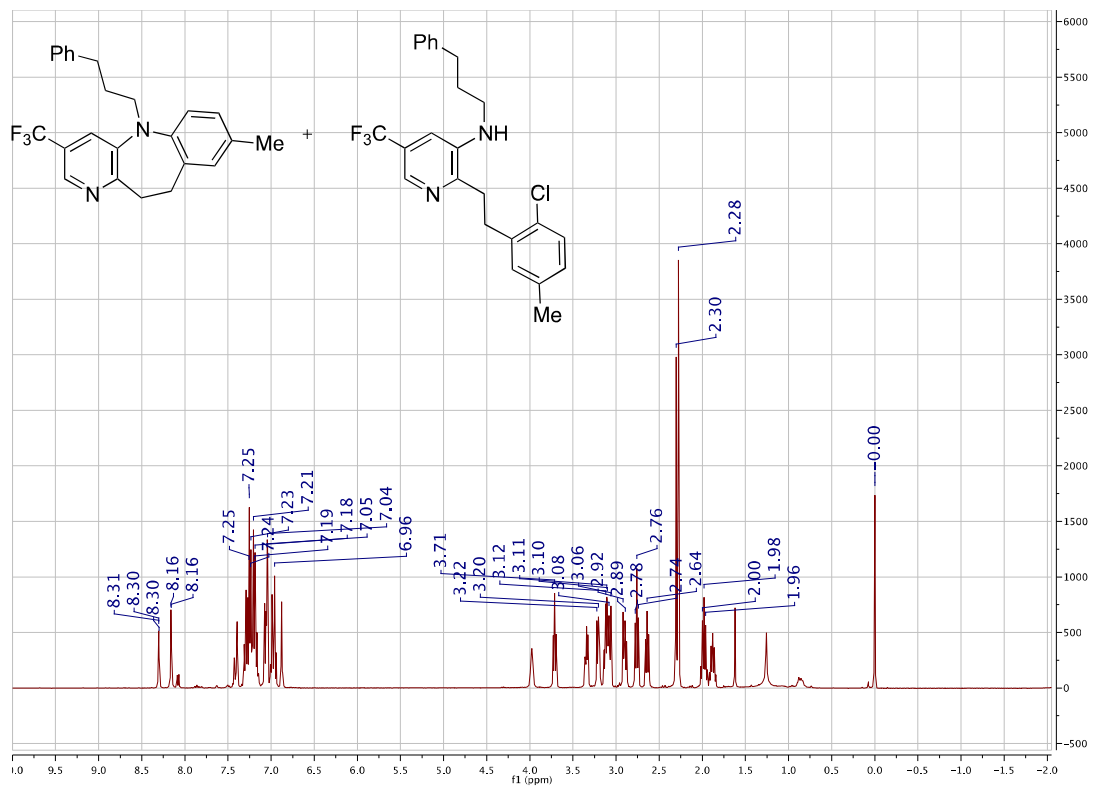


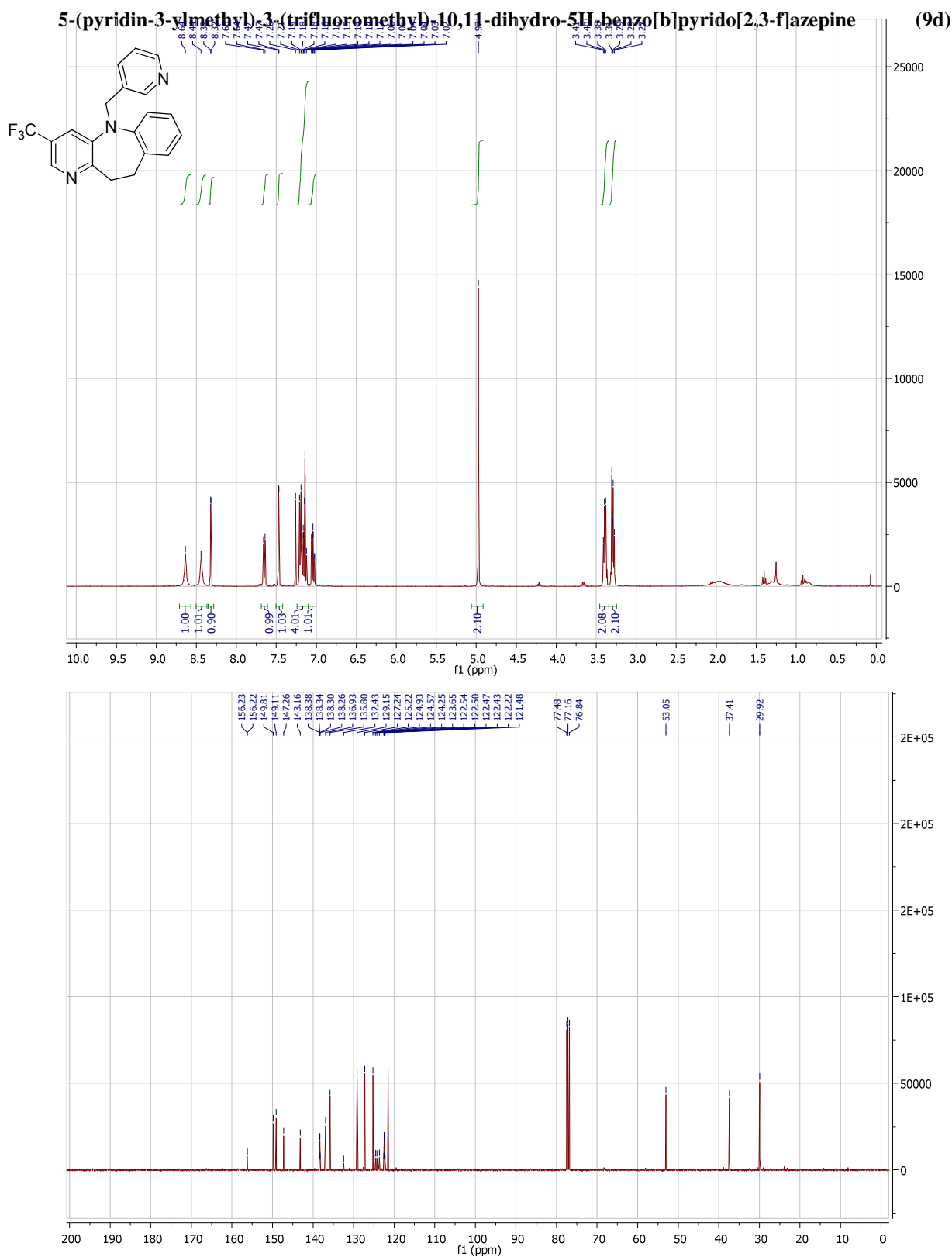
5-(3-phenylpropyl)-3,8-bis(trifluoromethyl)-10,11-dihydro-5H-benzo[b]pyrido[2,3-f]azepine (9b)

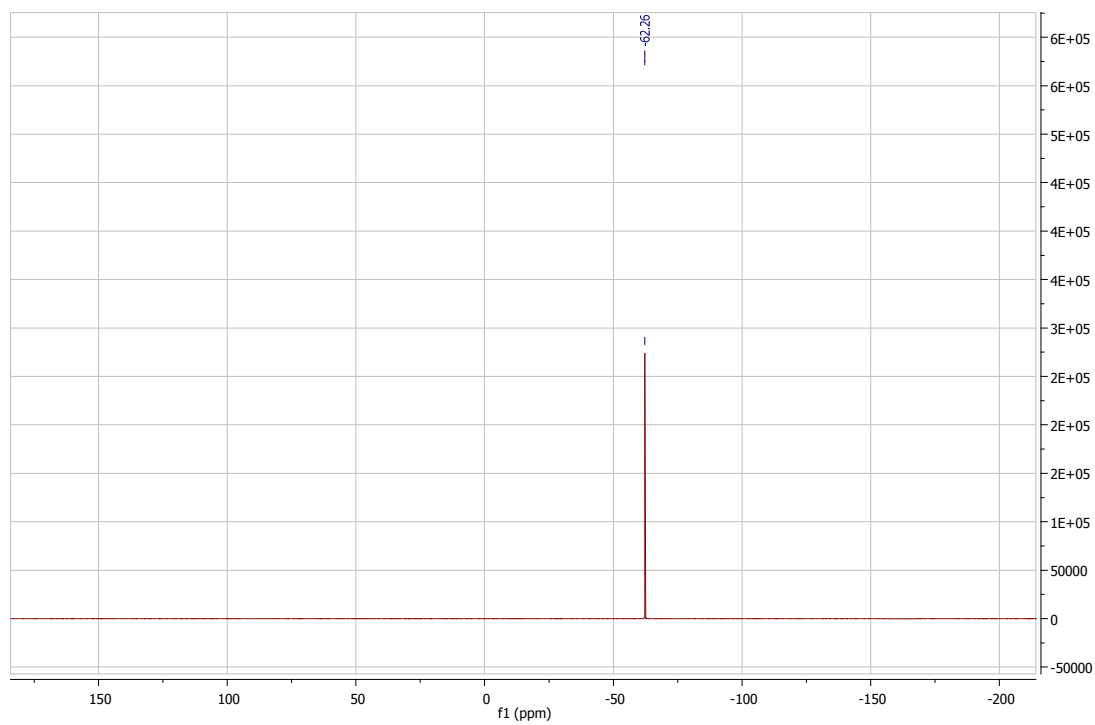




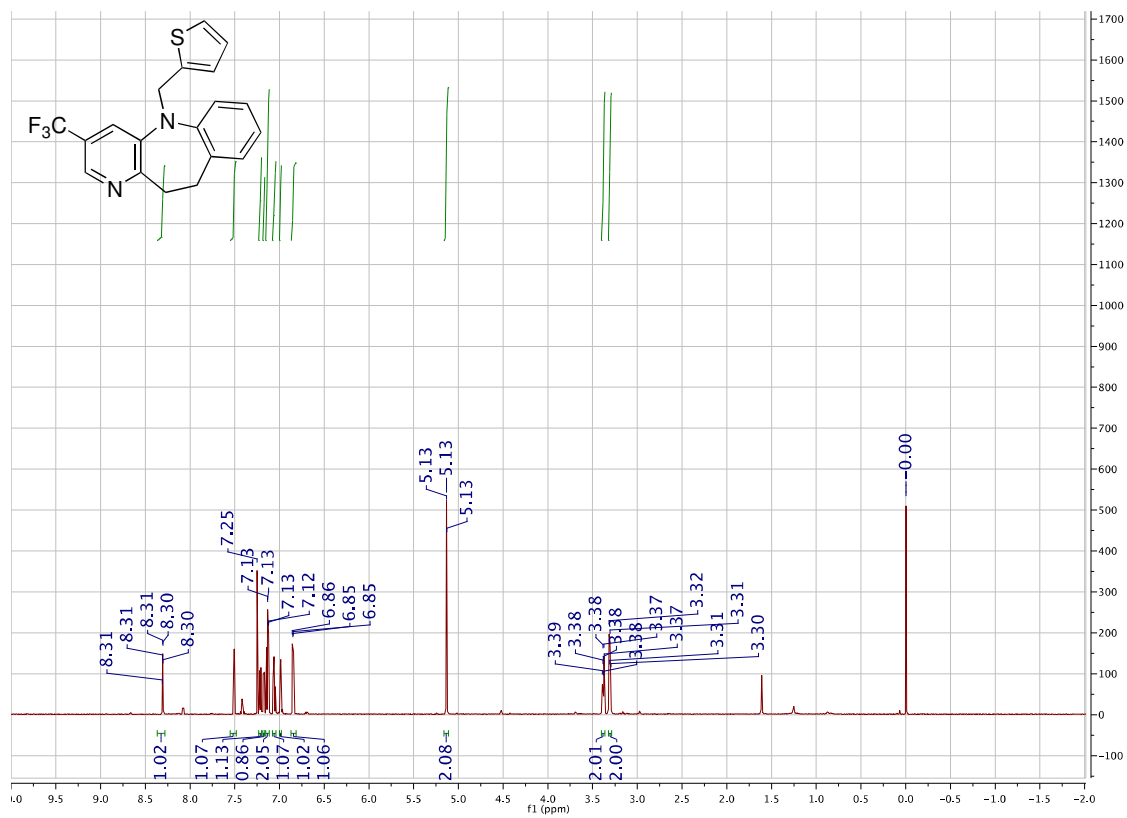
8-methyl-5-(3-phenylpropyl)-3-(trifluoromethyl)-10,11-dihydro-5H-benzo[*b*]pyrido[2,3-*f*]azepine (9c)

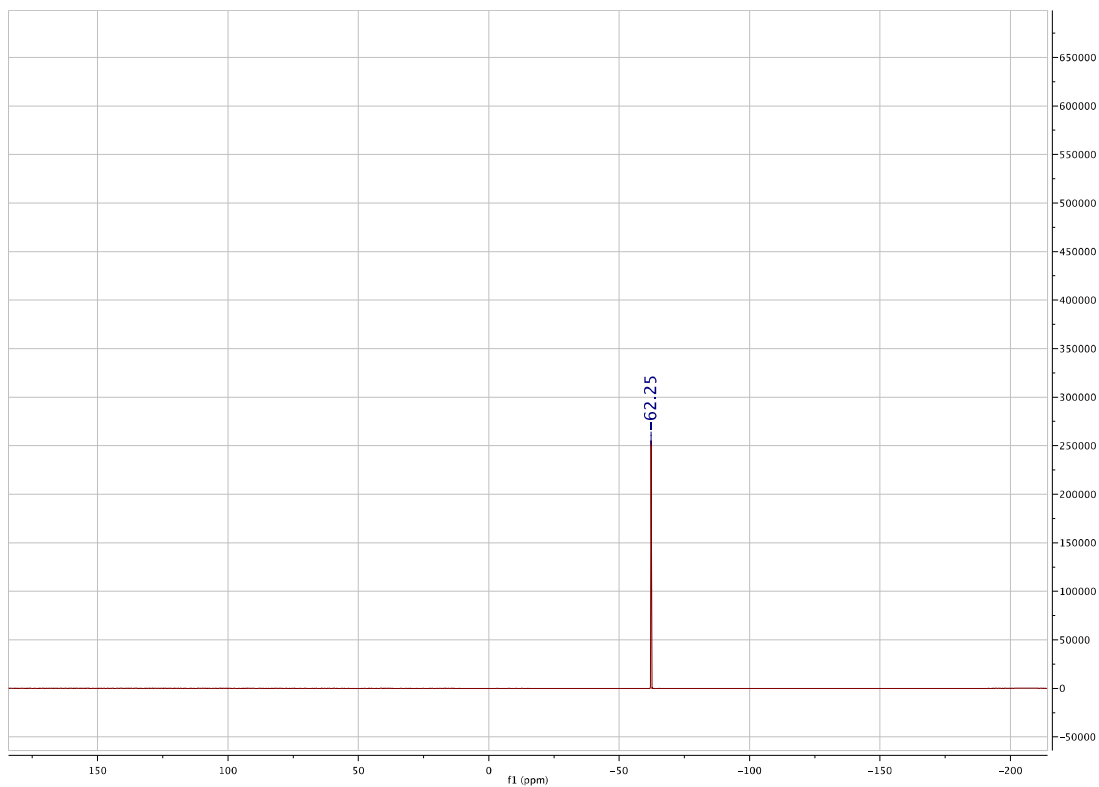
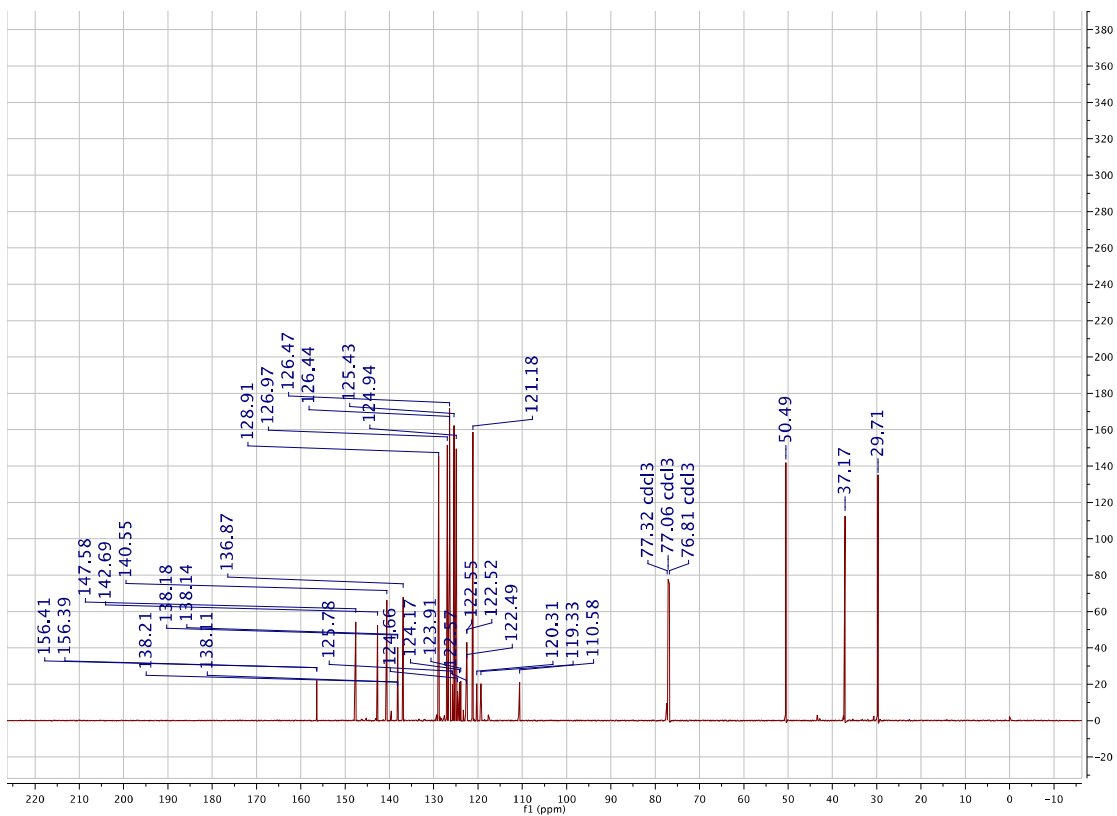




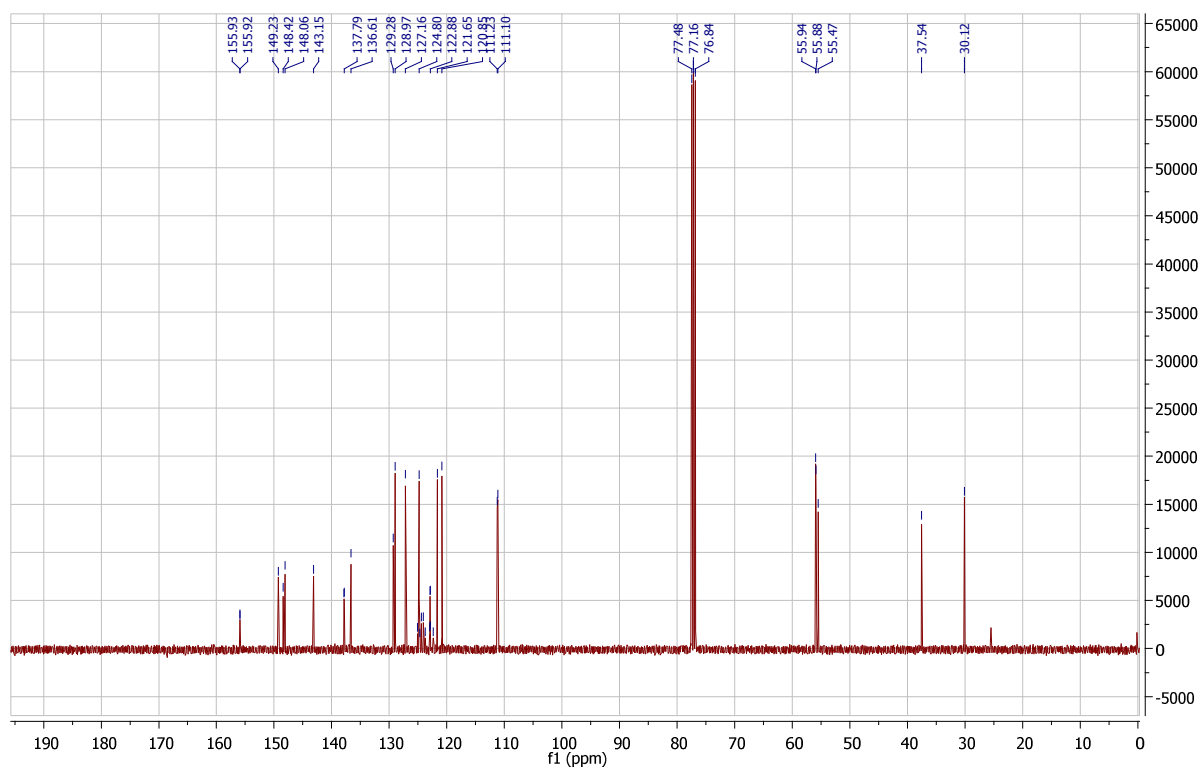
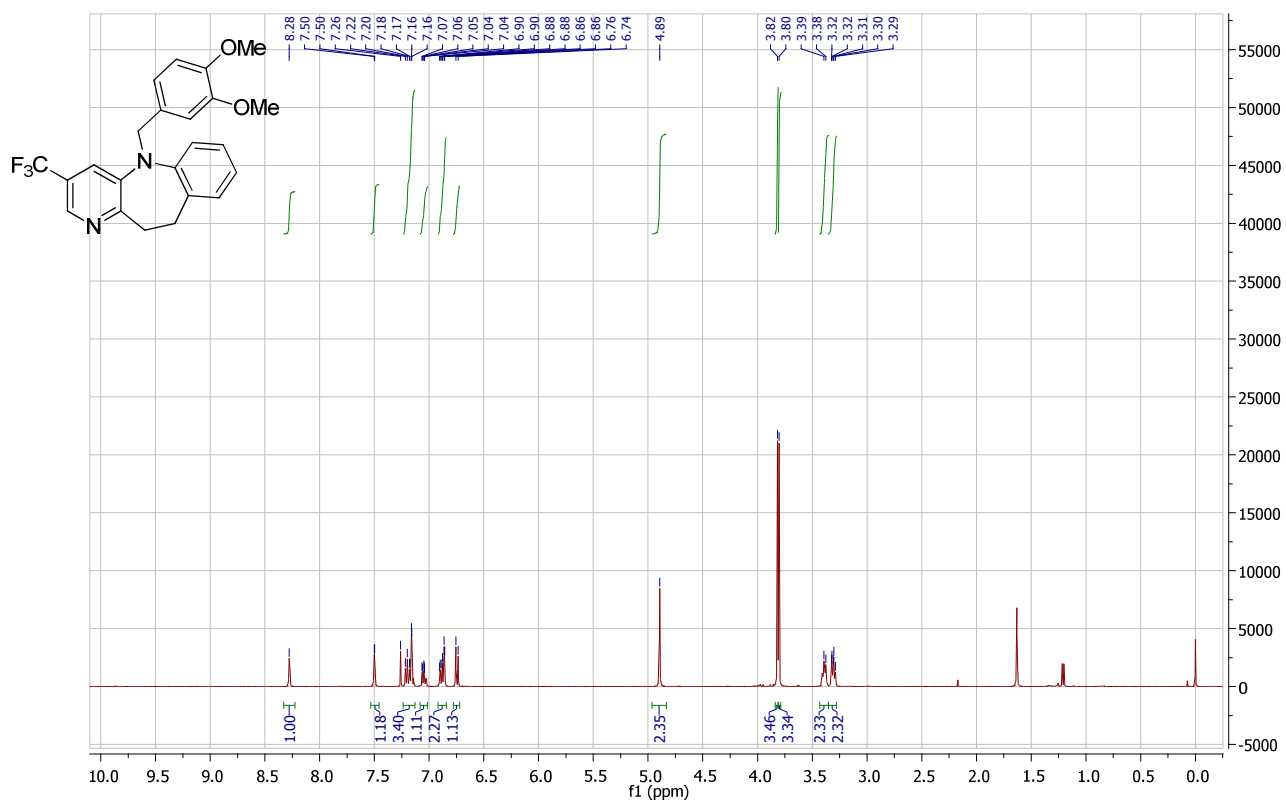


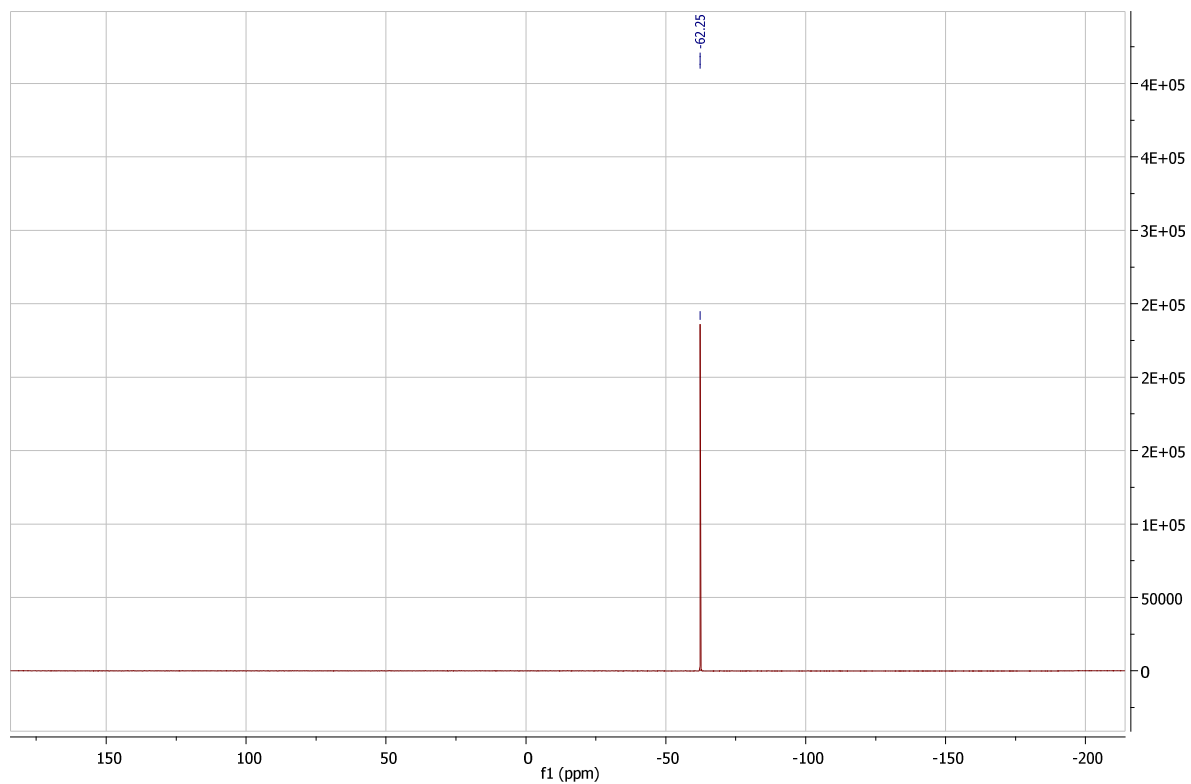
5-(thiophen-2-ylmethyl)-3-(trifluoromethyl)-10,11-dihydro-5H-benzo[*b*]pyrido[2,3-*f*]azepine (9e)



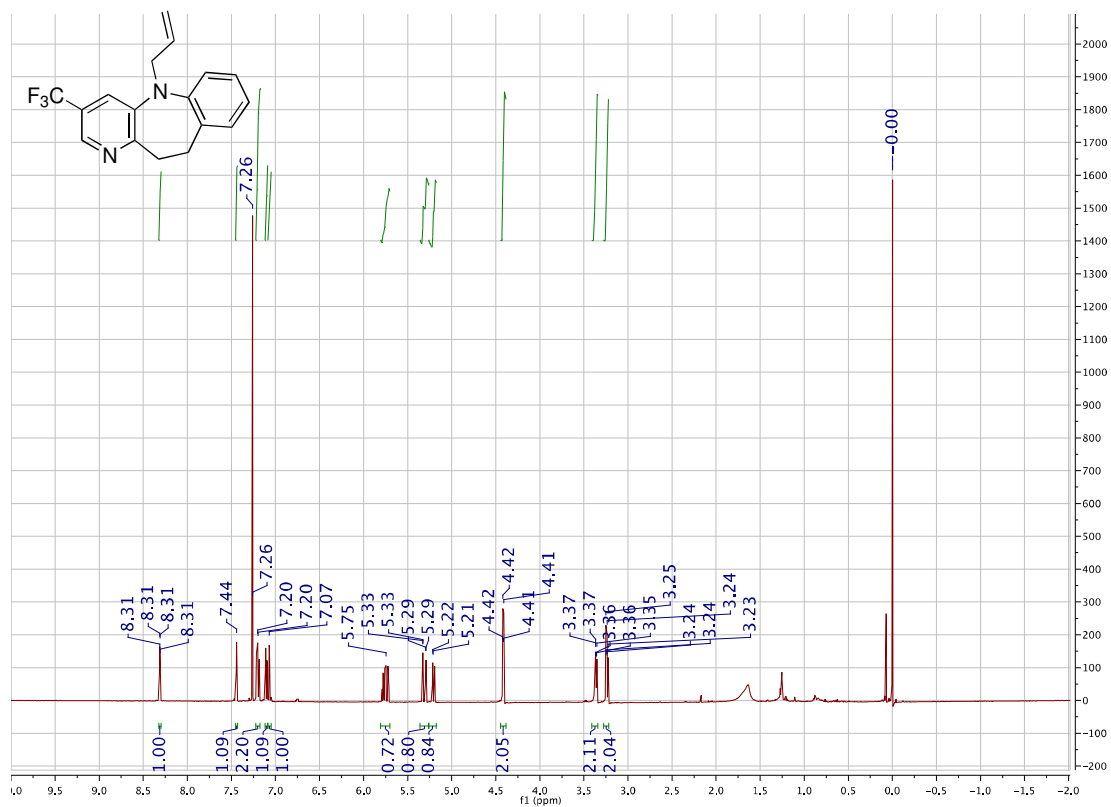


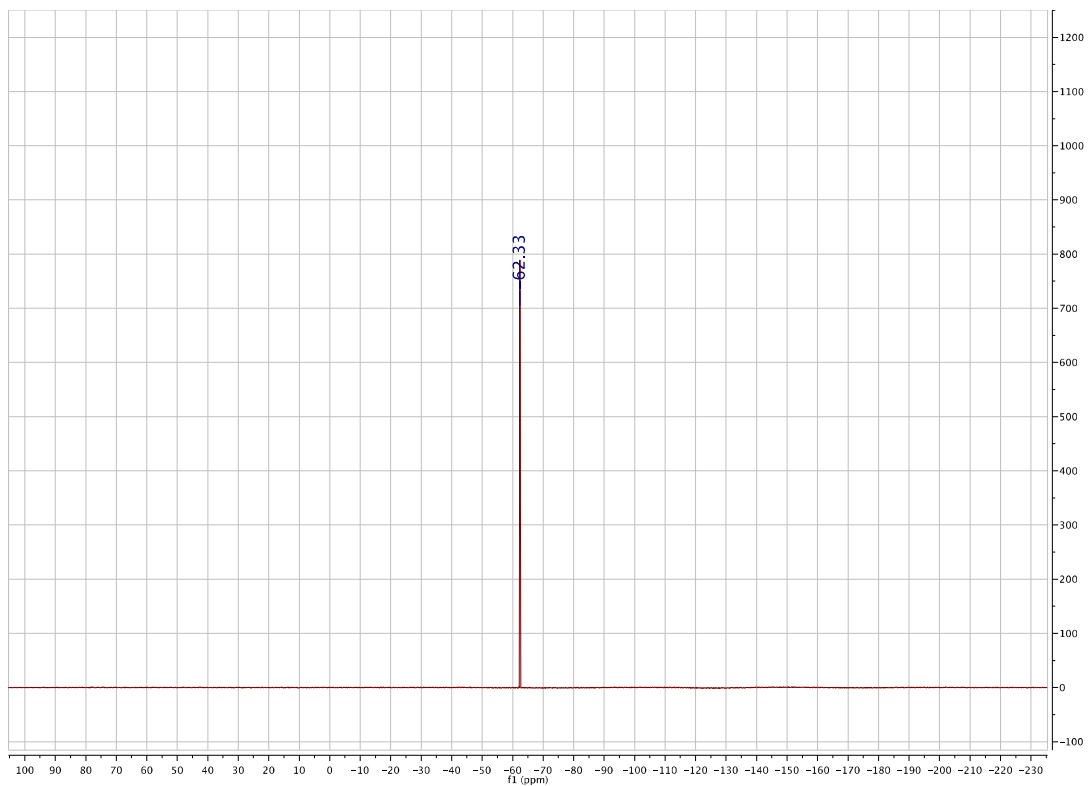
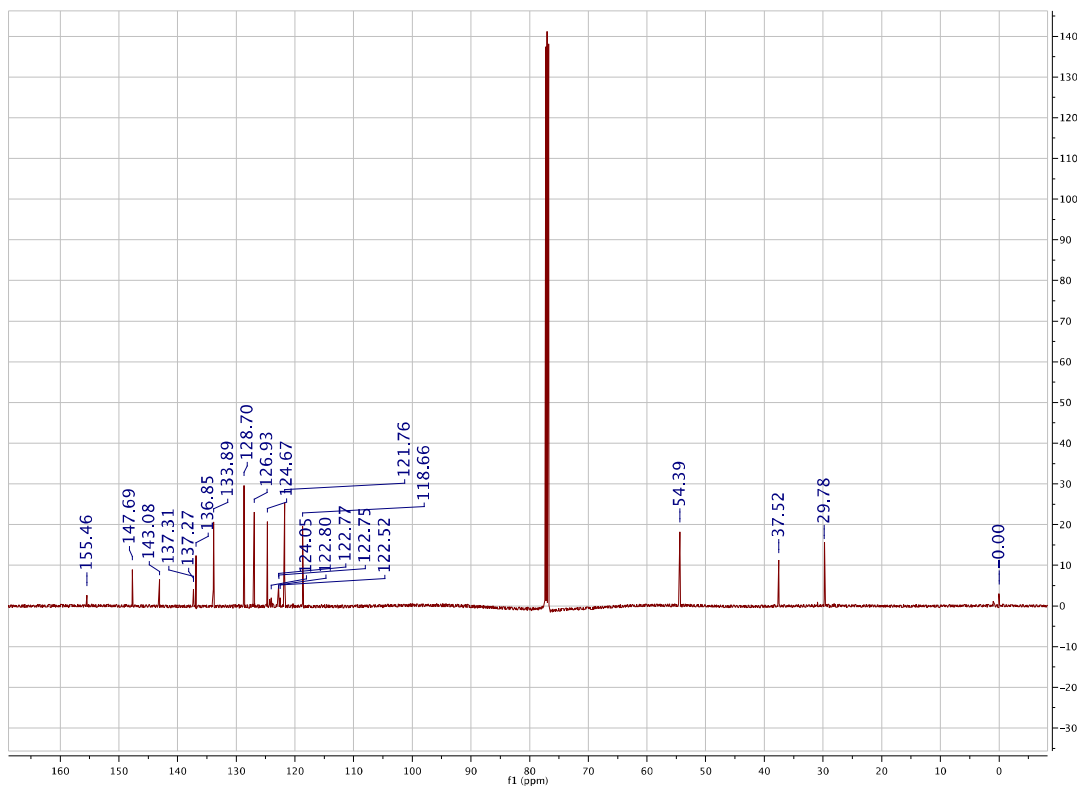
5-(3,4-dimethoxybenzyl)-3-(trifluoromethyl)-10,11-dihydro-5H-benzo[b]pyrido[2,3-f]azepine (9f)





5-allyl-3-(trifluoromethyl)-10,11-dihydro-5H-benzo[b]pyrido[2,3-f]azepine (9g)





3-(trifluoromethyl)-10,11-dihydro-5H-benzo[b]pyrido[2,3-f]azepine (10)

