Electronic Supplementary Information

Metal-Free Cross-Coupling Reaction of Aldehydes with Disulfides By Using DTBP as an Oxidant in Solvent-Free Conditions

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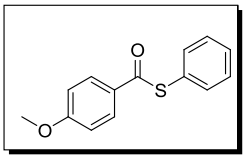
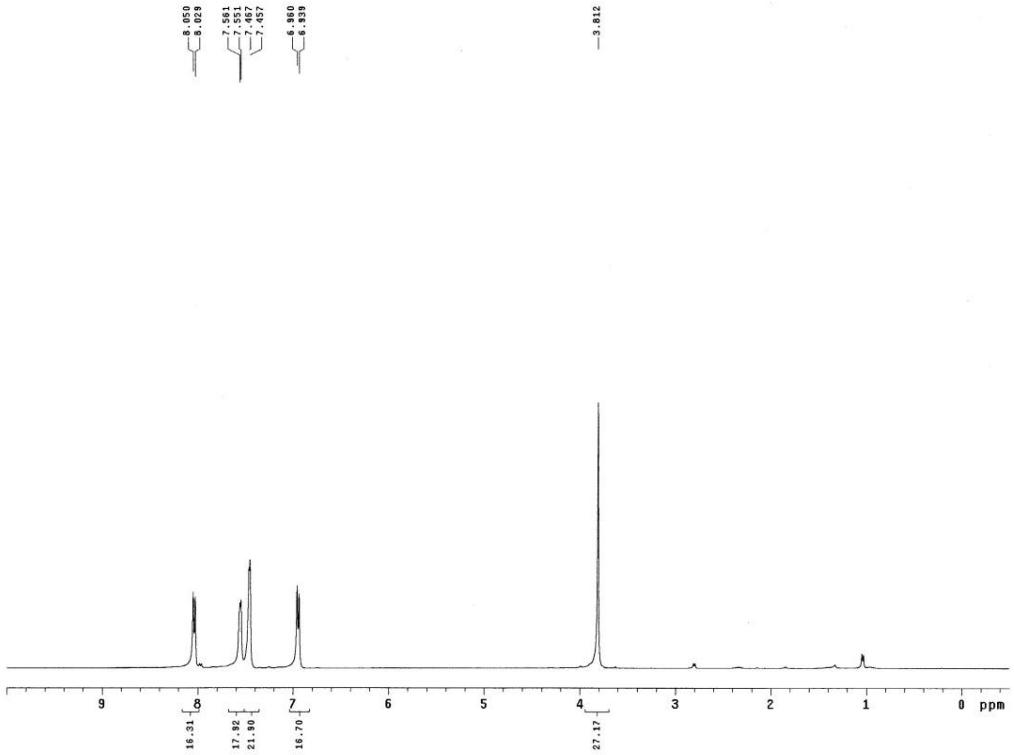
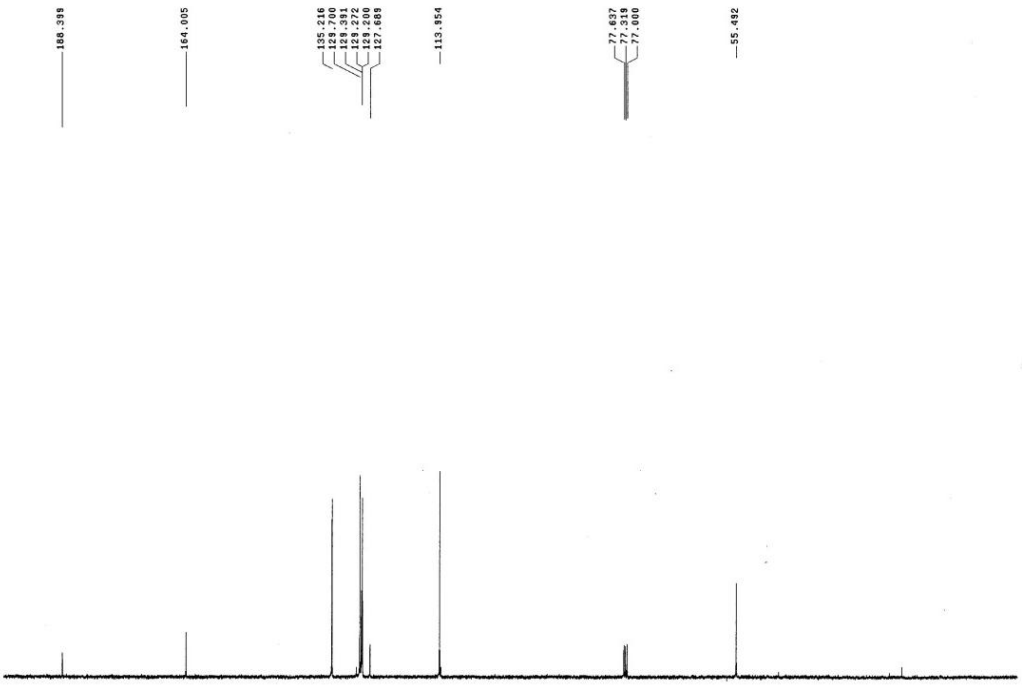
NMR Spectra (^{1}H & ^{13}C) for Compounds **3a-3s, 4a-4v**

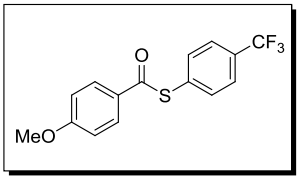
S-phenyl 4-methoxybenzothioate (3a)

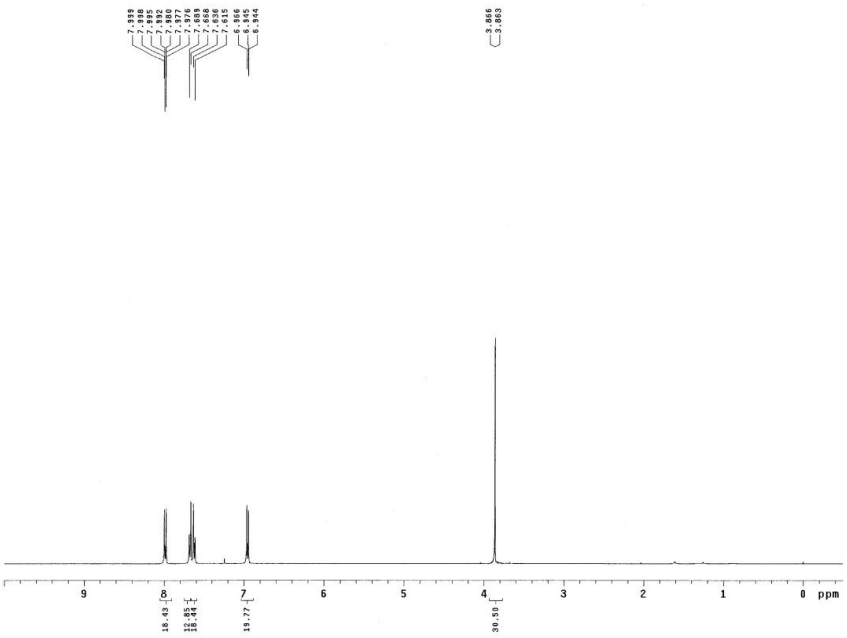


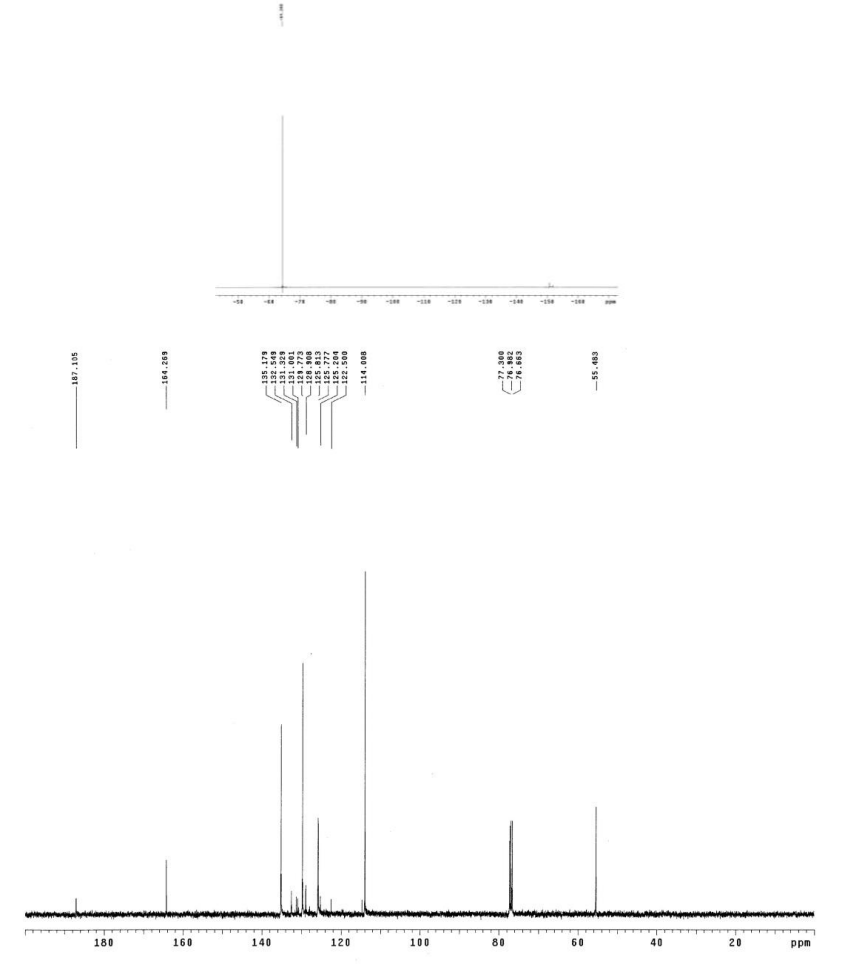




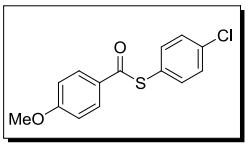
S-{4-(Trifluoromethyl)phenyl} 4-methoxybenzothioate (3b)

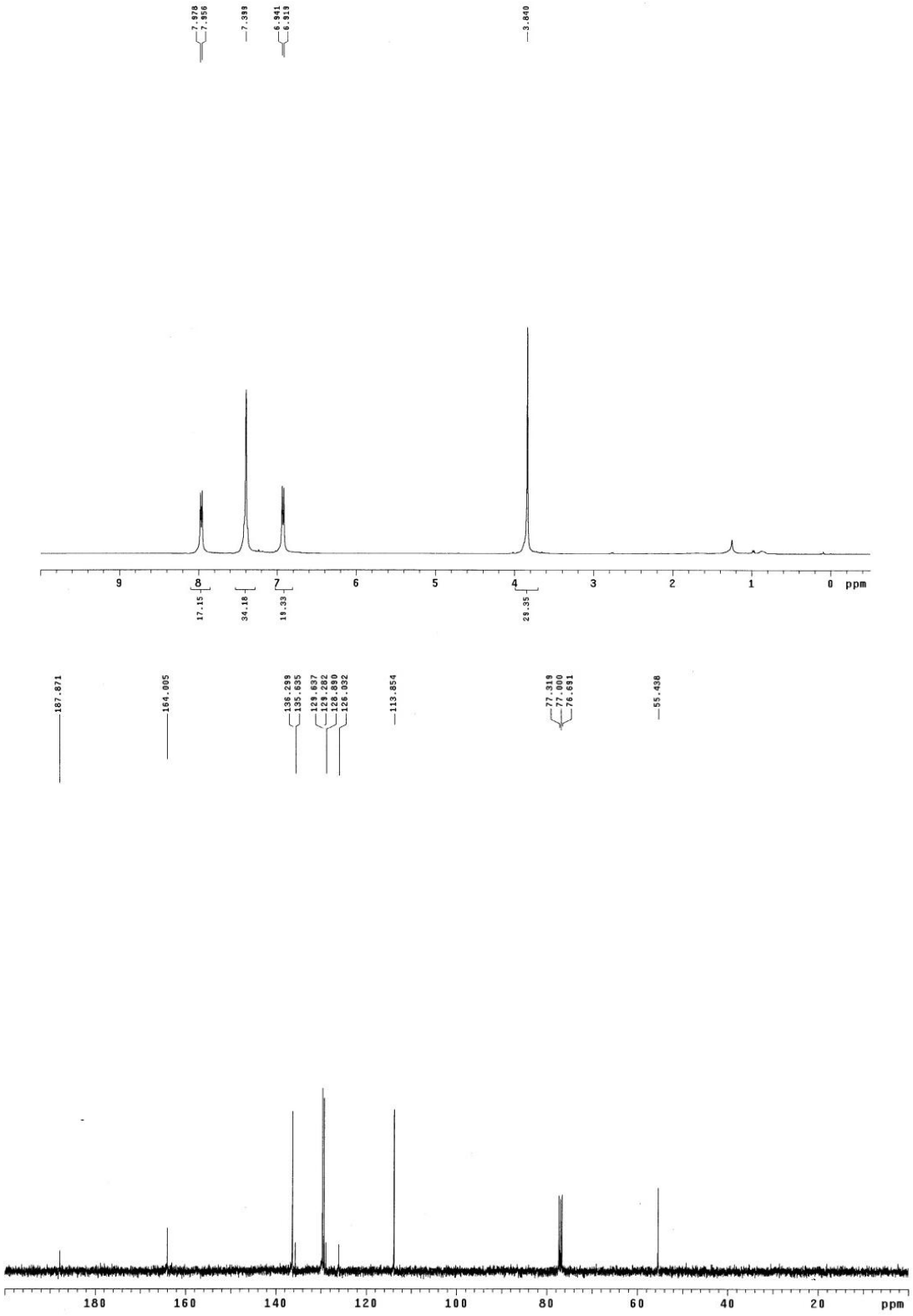




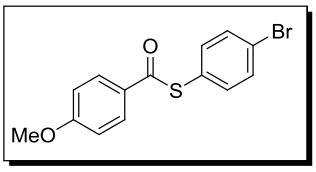


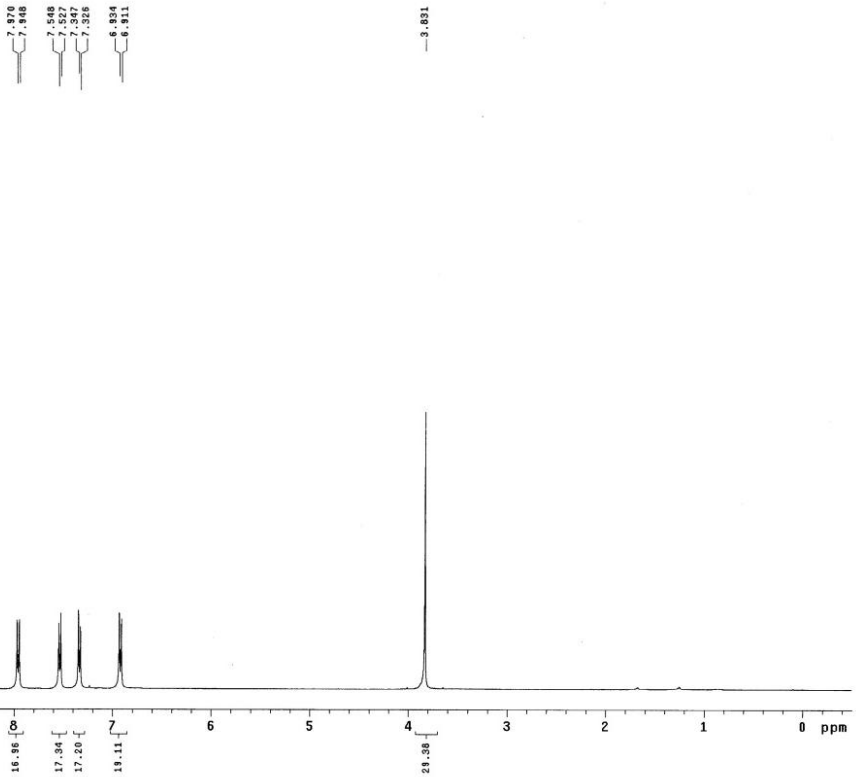
S-(4-Chlorophenyl) 4-methoxybenzothioate (3c)

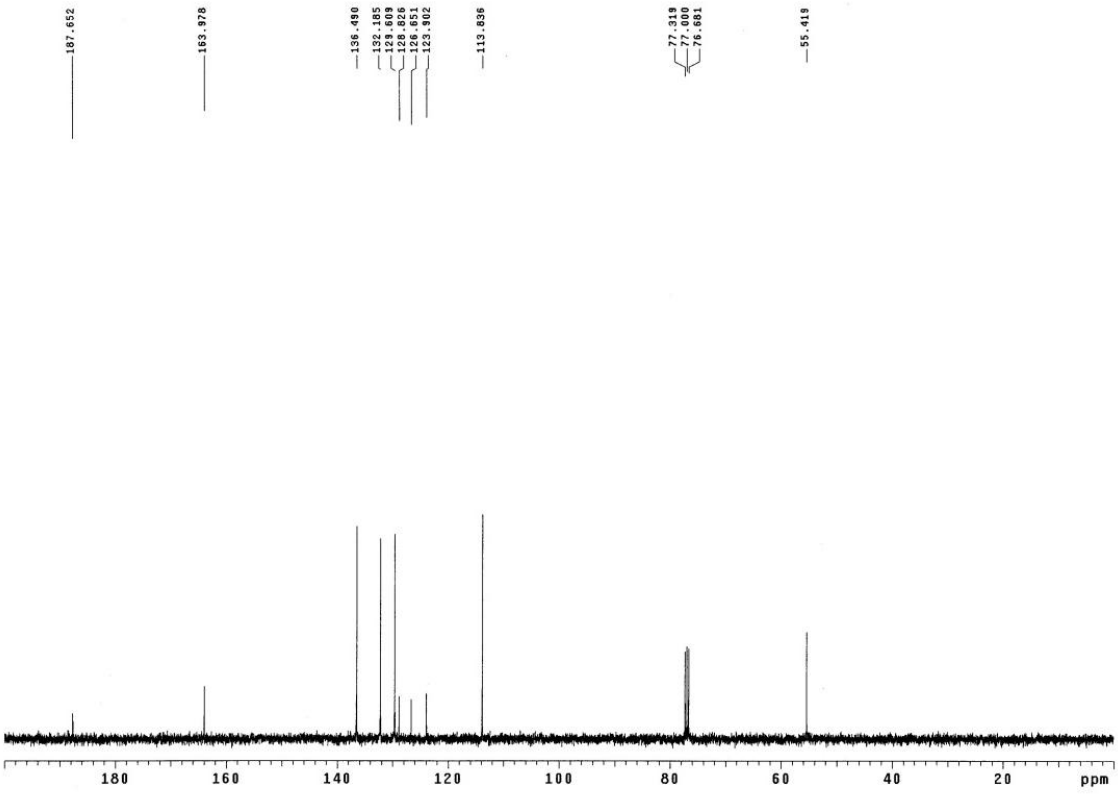




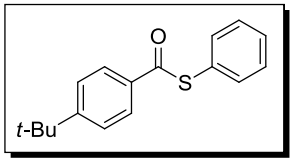
S-(4-Bromophenyl) 4-methoxybenzothioate (3d)

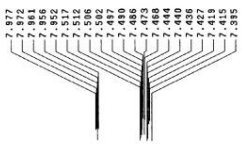


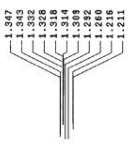


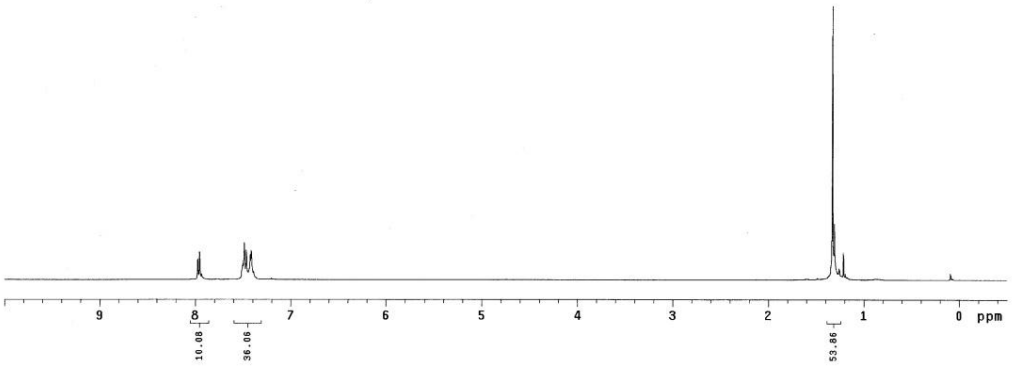


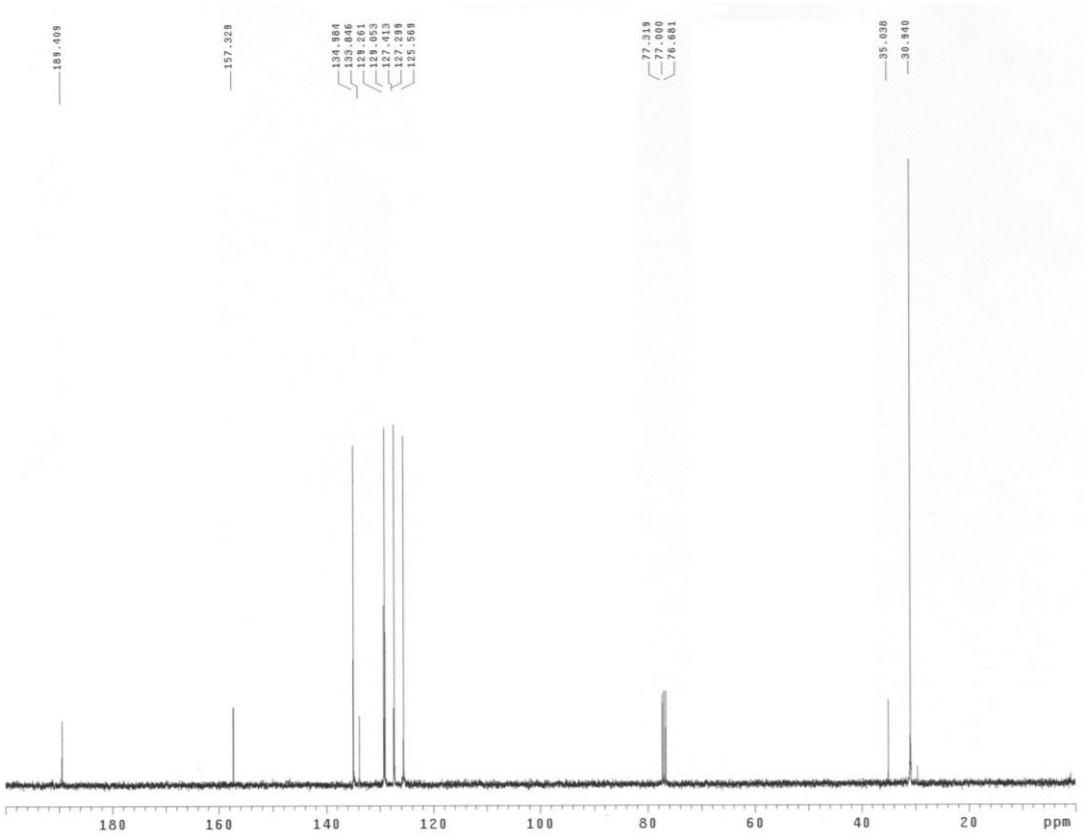
S-Phenyl 4-(*tert*-butyl)benzothioate (3e)



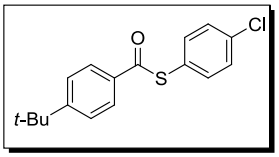


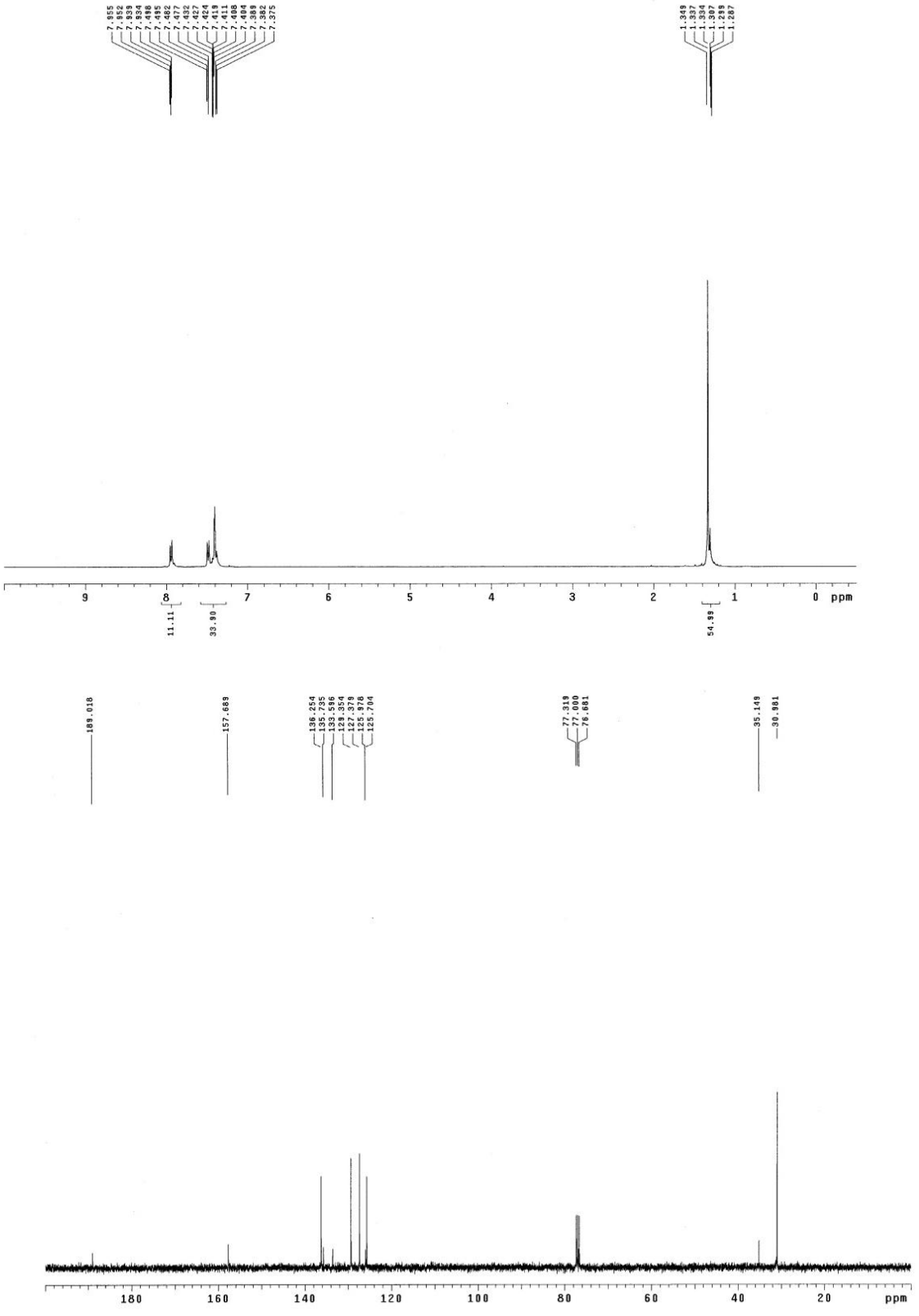




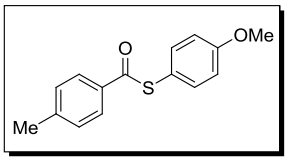


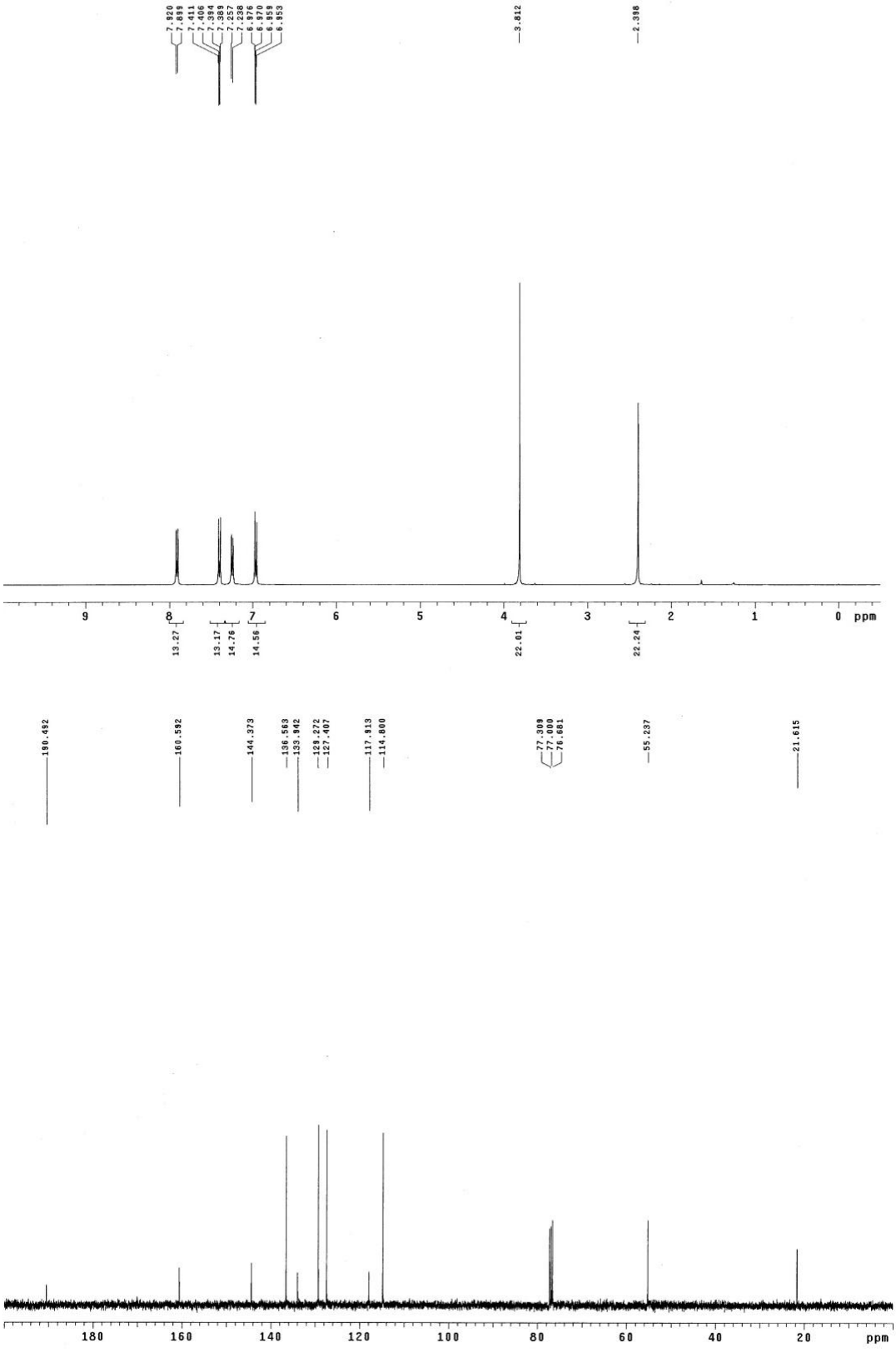
S-(4-Chlorophenyl) 4-(*tert*-butyl)benzothioate (3f)



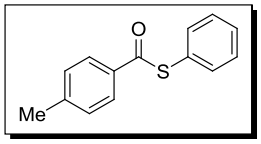


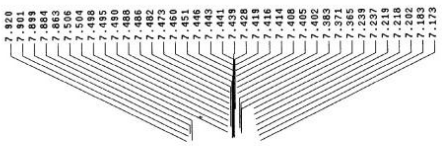
S-(4-Methoxyphenyl) 4-methylbenzothioate (3g)

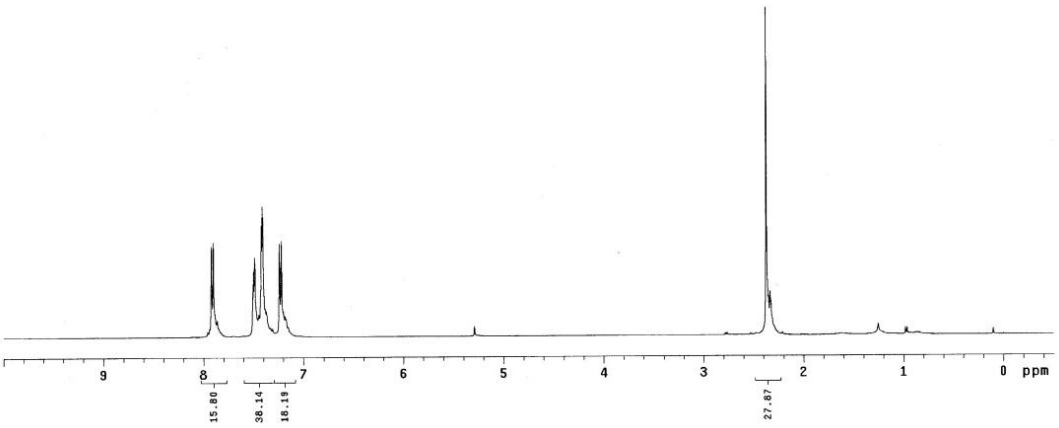


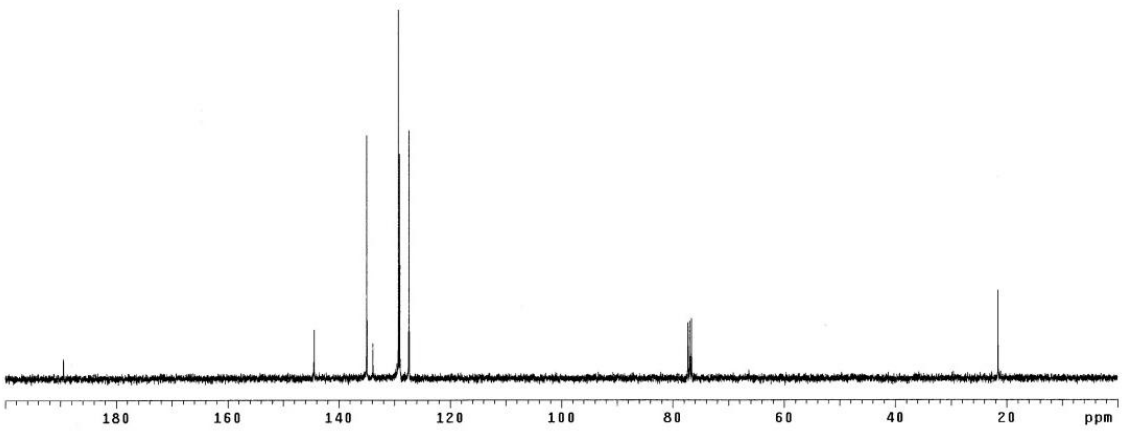


S-Phenyl 4-methylbenzothioate (3h)

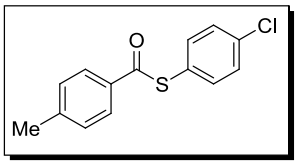


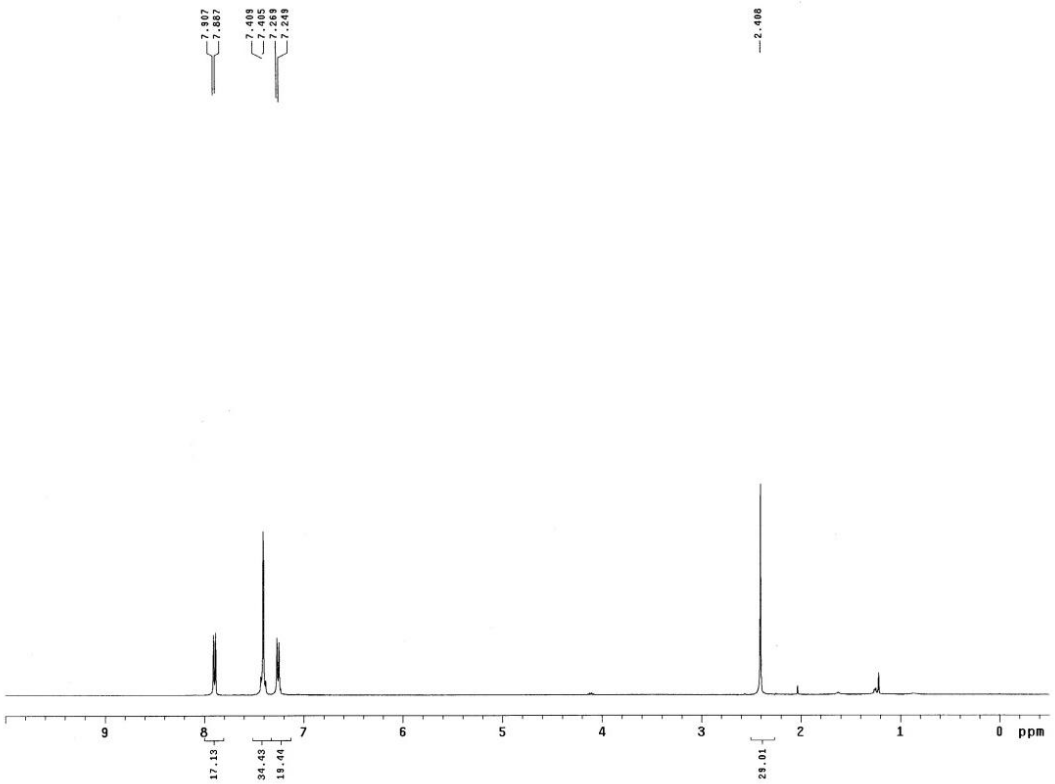


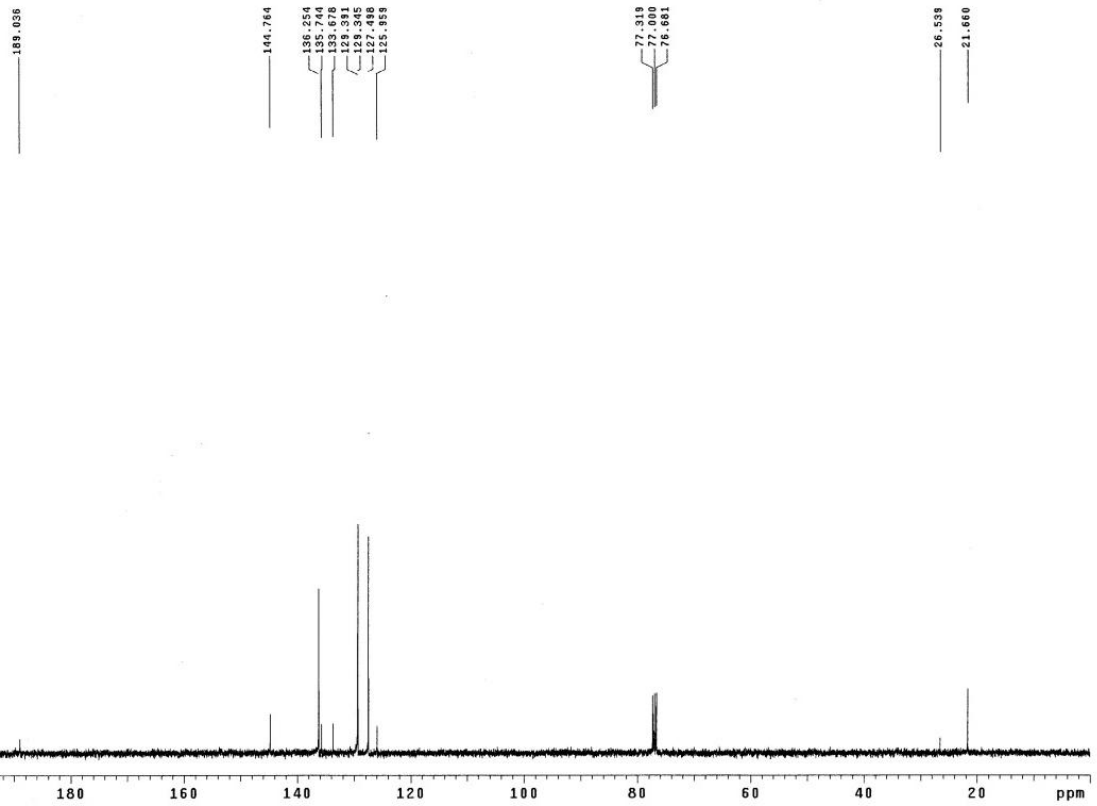




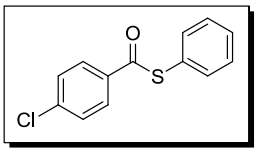
S-(4-Chlorophenyl) 4-methylbenzothioate (3i)

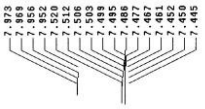


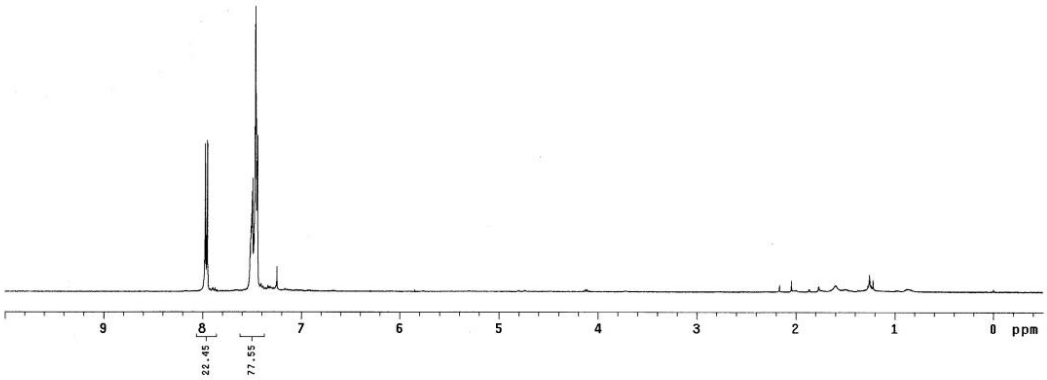


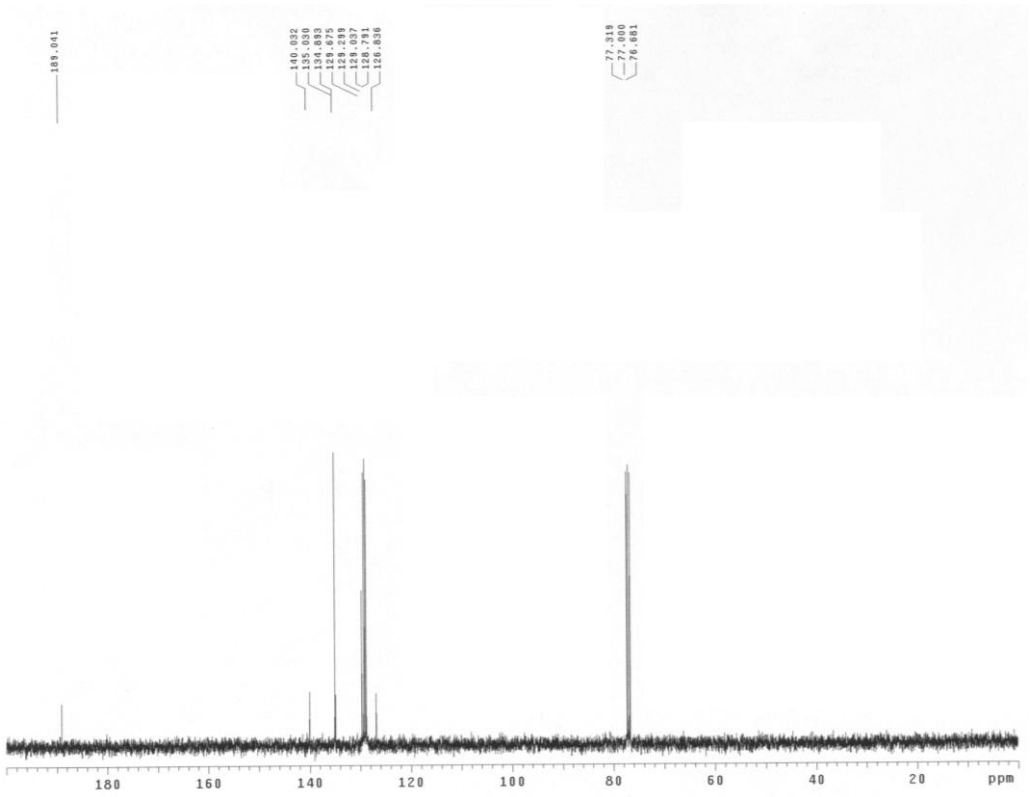


S-Phenyl 4-chlorobenzothioate (3j)

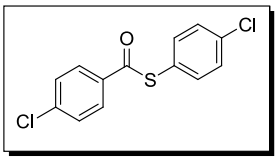


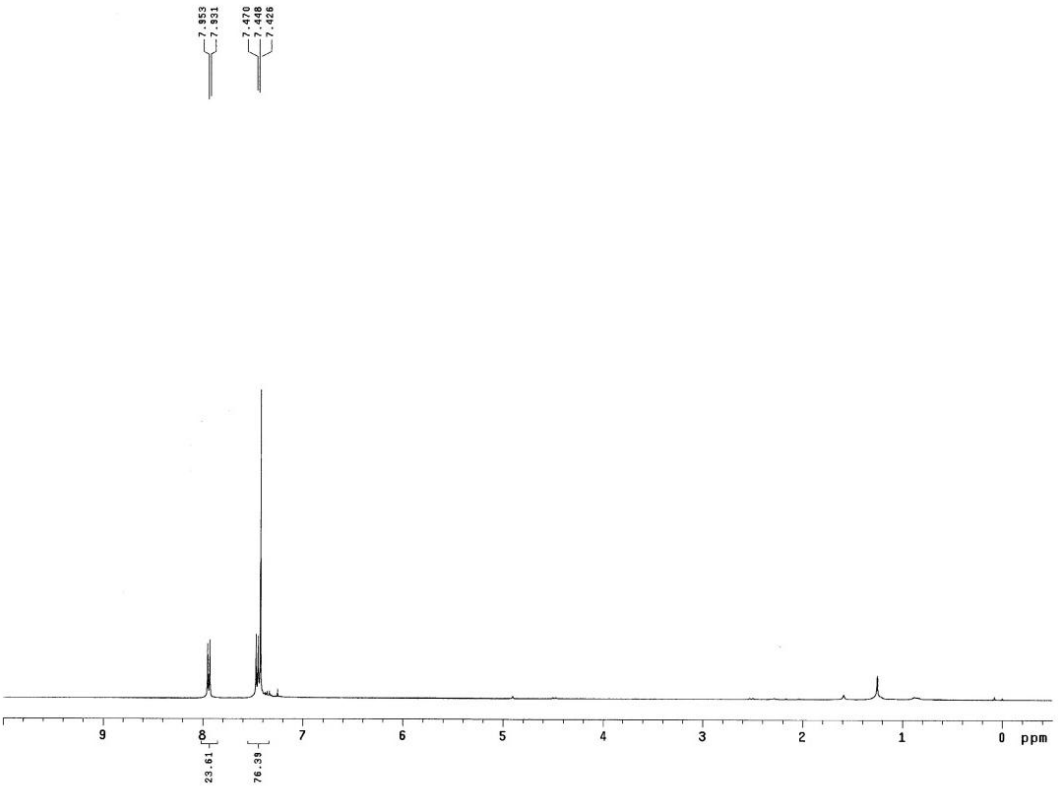


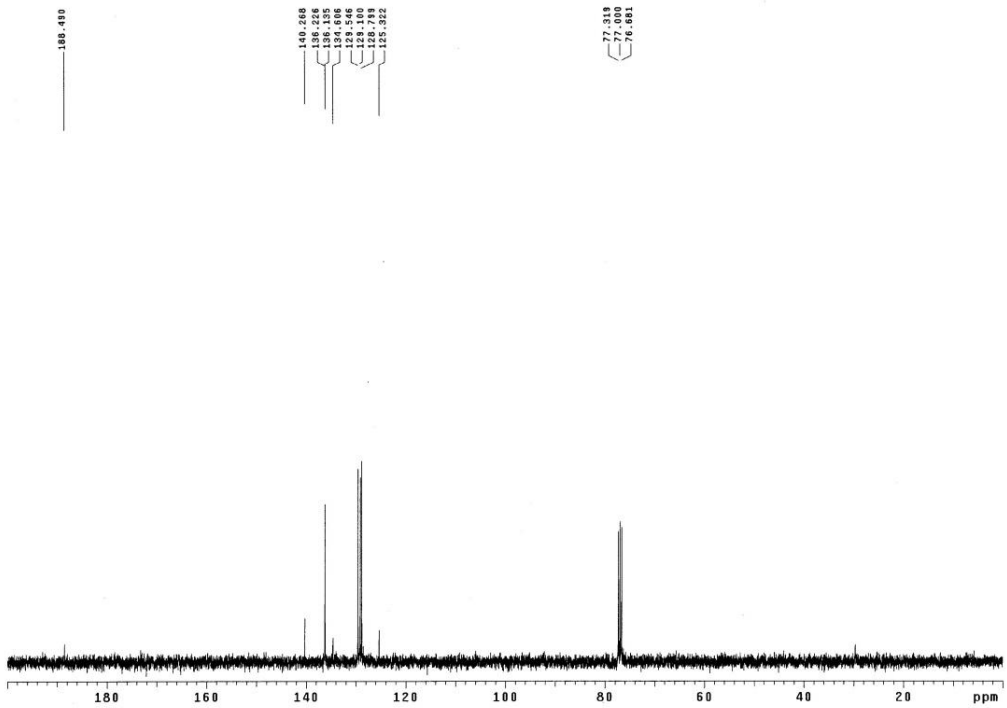




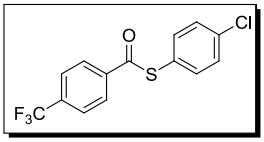
S-(4-Chlorophenyl) 4-chlorobenzothioate (3k)

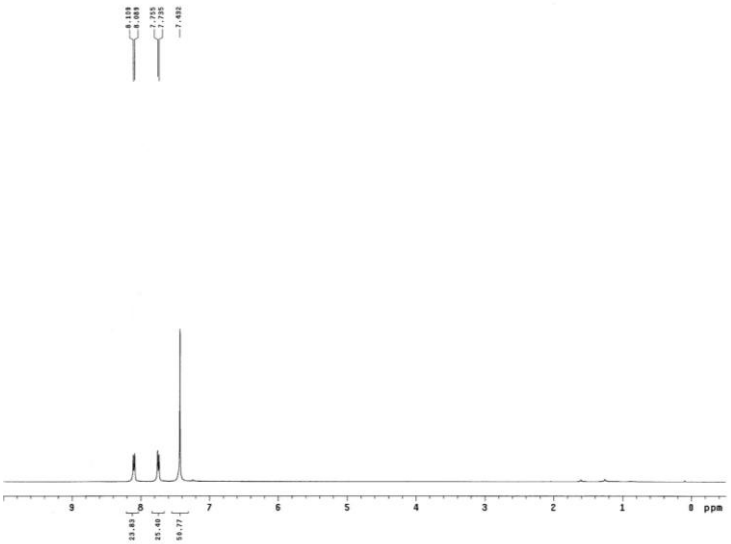


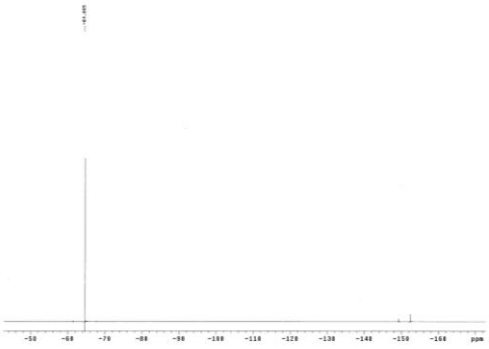


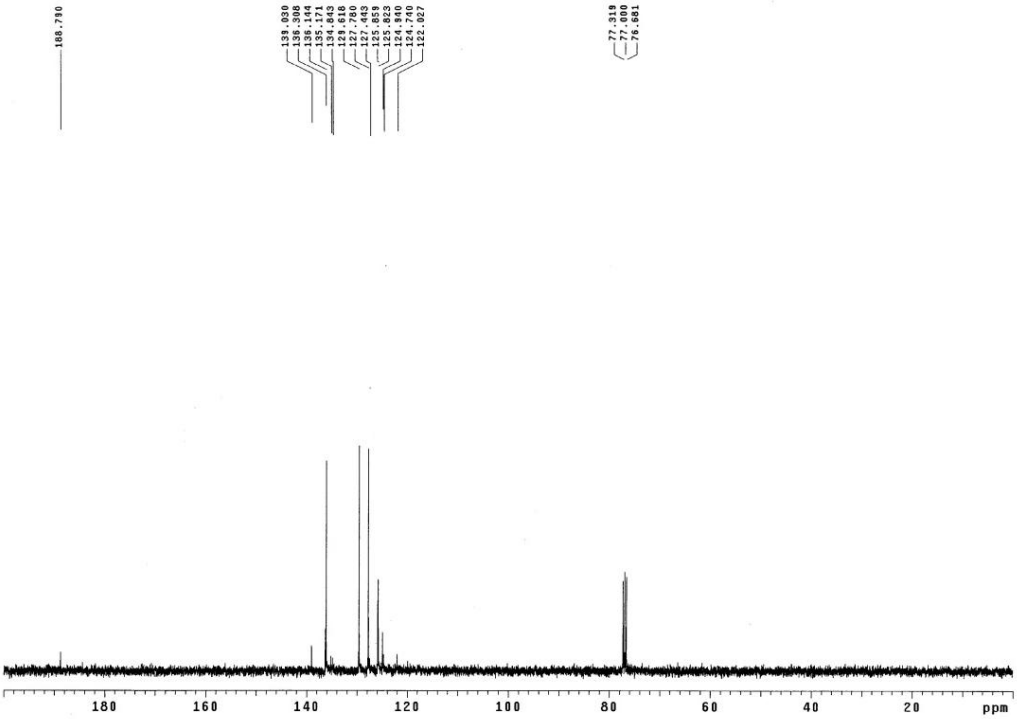


S-(4-Chlorophenyl) 4-(trifluoromethyl)benzothioate (3l)

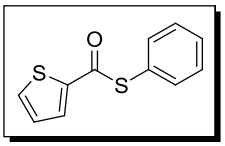


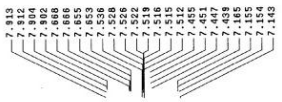


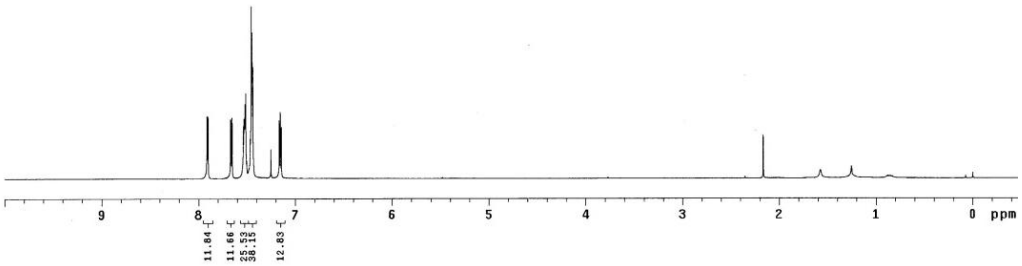


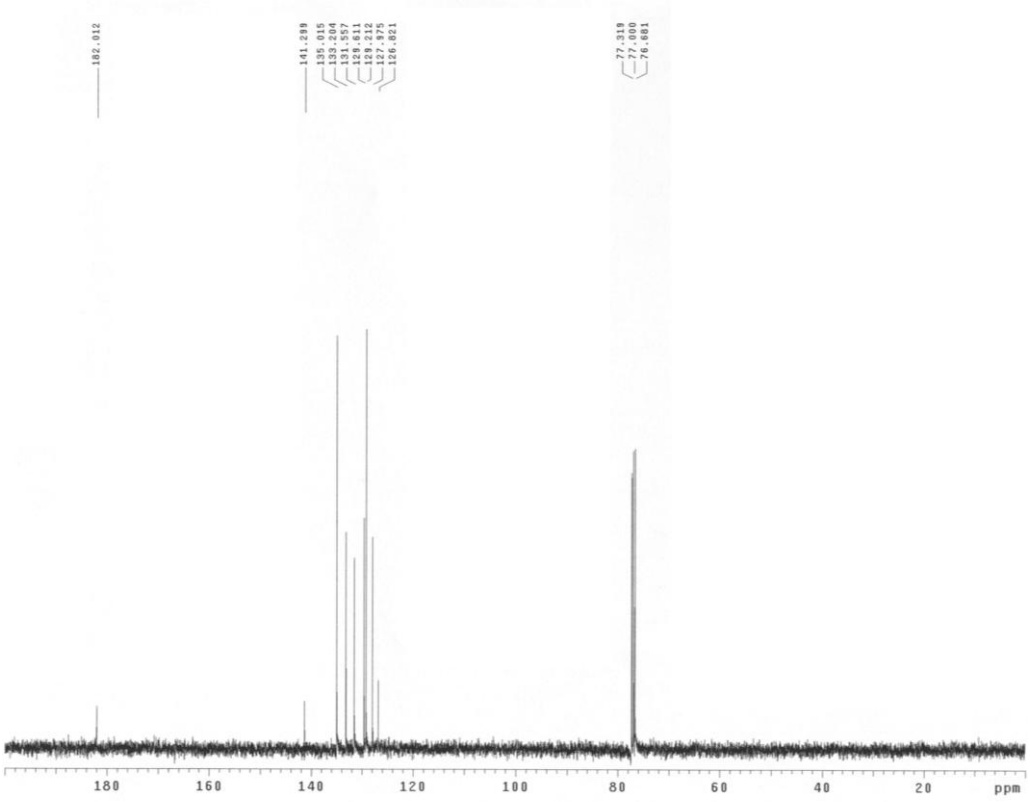


S-Phenyl thiophene-2-carbothioate (3m)

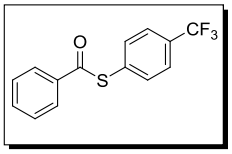


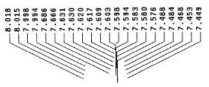


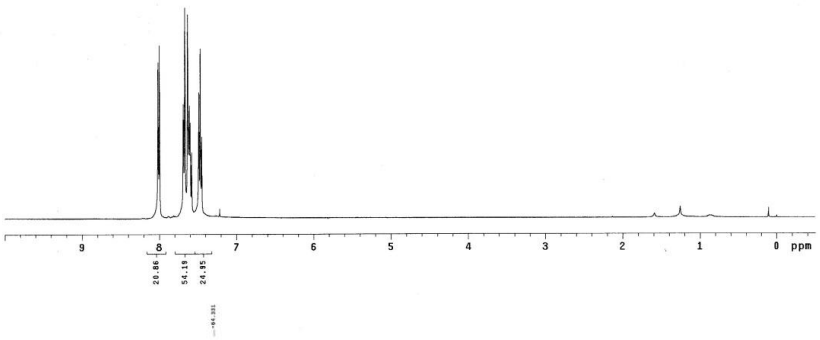


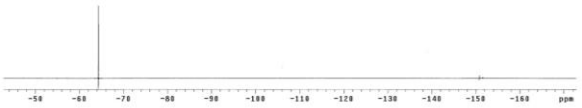


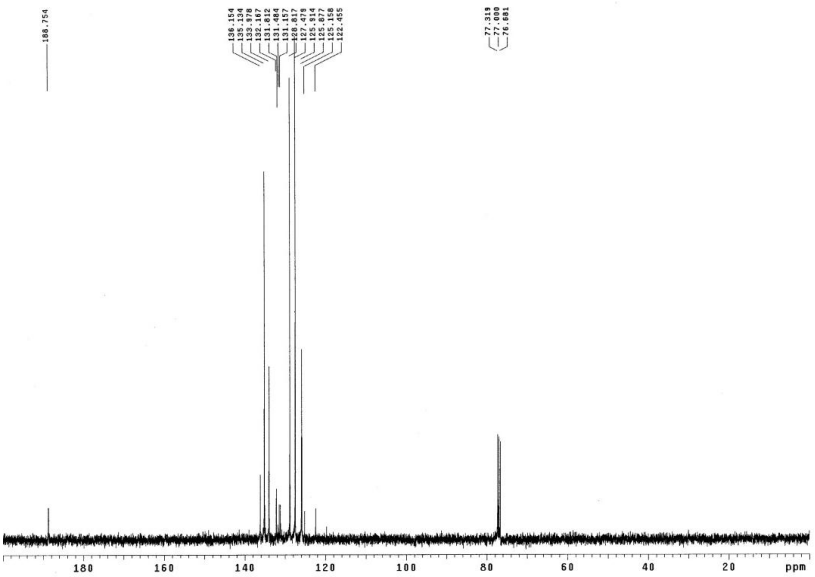
S-(4-(Trifluoromethyl)phenyl) benzothioate (3n)



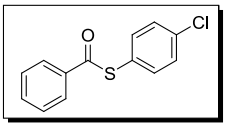


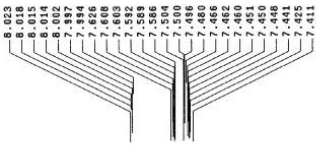


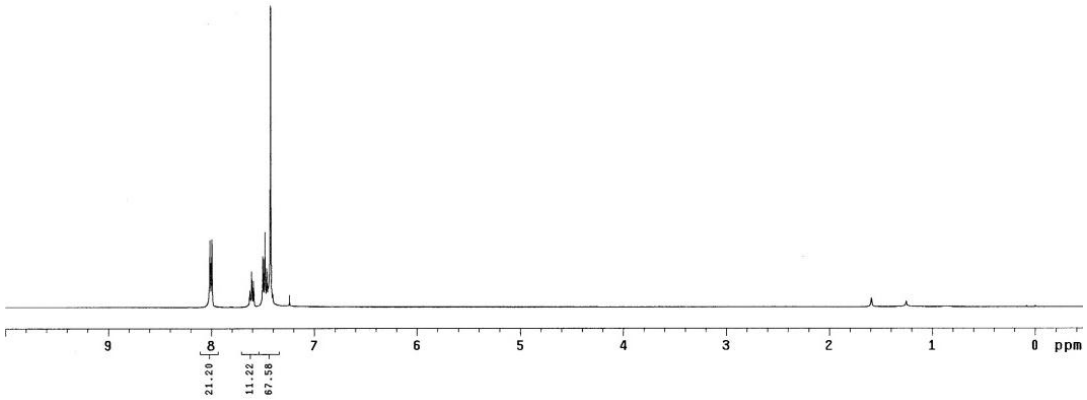


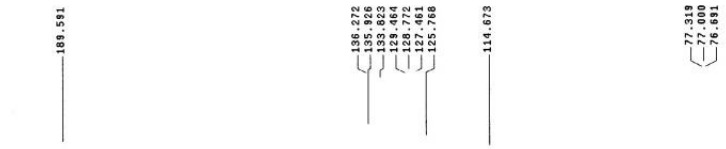


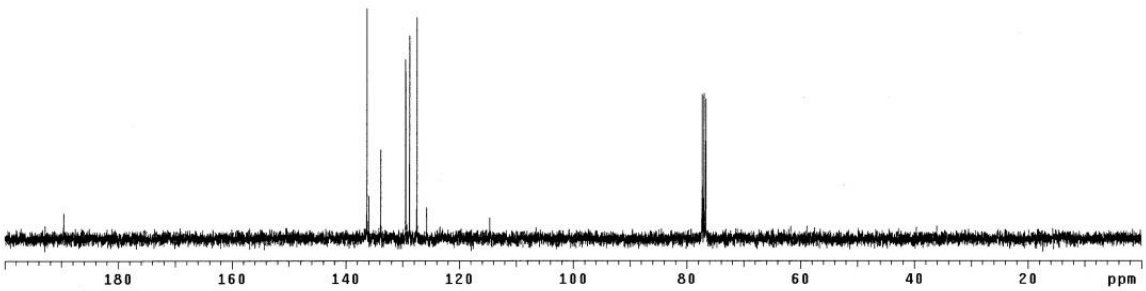
S-(4-Chlorophenyl) benzothioate (3o)



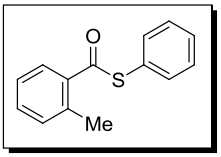


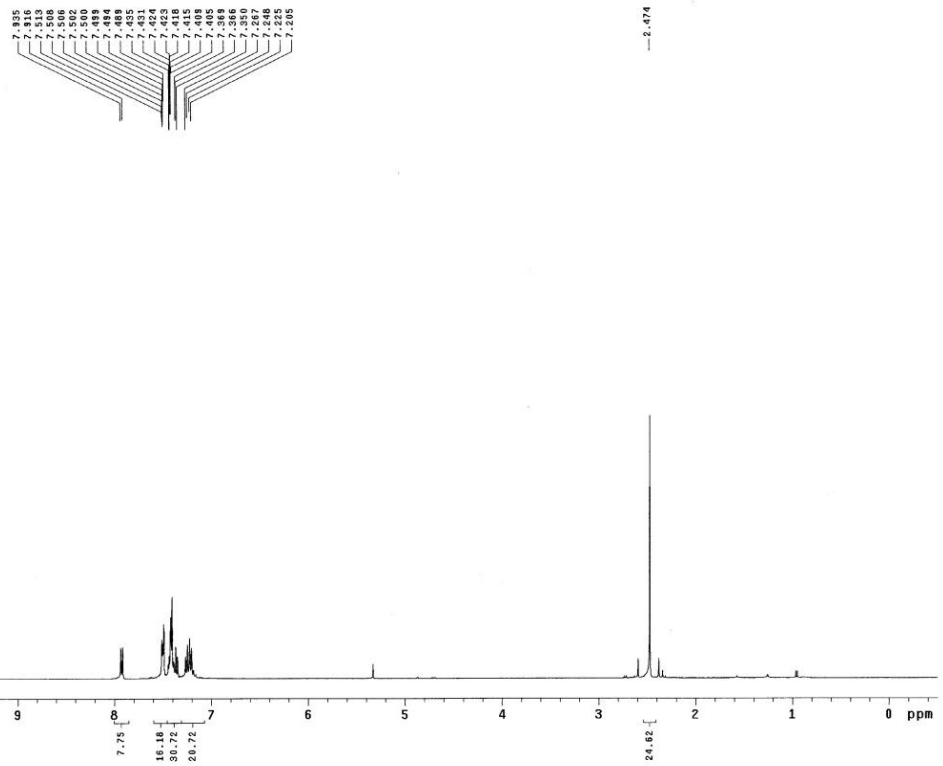


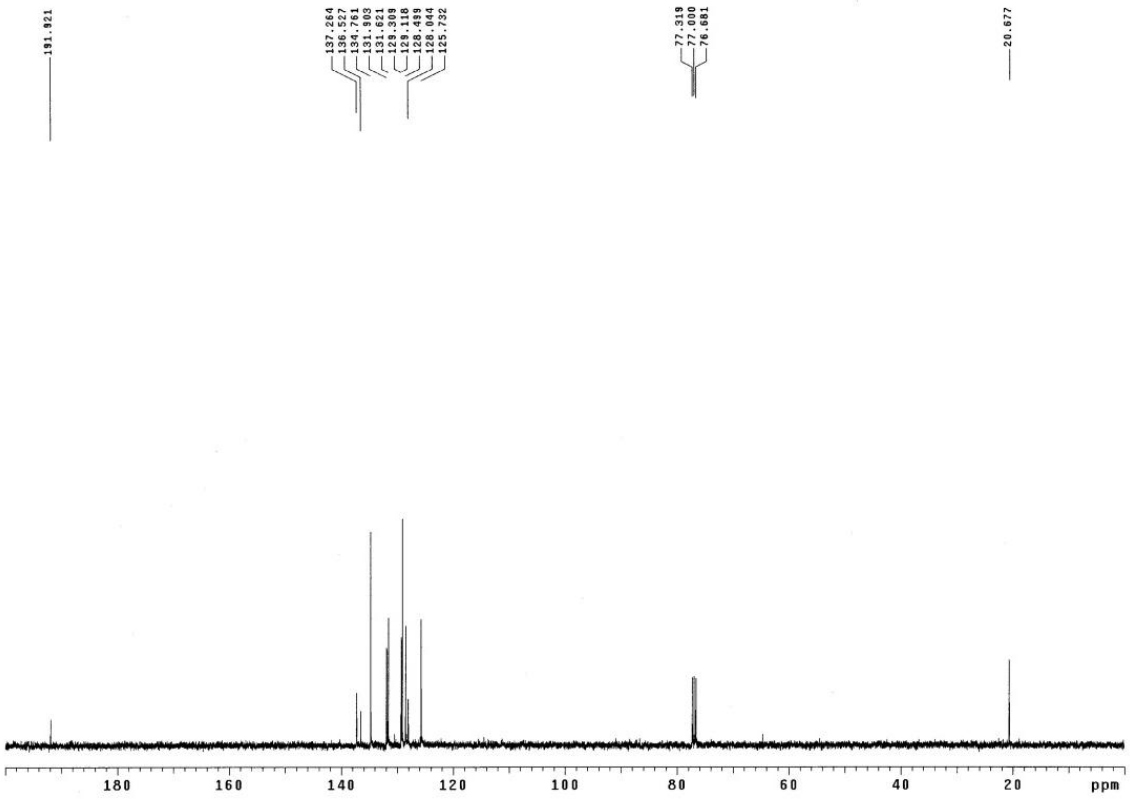




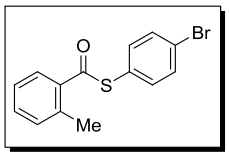
S-Phenyl 2-methylbenzothioate (3p)

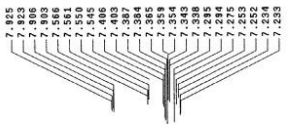


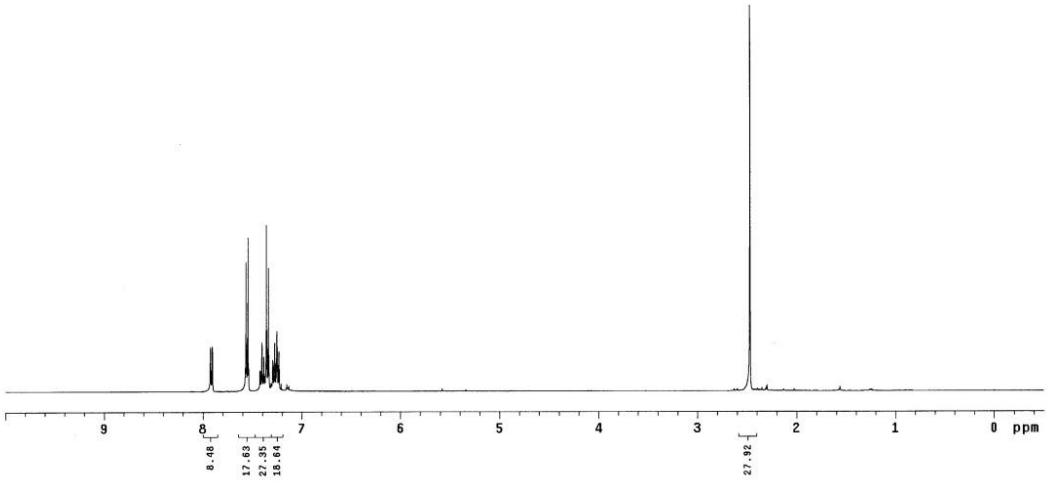


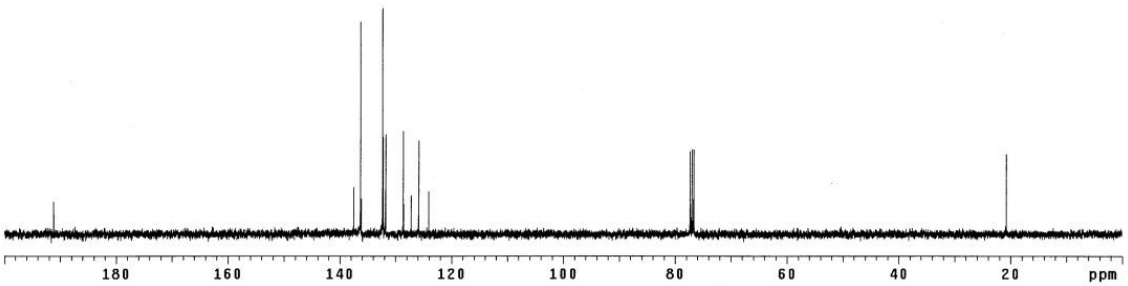


S-(4-Bromophenyl) 2-methylbenzothioate (3q)

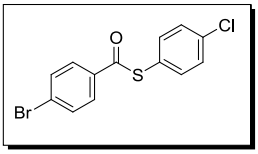


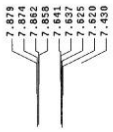


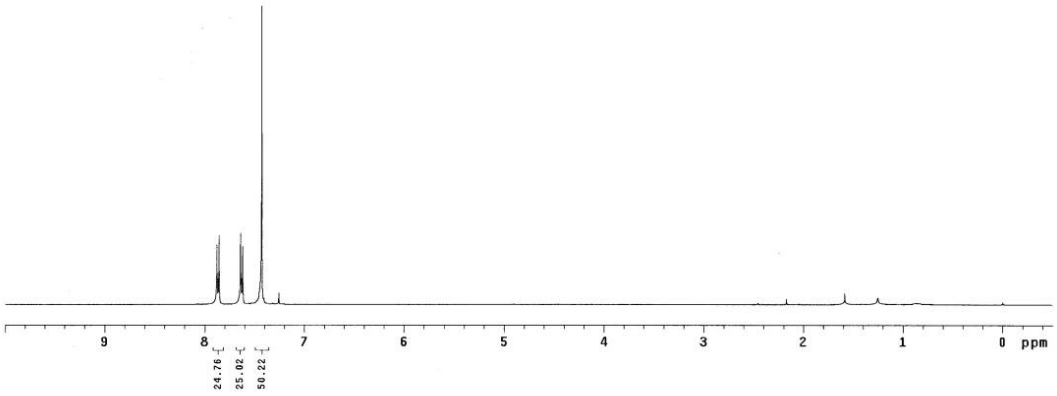


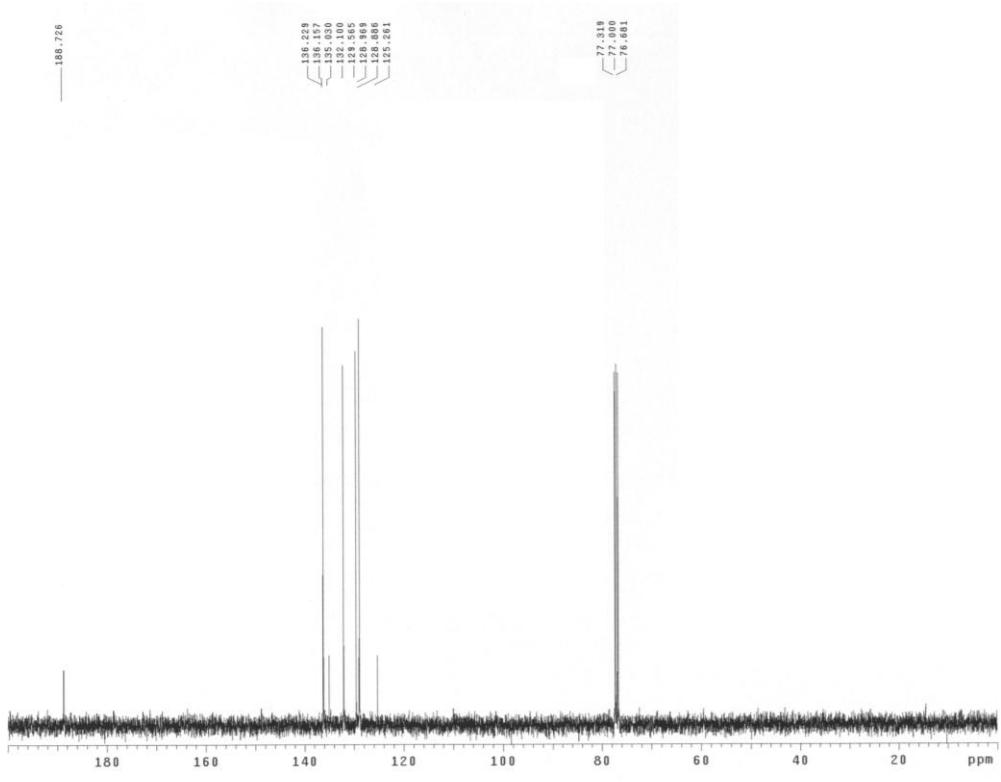


S-(4-Chlorophenyl) 4-bromobenzothioate (3r)

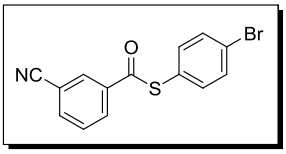


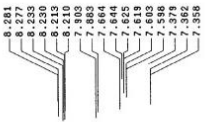


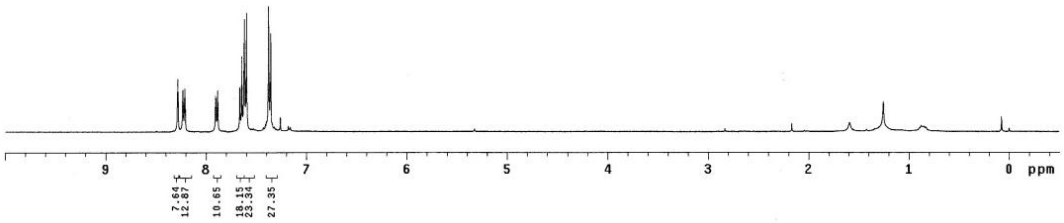


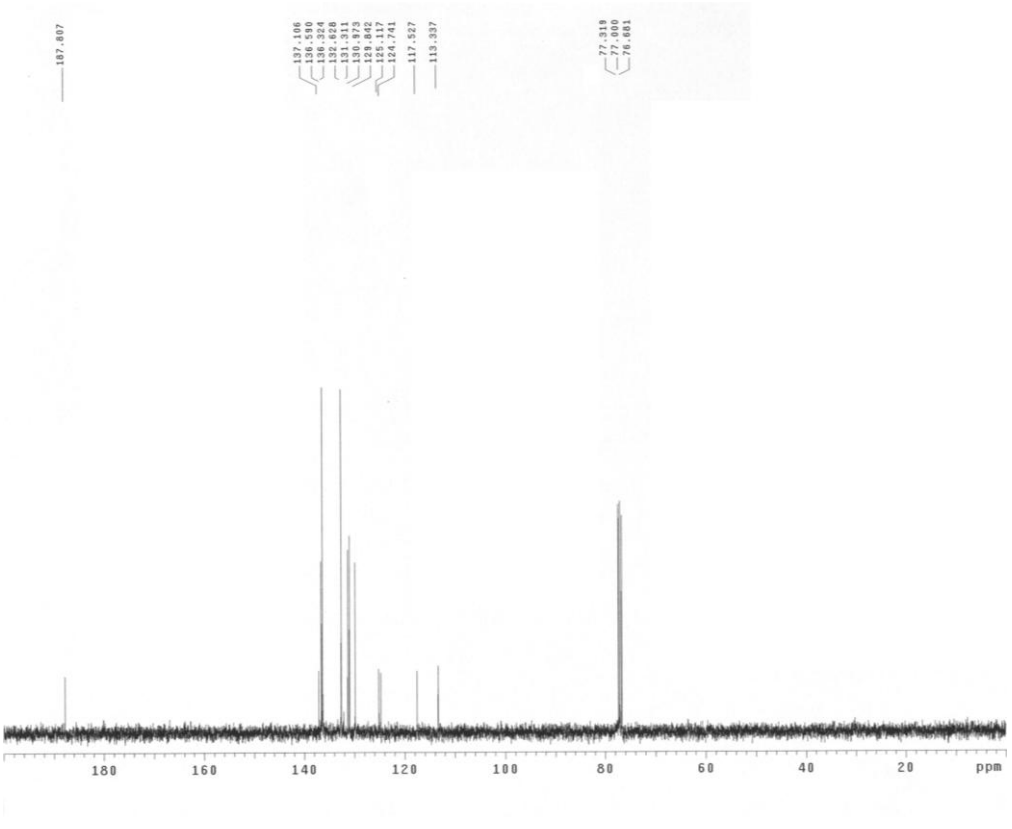


S-(4-Bromophenyl) 3-cyanobenzothioate (3s)

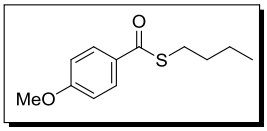


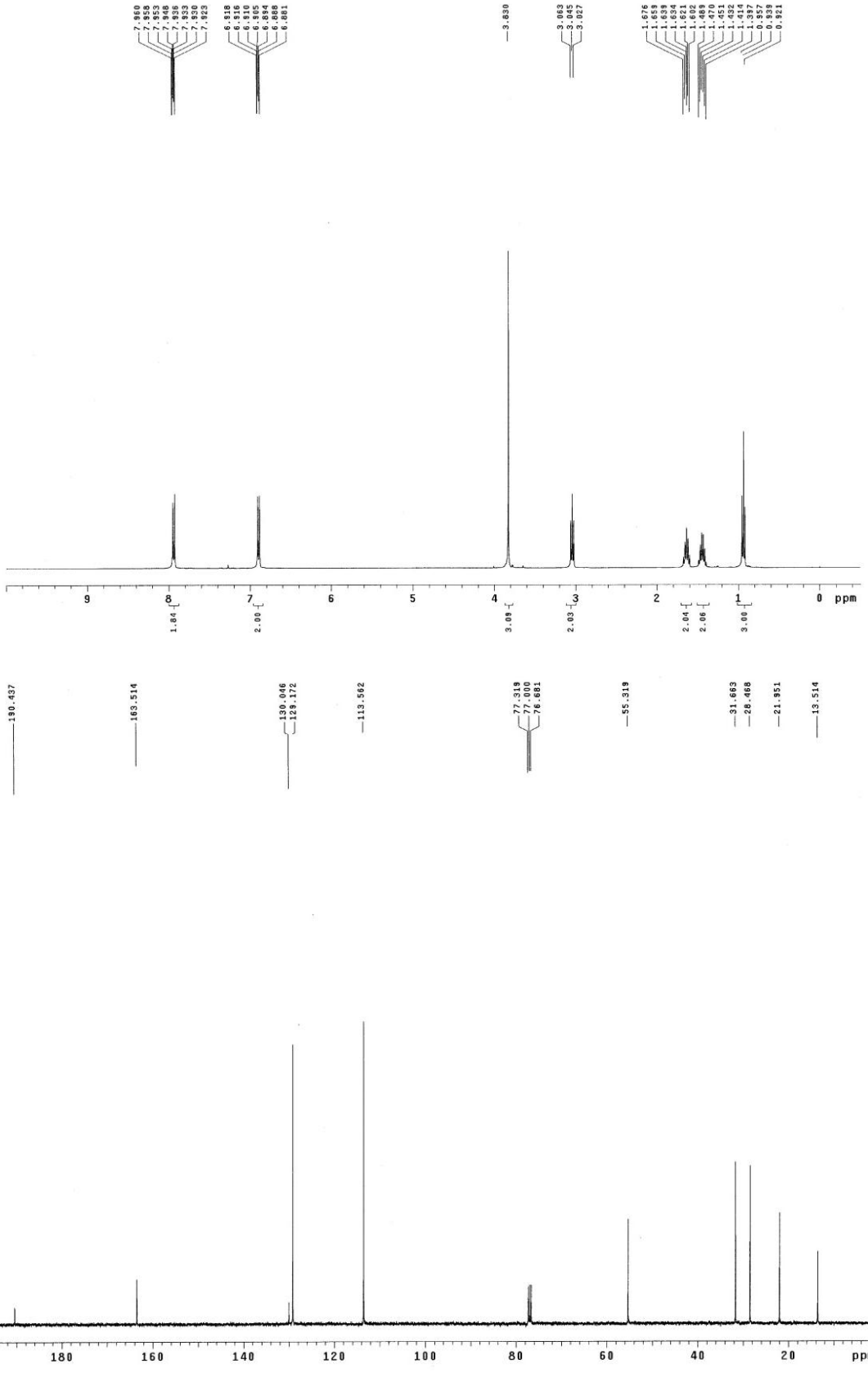




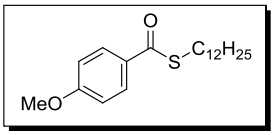


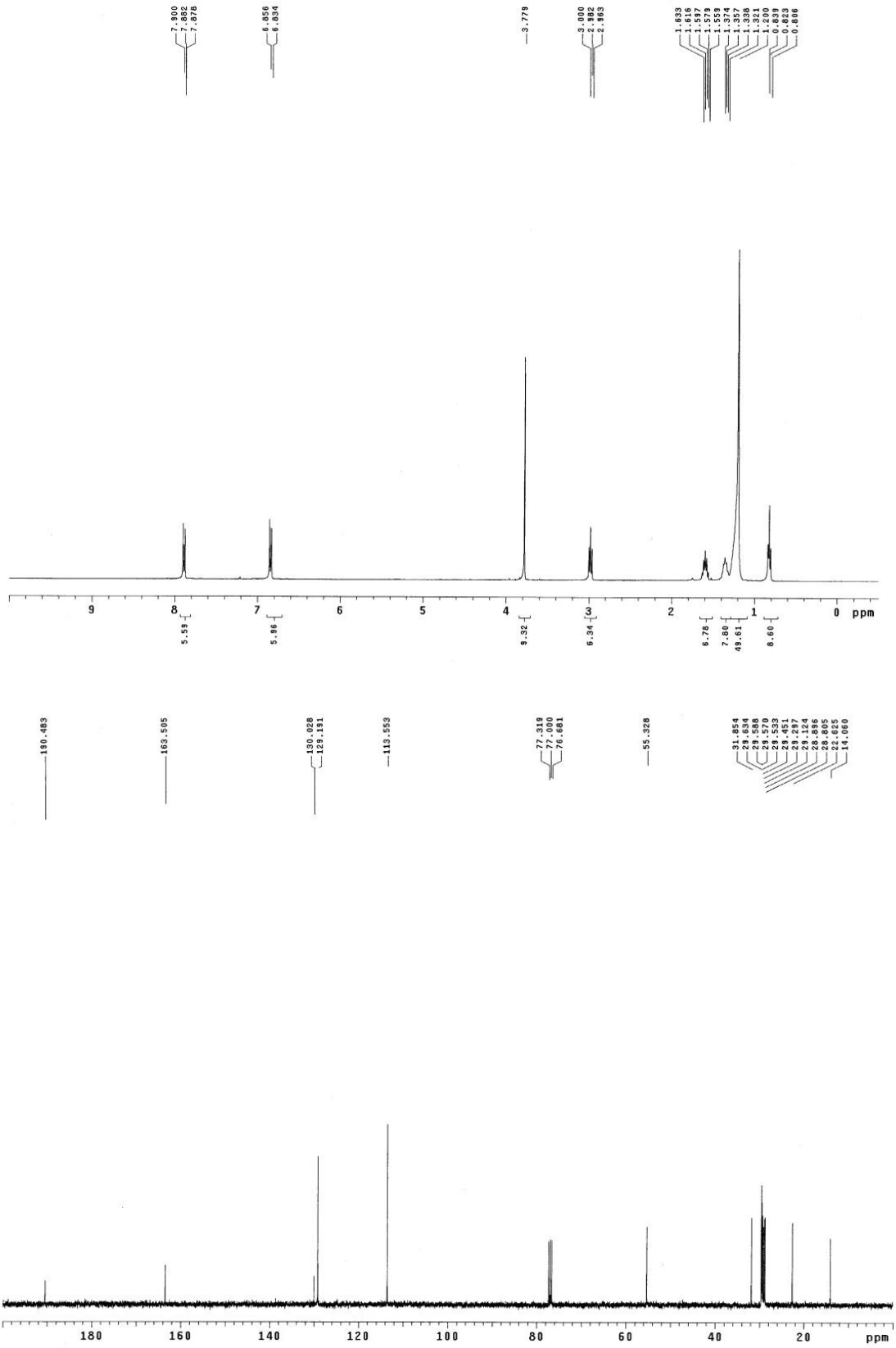
S-(*n*-Butyl) 4-methoxybenzothioate (4a)



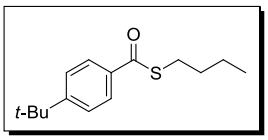


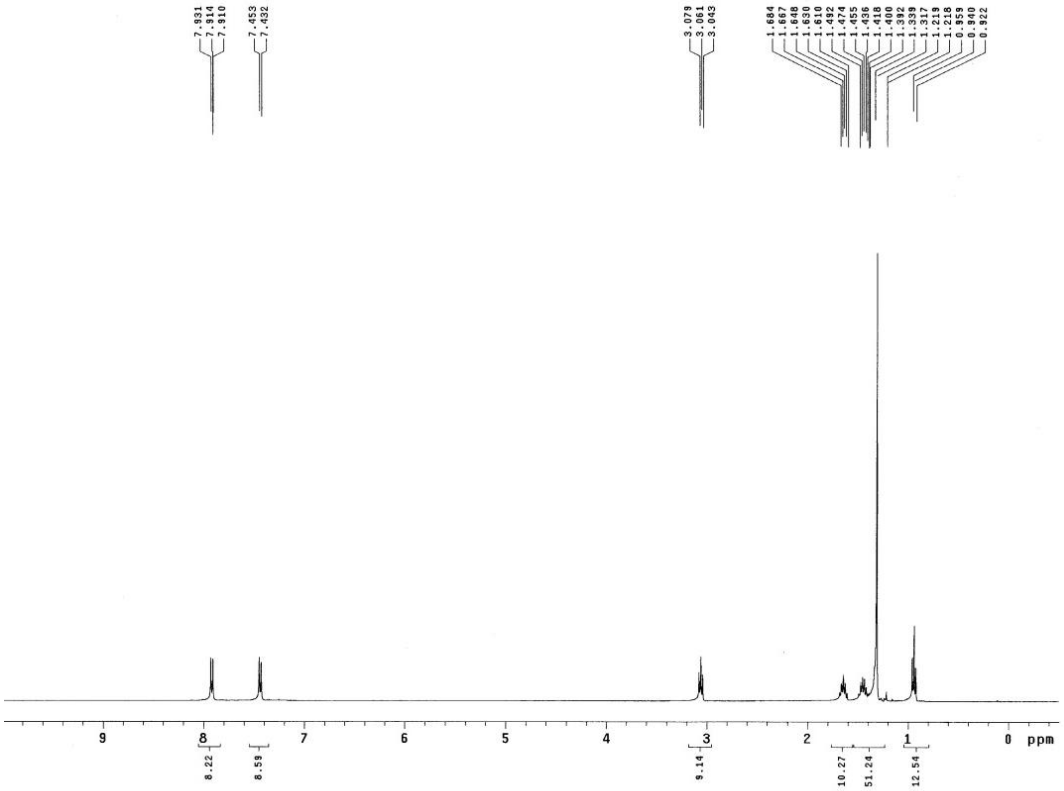
S-(*n*-Dodecyl) 4-methoxybenzothioate (4b)

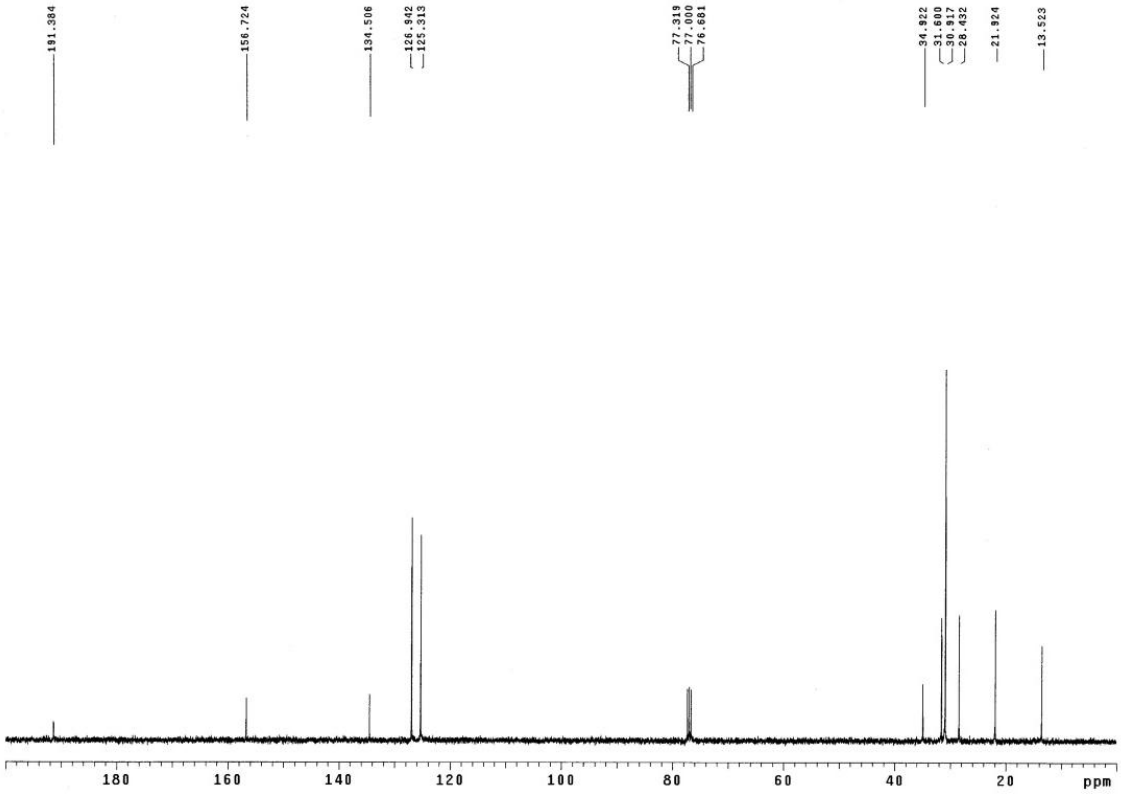




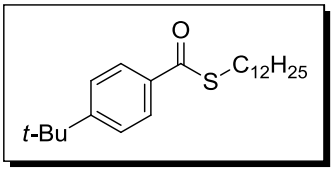
S-(*n*-Butyl) 4-(*t*-butyl) benzothioate (4c)

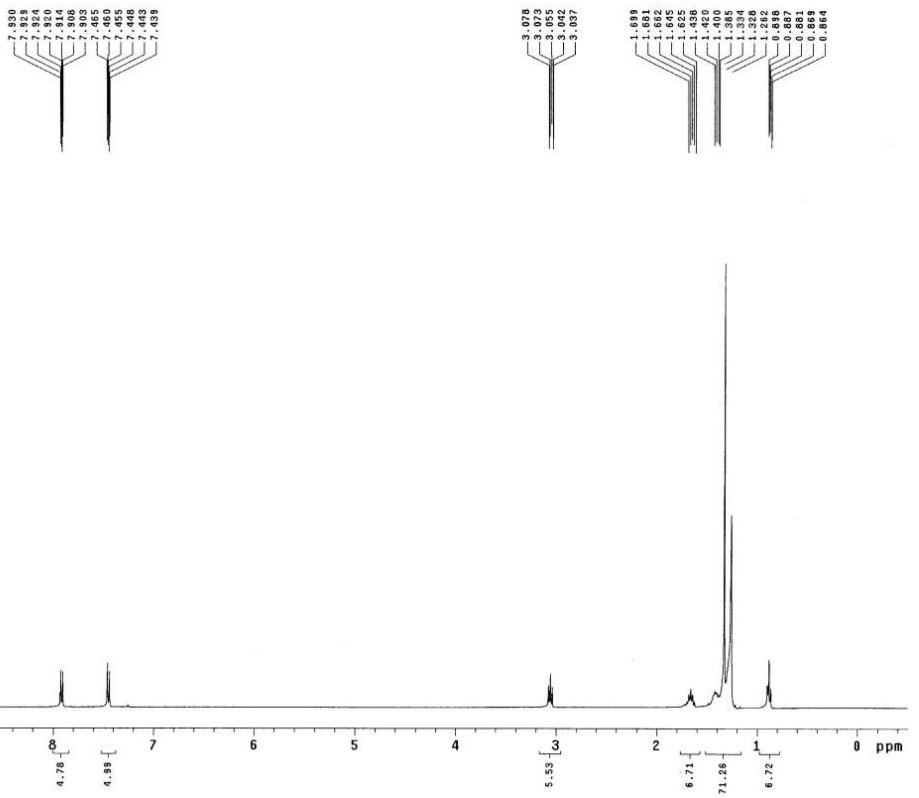


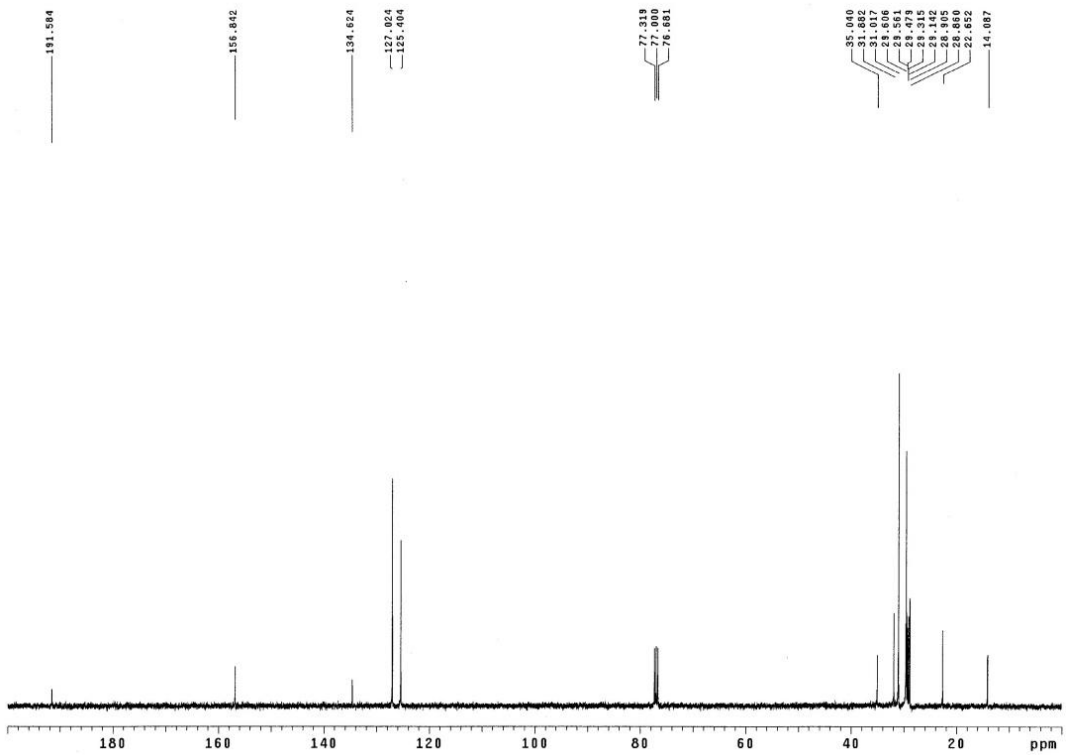




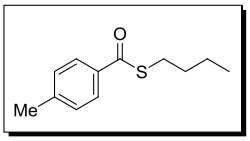
S-(*n*-Dodecyl) 4-(*t*-butyl)benzothioate (4d)

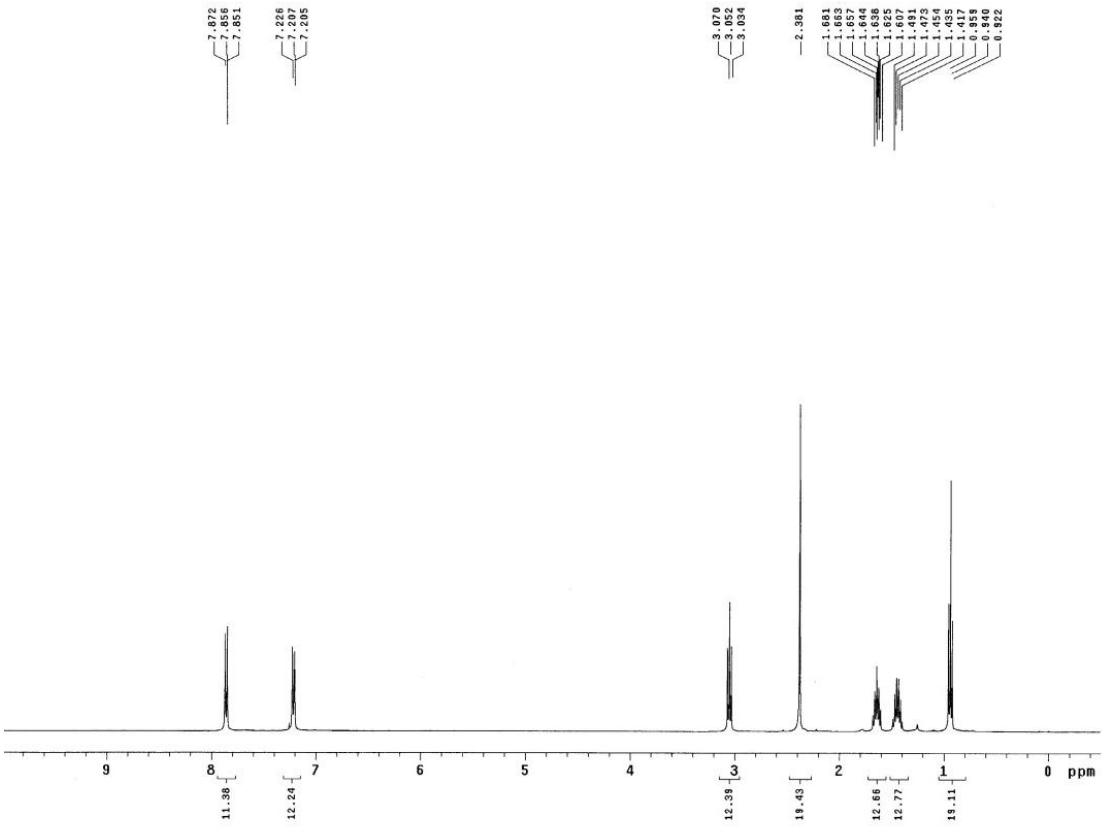


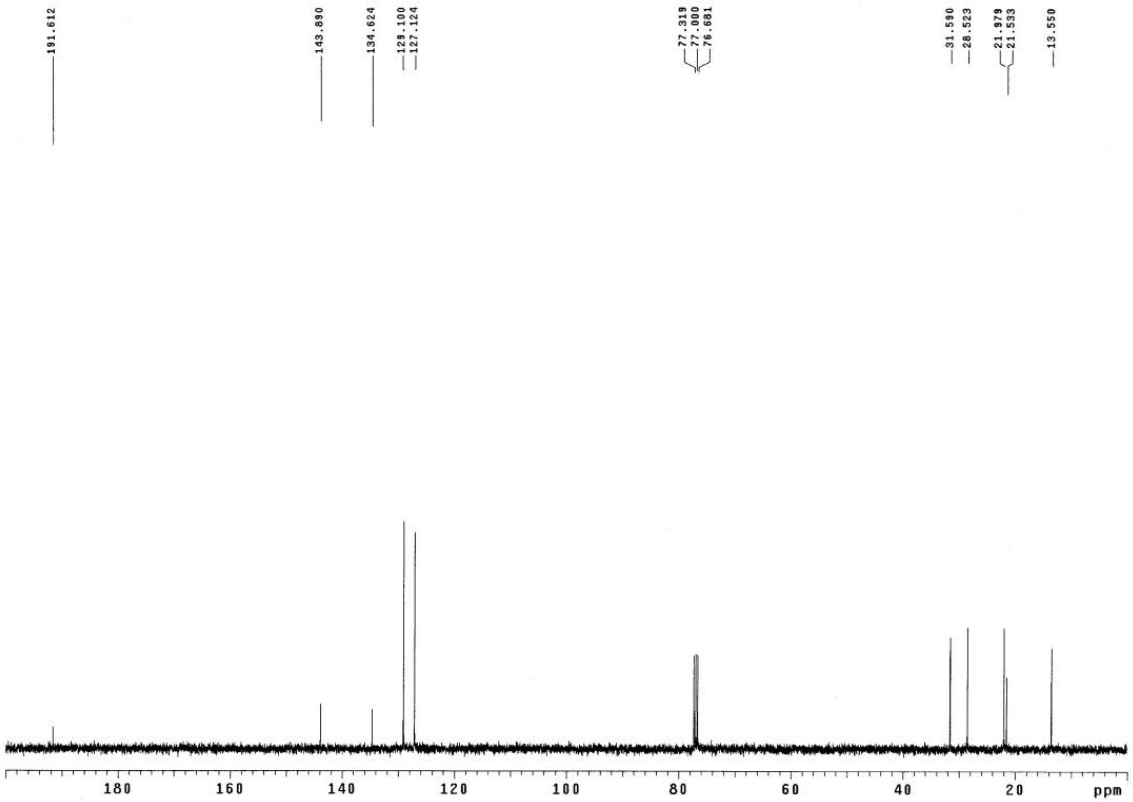




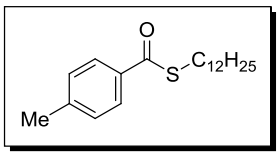
S-(*n*-Butyl) 4-methylbenzothioate (4e)

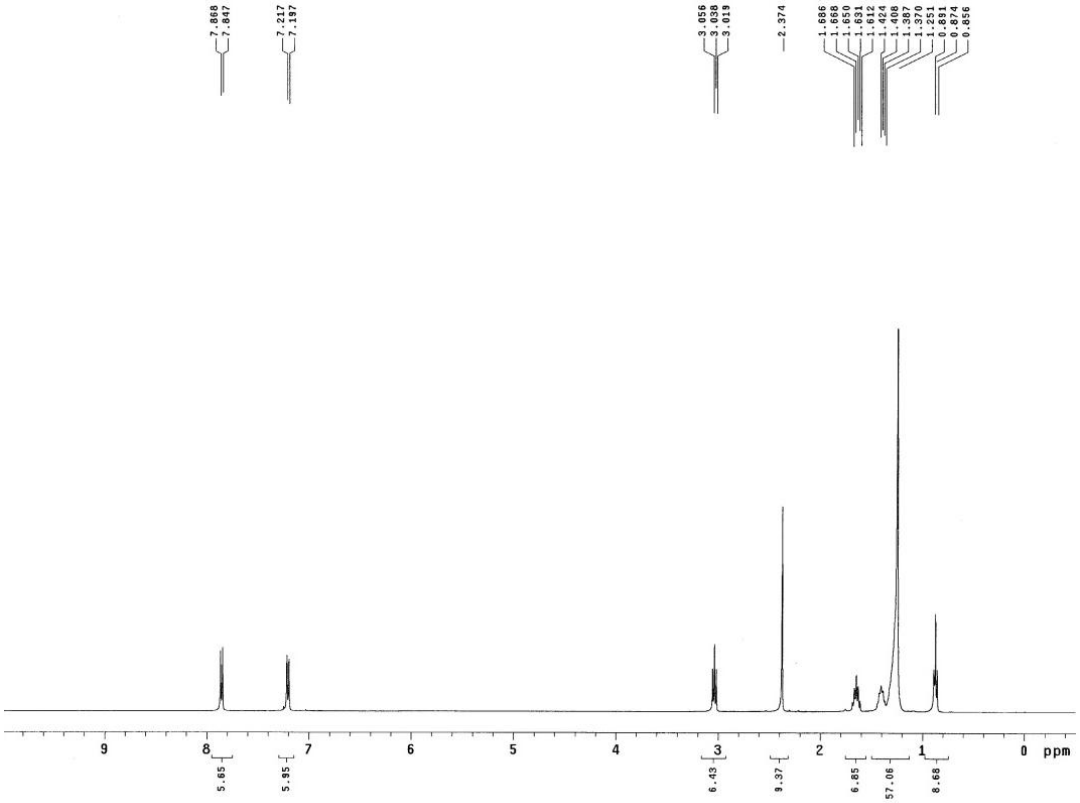


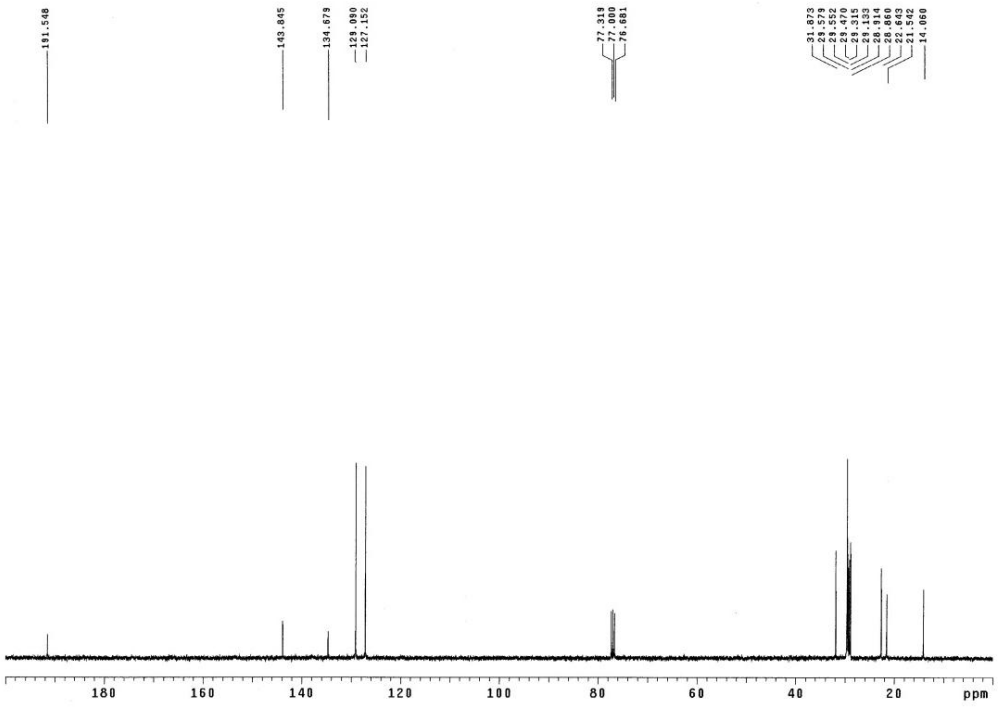




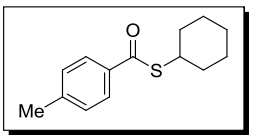
S-(*n*-Dodecyl) 4-methylbenzothioate (4f)

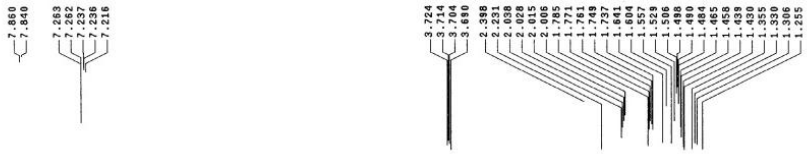


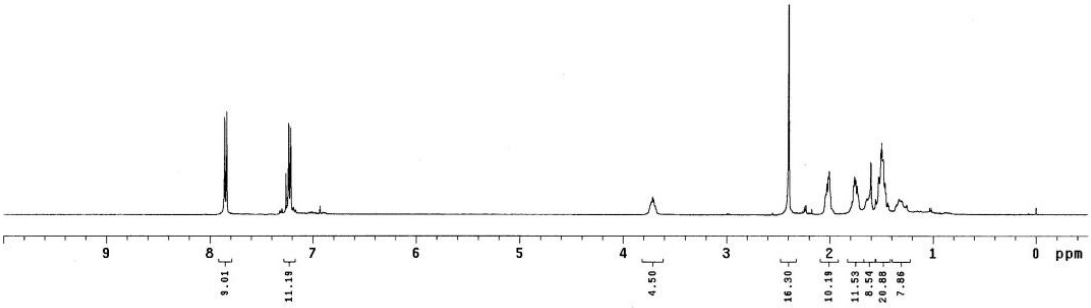


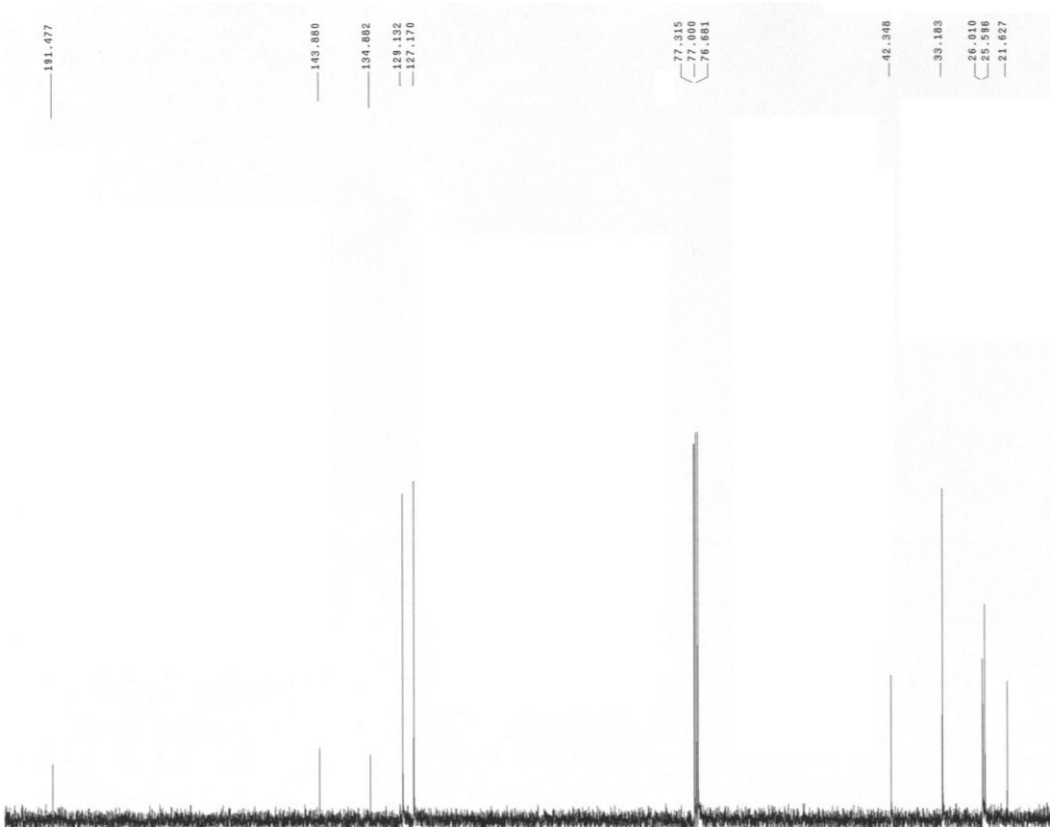


S-Cyclohexyl 4-methylbenzothioate (4g)

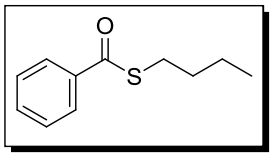


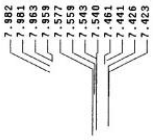


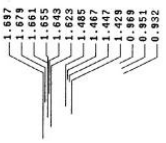


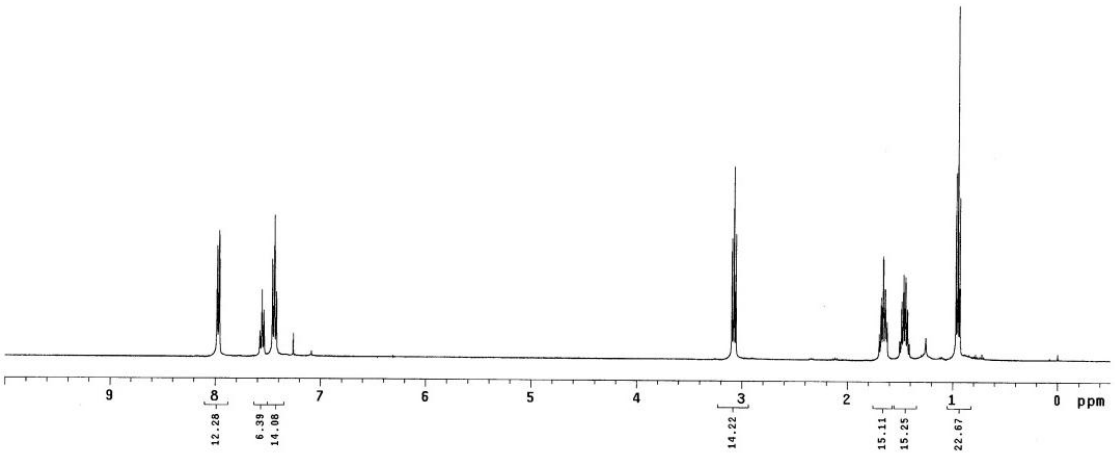


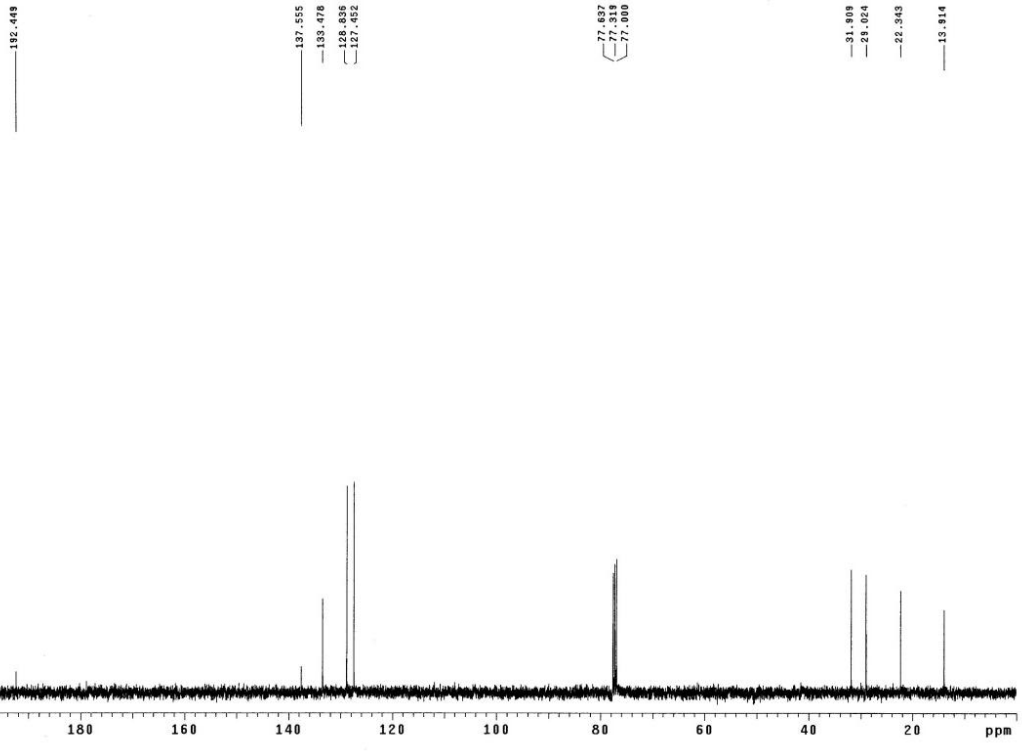
S-(*n*-Butyl) benzothioate (4h)



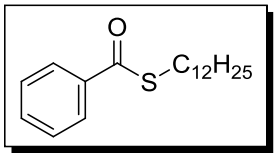


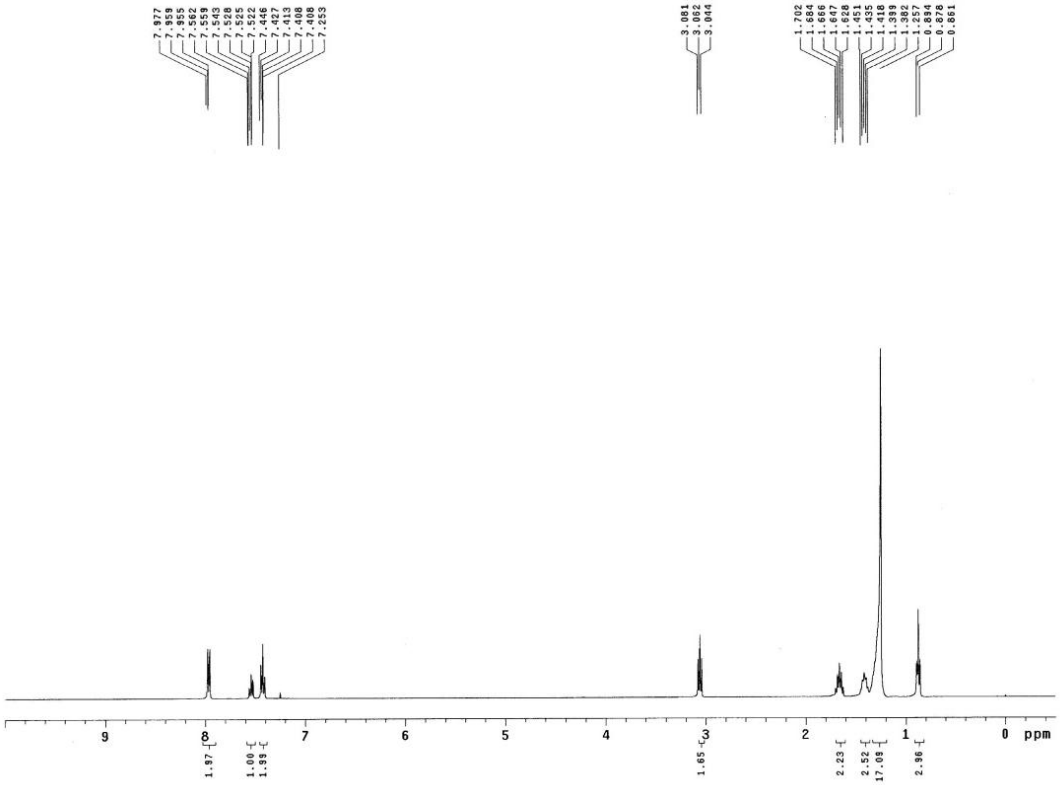


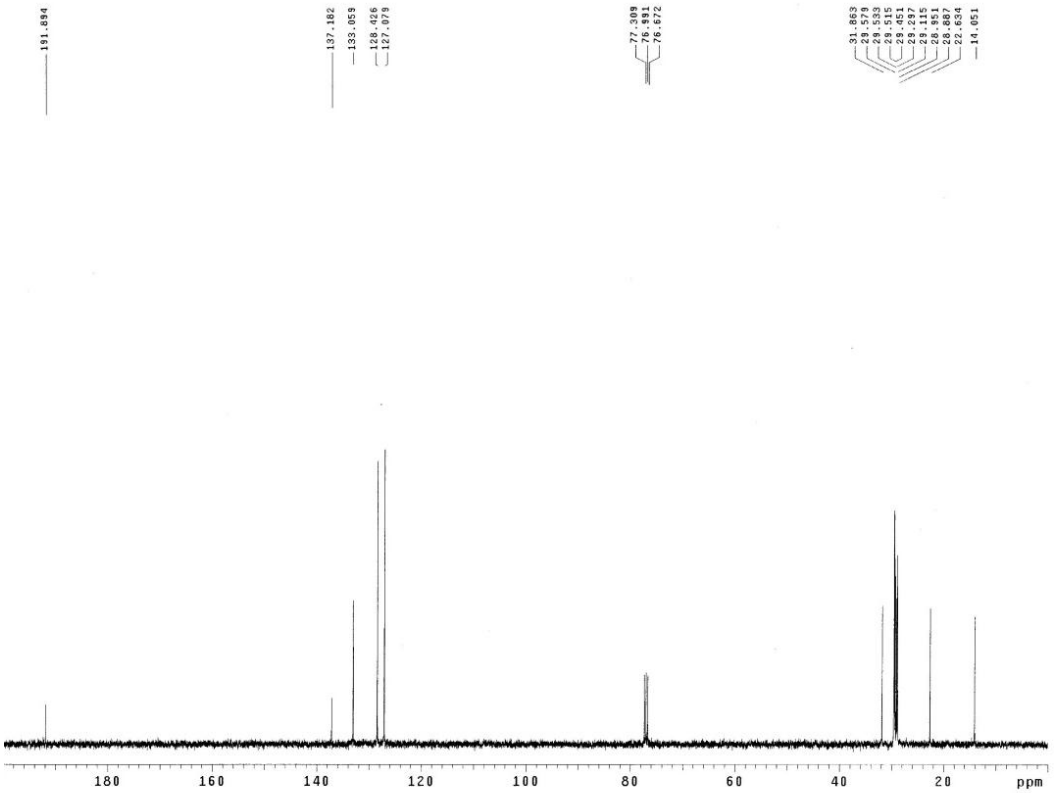




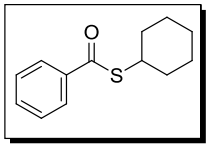
S-(*n*-Dodecyl) benzothioate (4i)

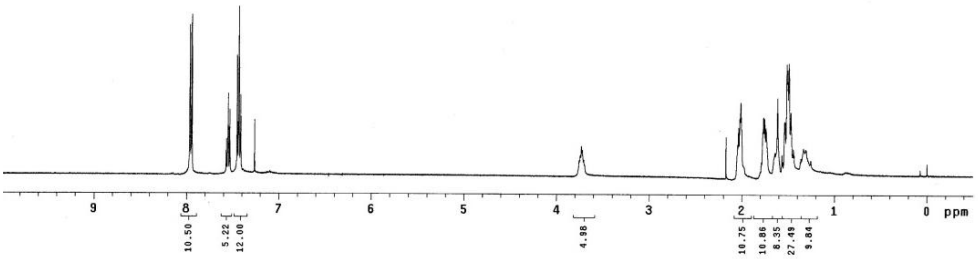


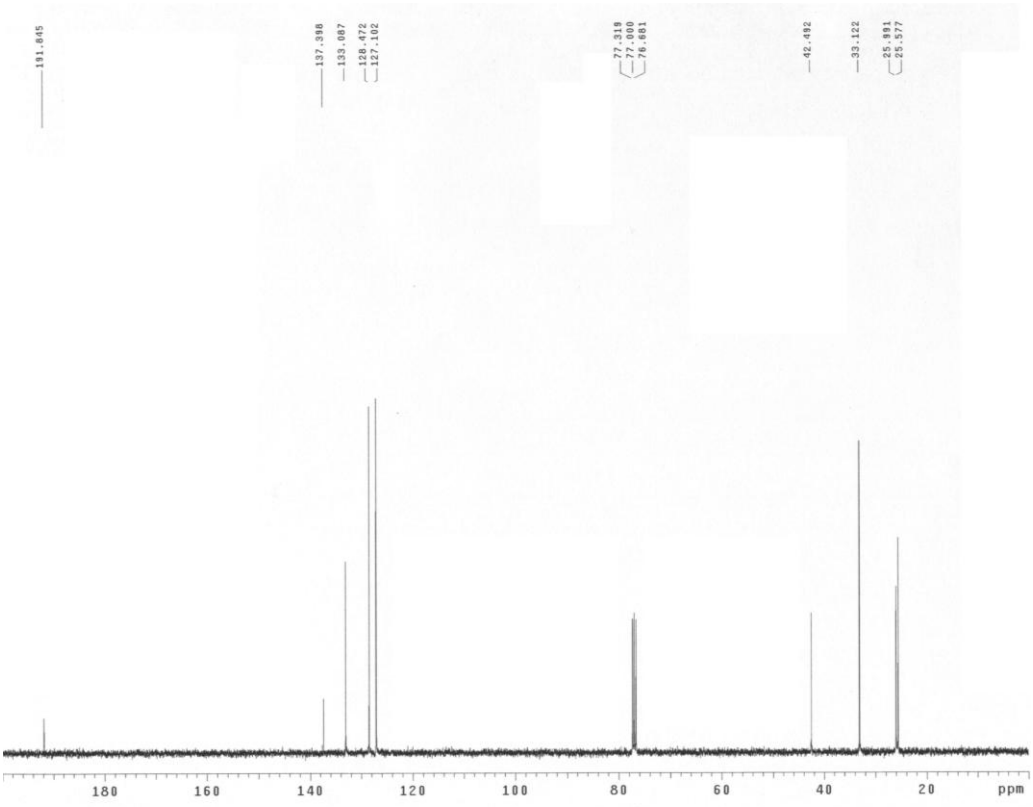




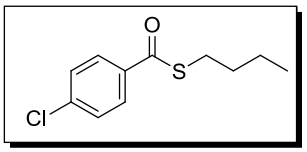
S-Cyclohexyl benzothioate (4j)

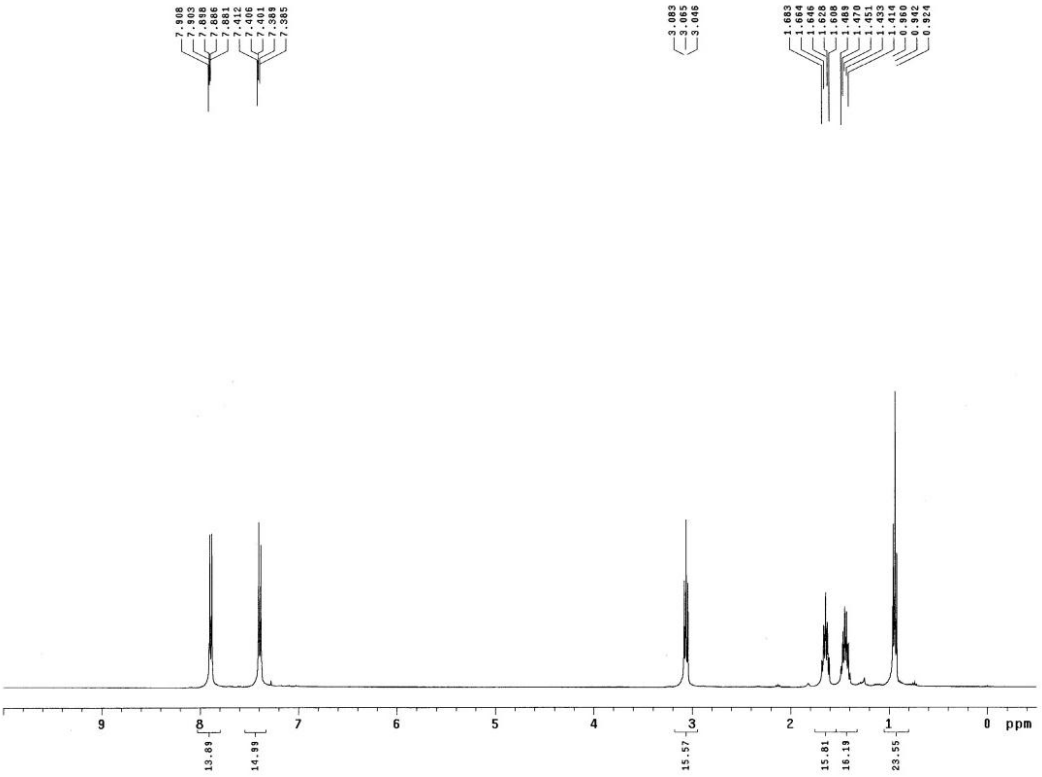


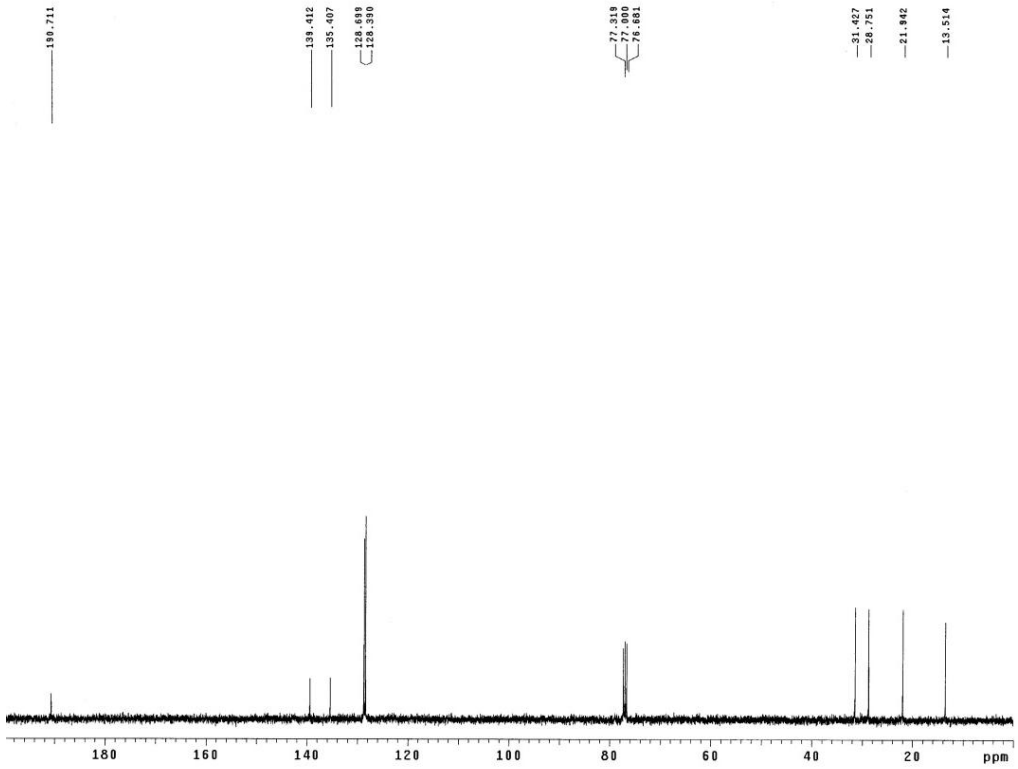




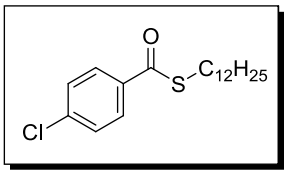
S-(*n*-Butyl) 4-chlorobenzothioate (4k)

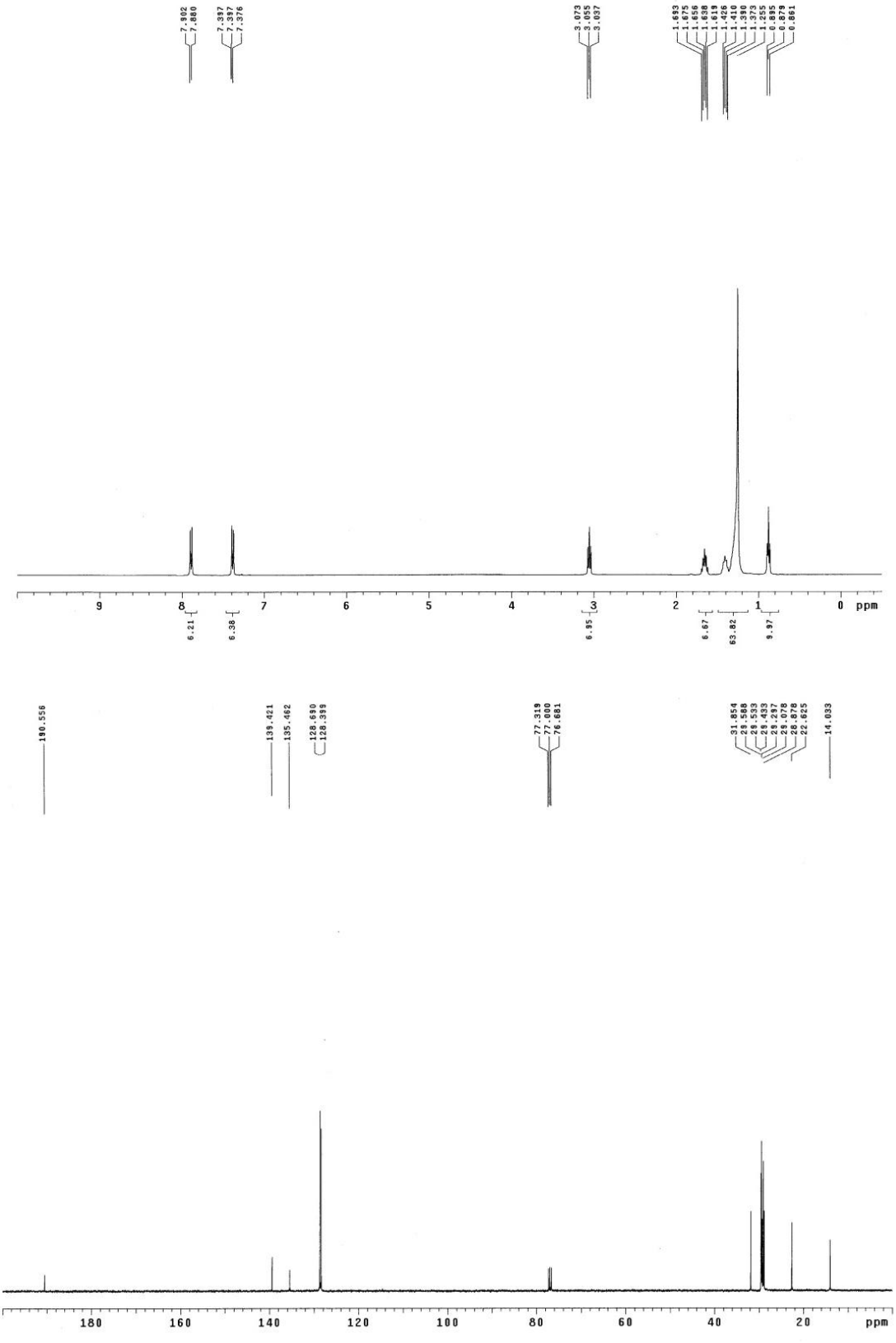




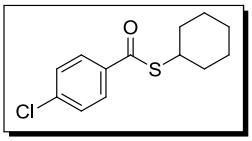


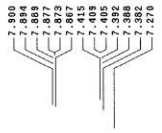
S-(*n*-Dodecyl) 4-chlorobenzothioate (4l)

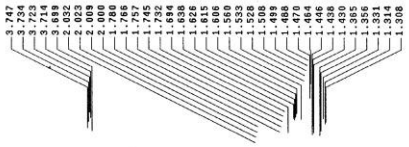


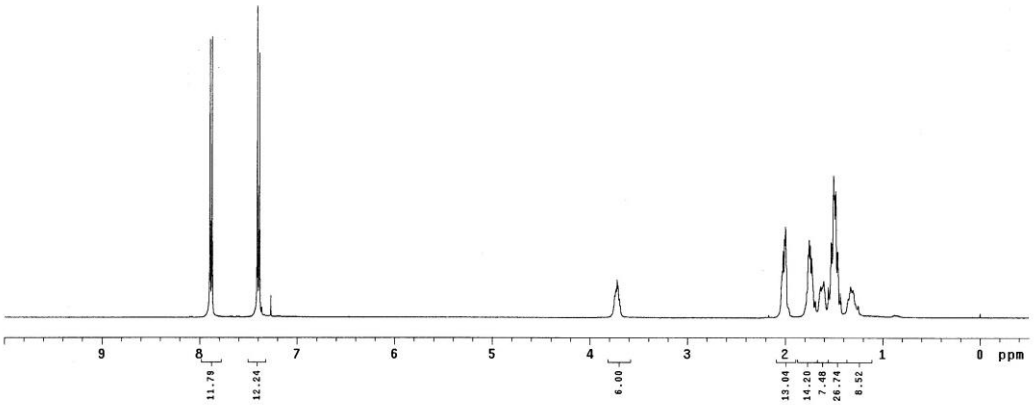


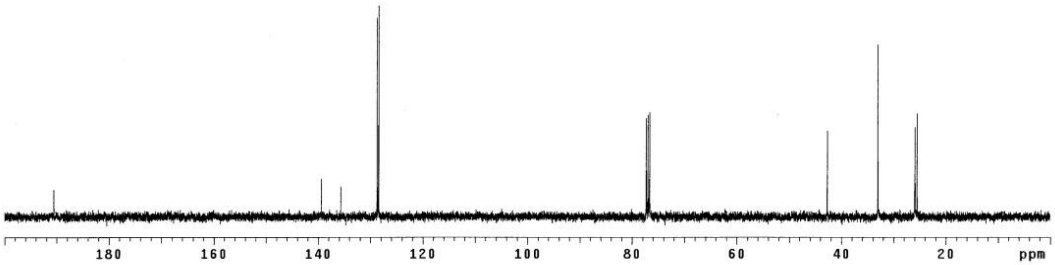
S-Cyclohexyl 4-chlorobenzothioat*e* (4m)



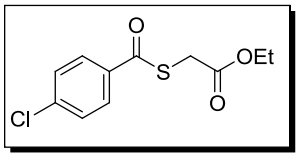


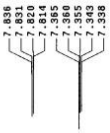


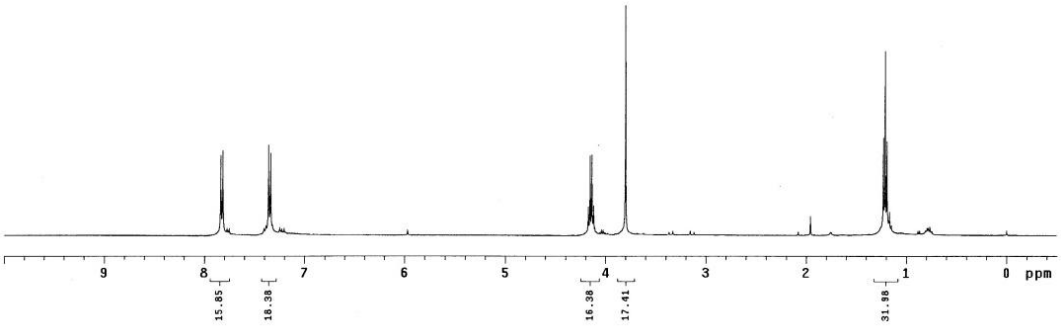


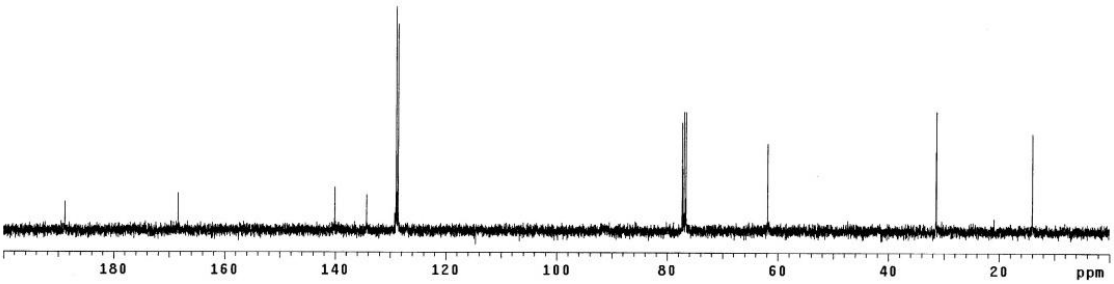


Ethyl 2-{(4-chlorobenzoyl)thio}acetate (4n)

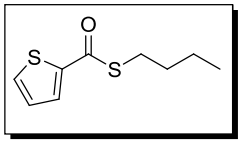


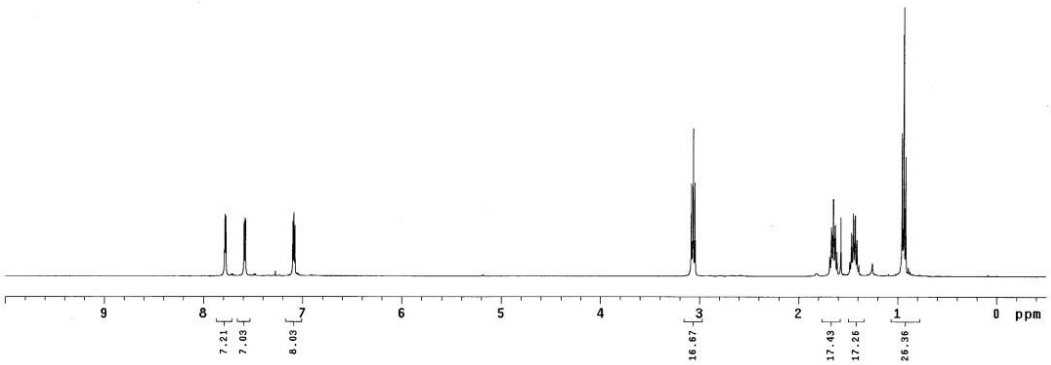


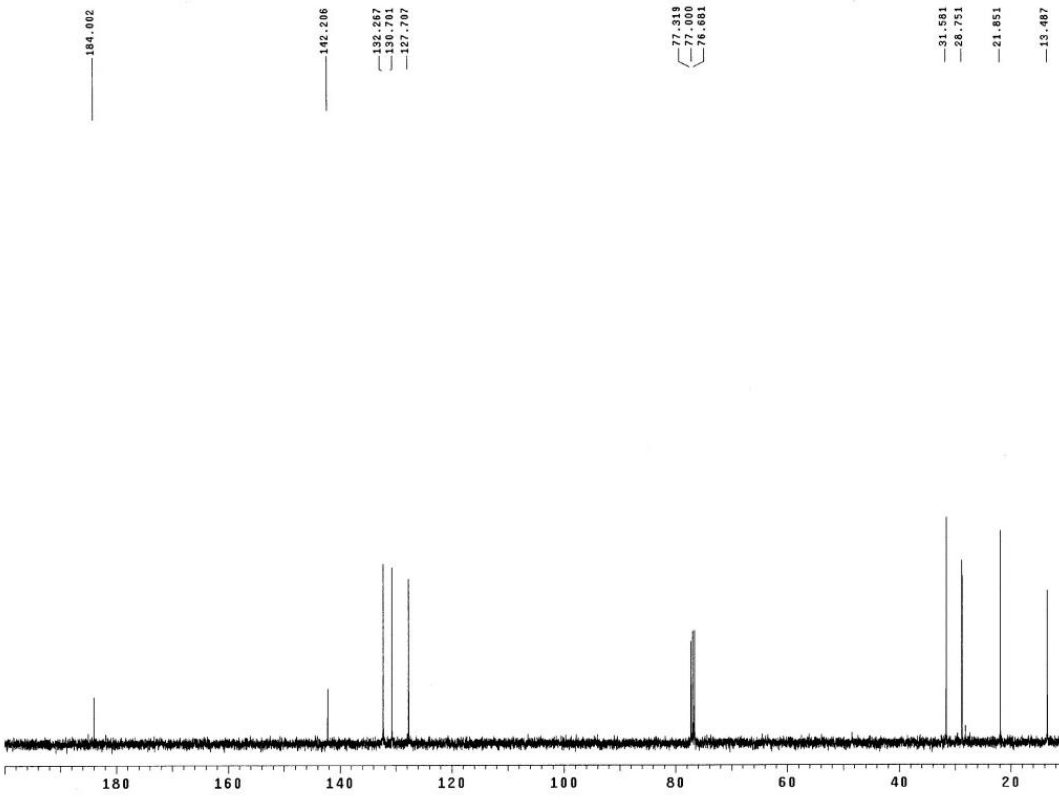




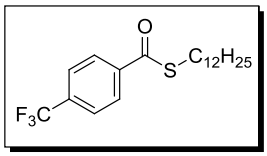
S-(*n*-Butyl) thiophene-2-carbothioate (4o)

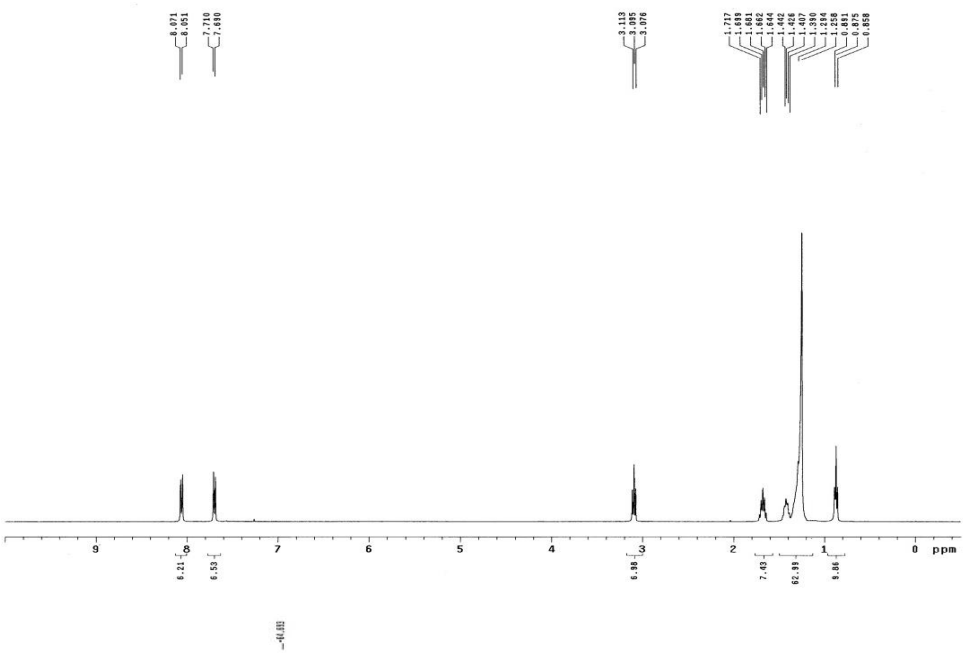


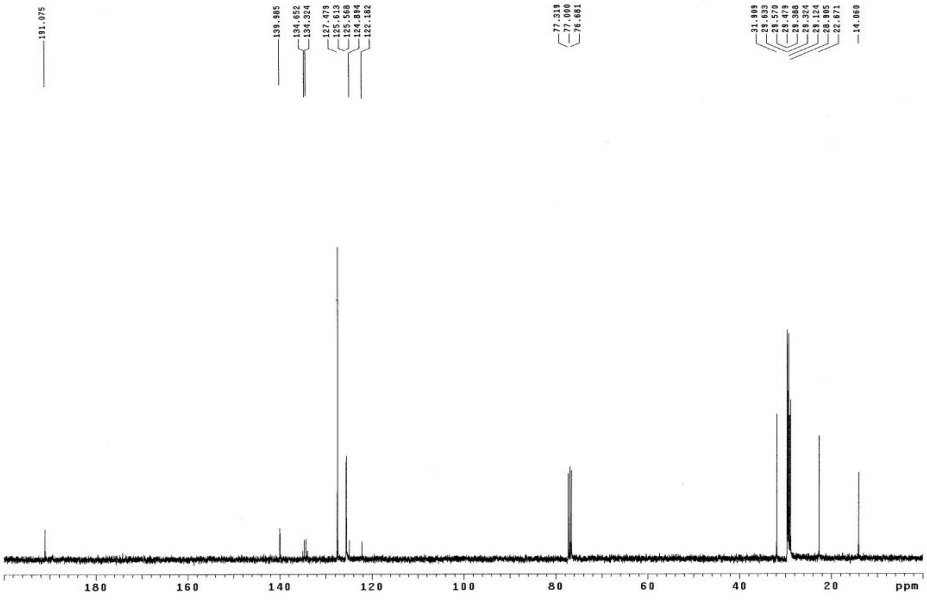




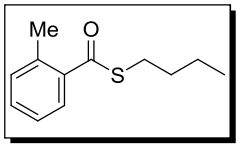
S-(*n*-Dodecyl) 4-(trifluoromethyl)benzothioate (4p)

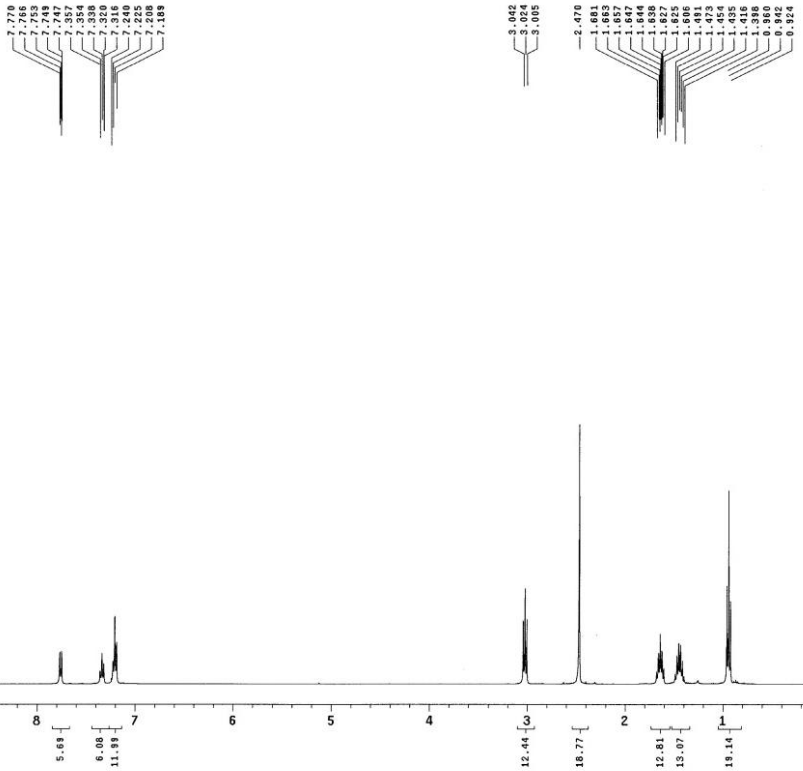


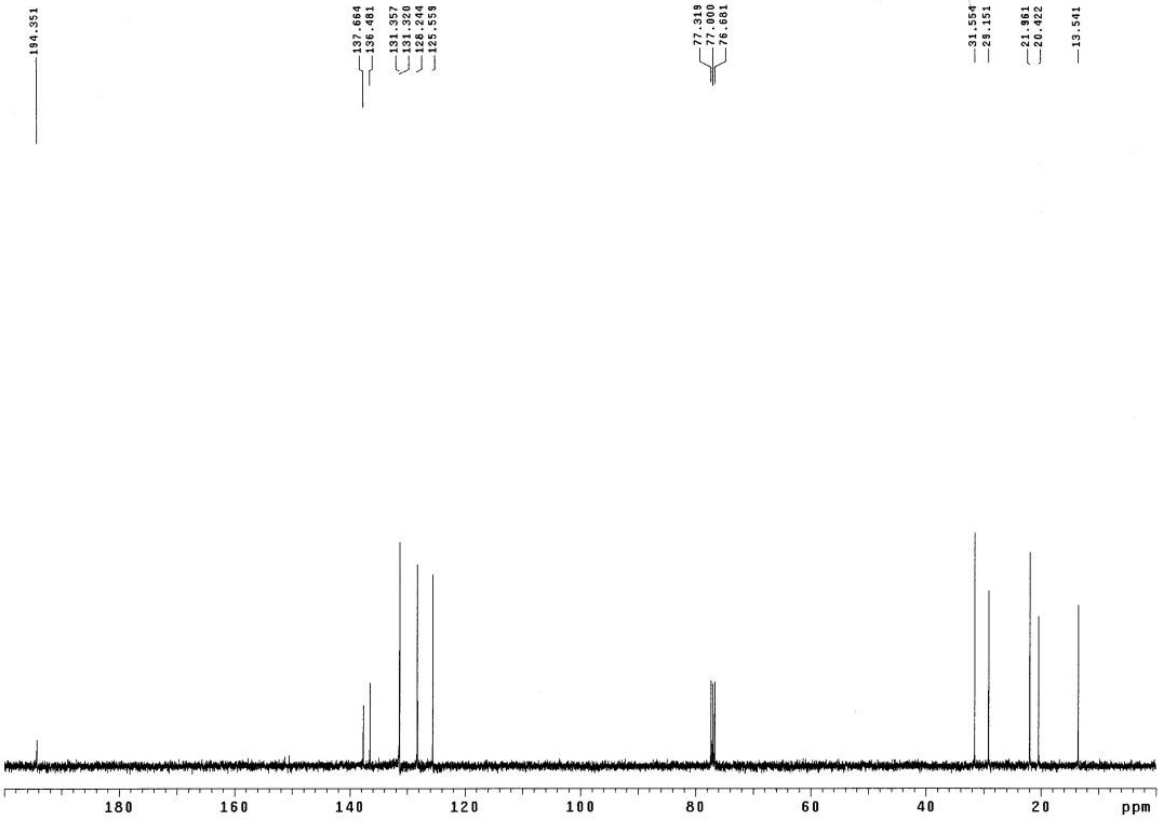




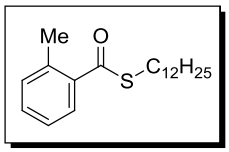
S-(*n*-Butyl) 2-methylbenzothioate (4q)

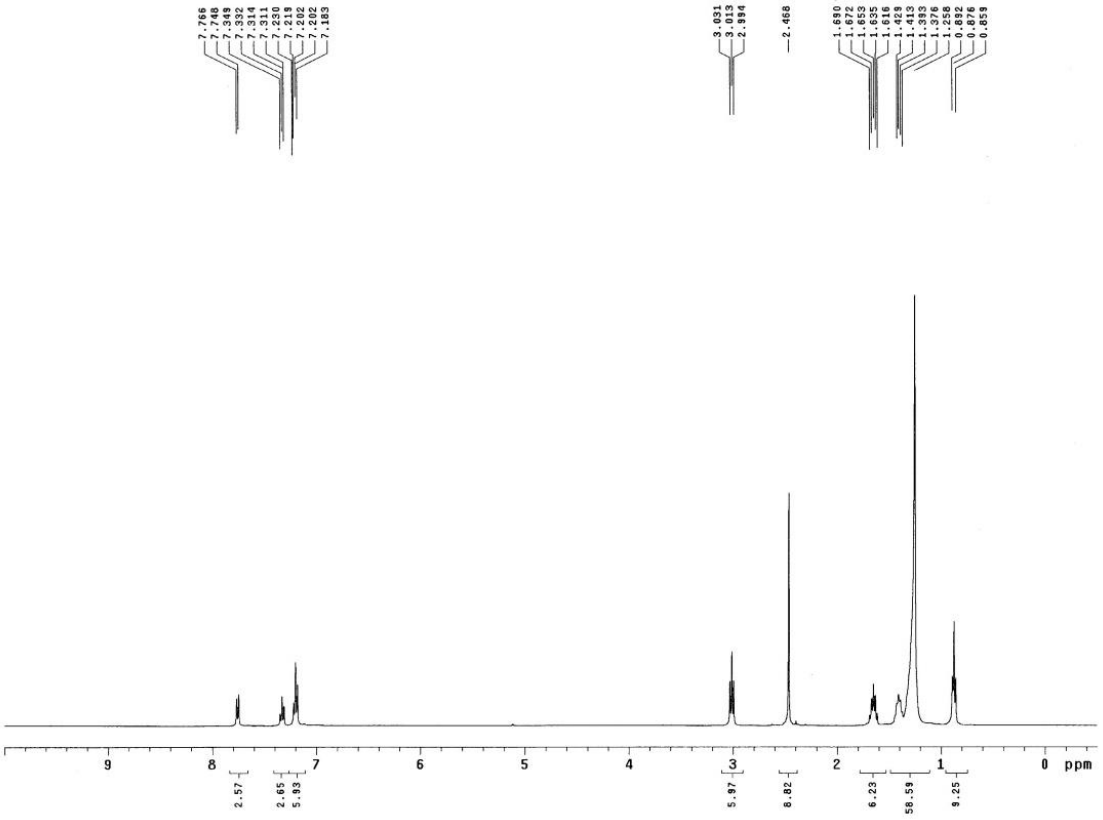


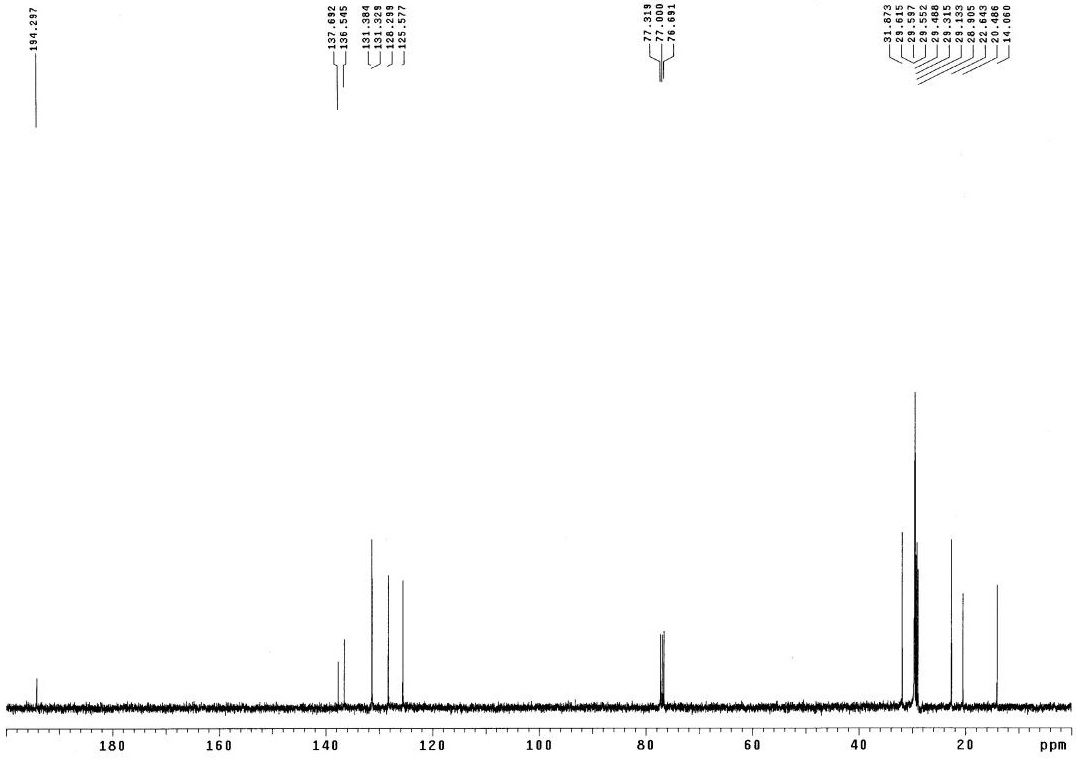




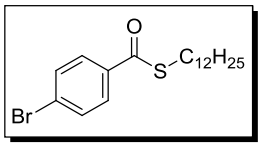
S-(*n*-Dodecyl) 2-methylbenzothioate (4r)

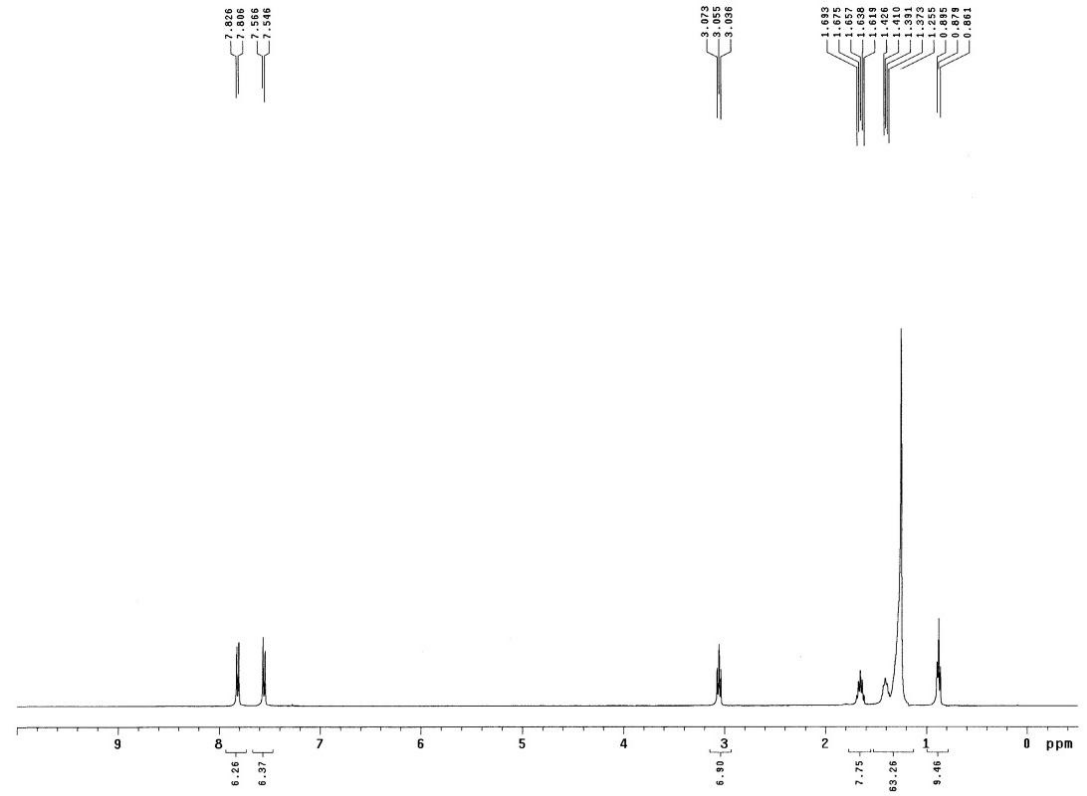


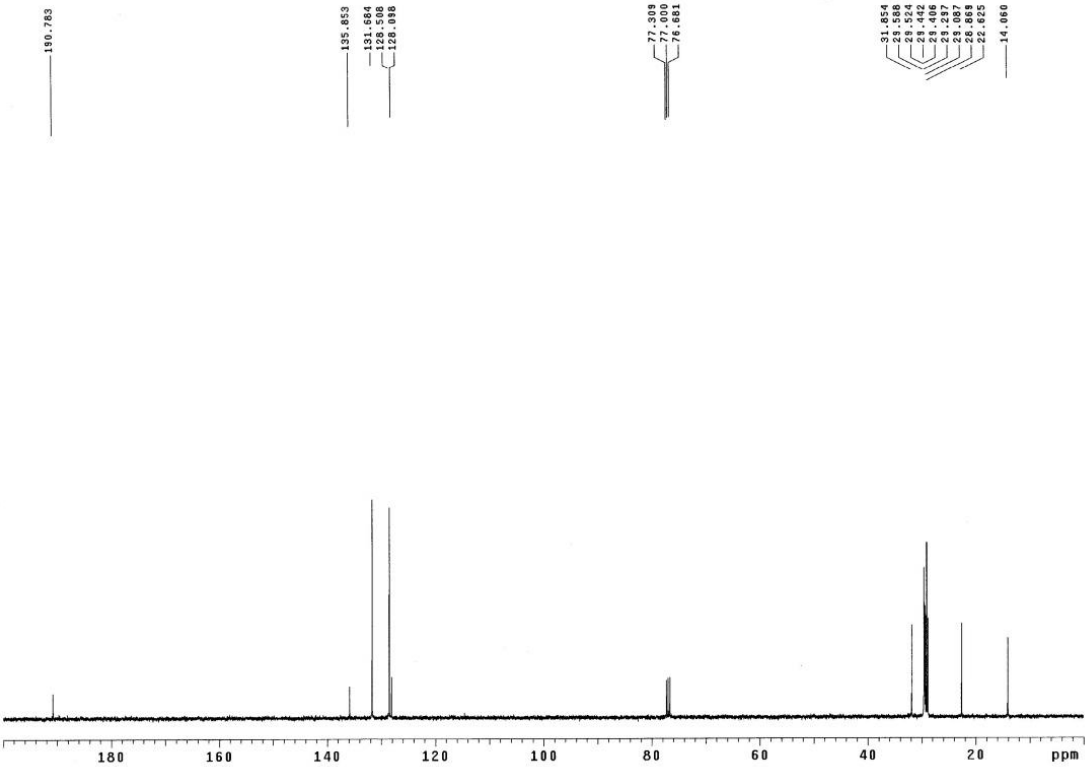




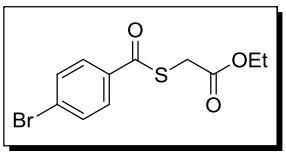
S-(*n*-Dodecyl) 4-bromobenzothioate (4s)

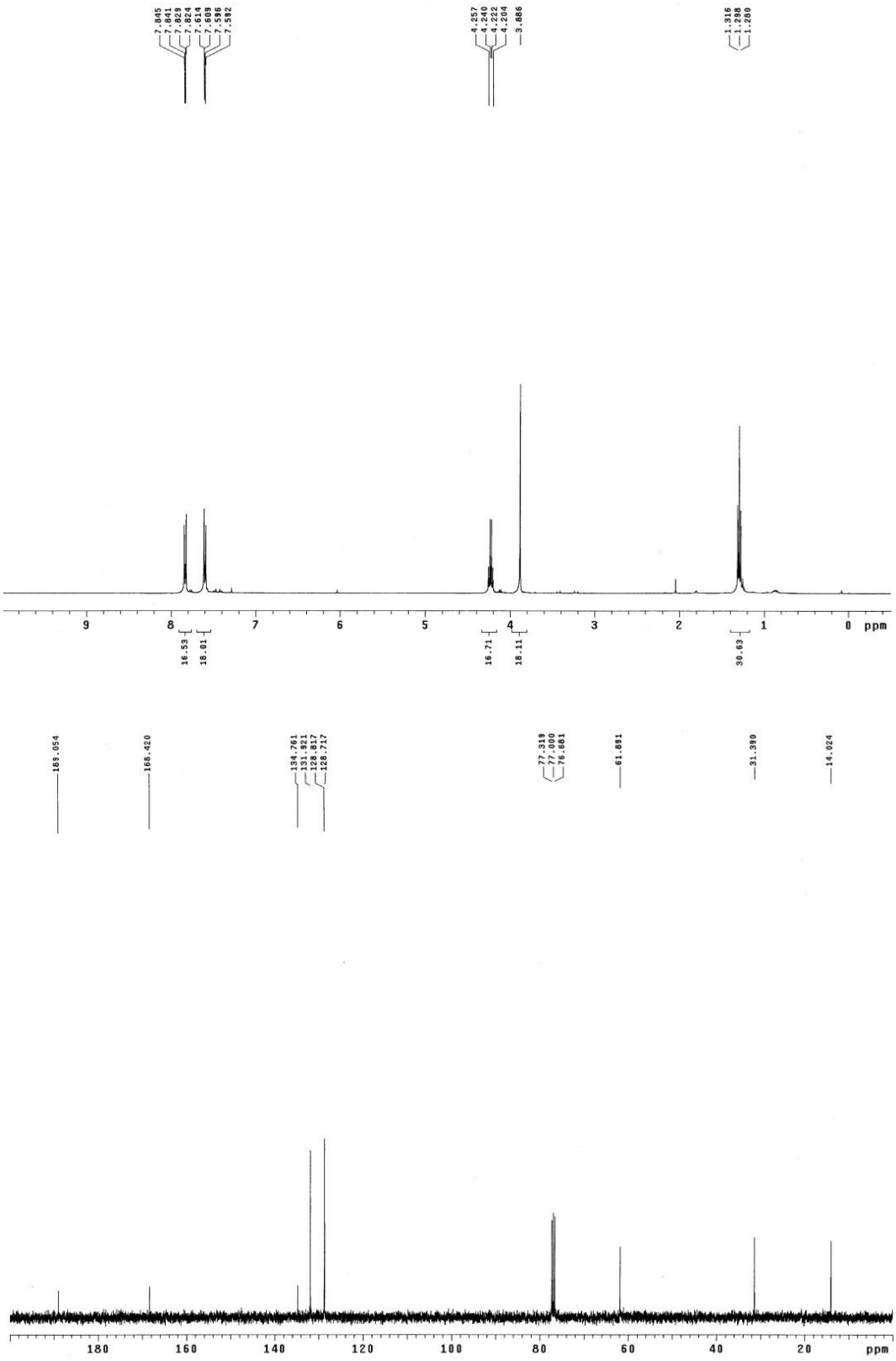




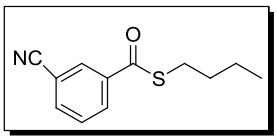


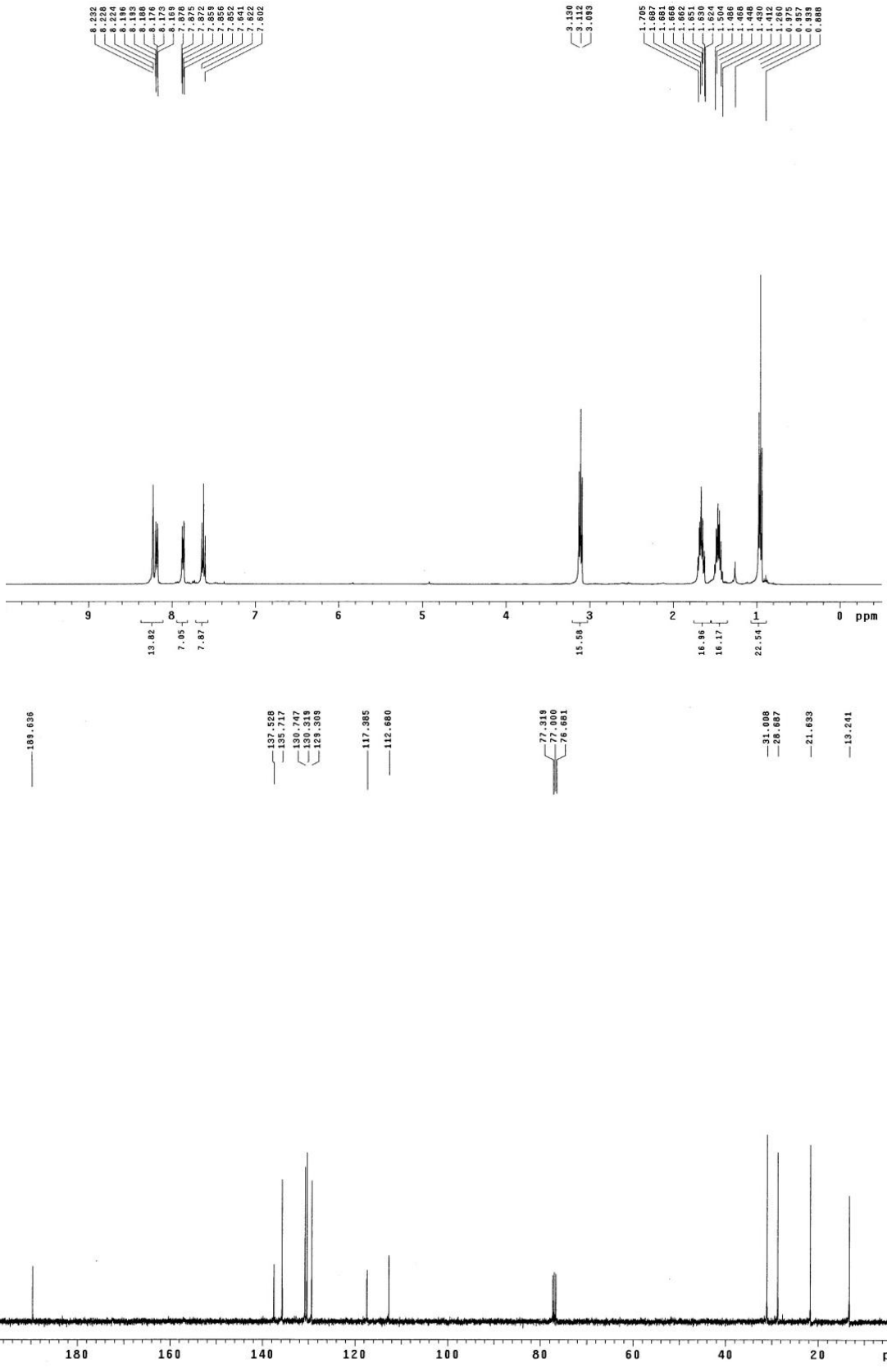
Ethyl 2-{(4-bromobenzoyl)thio}acetate (4t)





S-(*n*-Butyl) 3-cyanobenzothioate (4u)





S-(*n*-Butyl) 3-iodobenzothioate (4v)