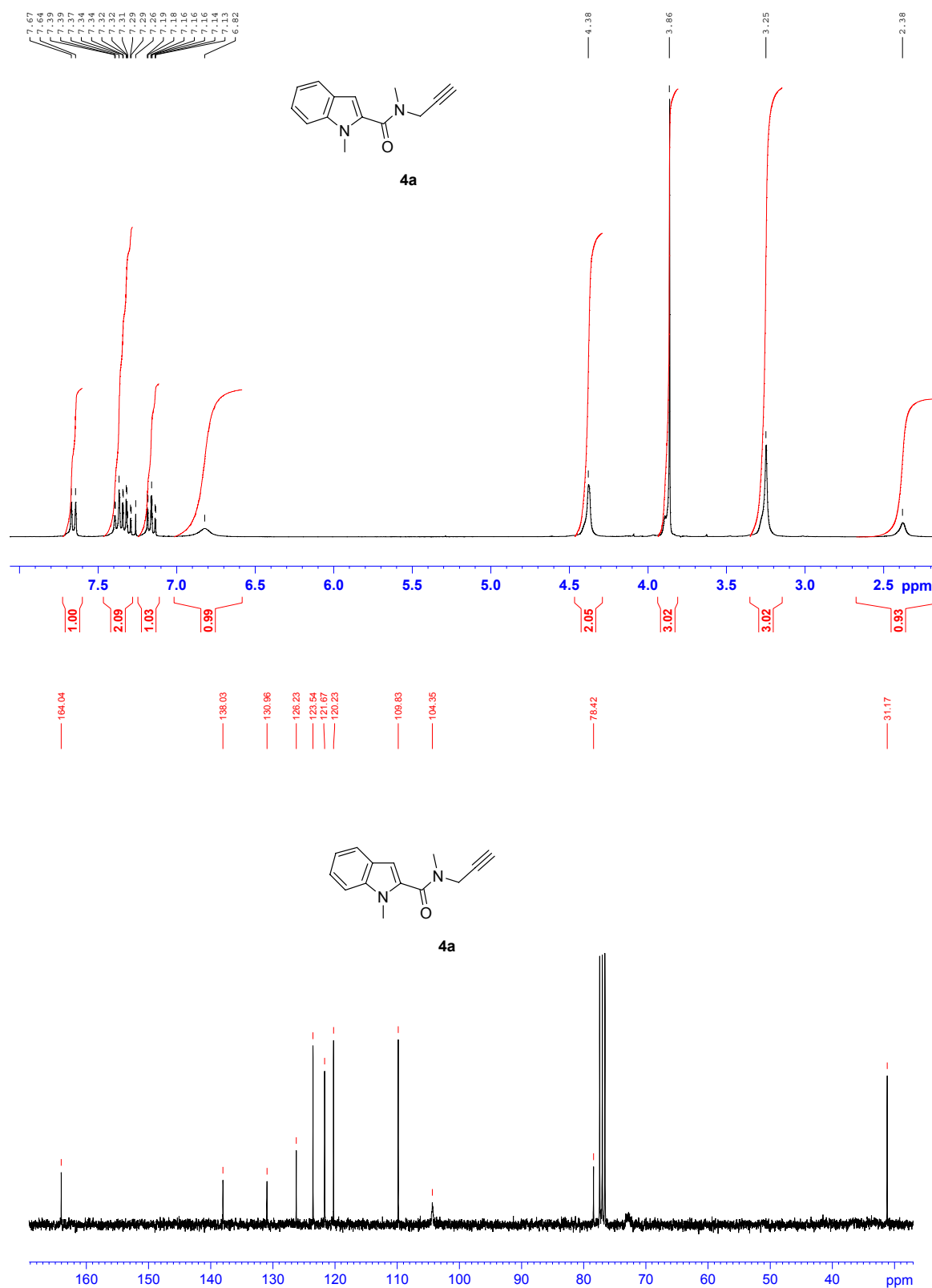


SUPPORTING INFORMATION

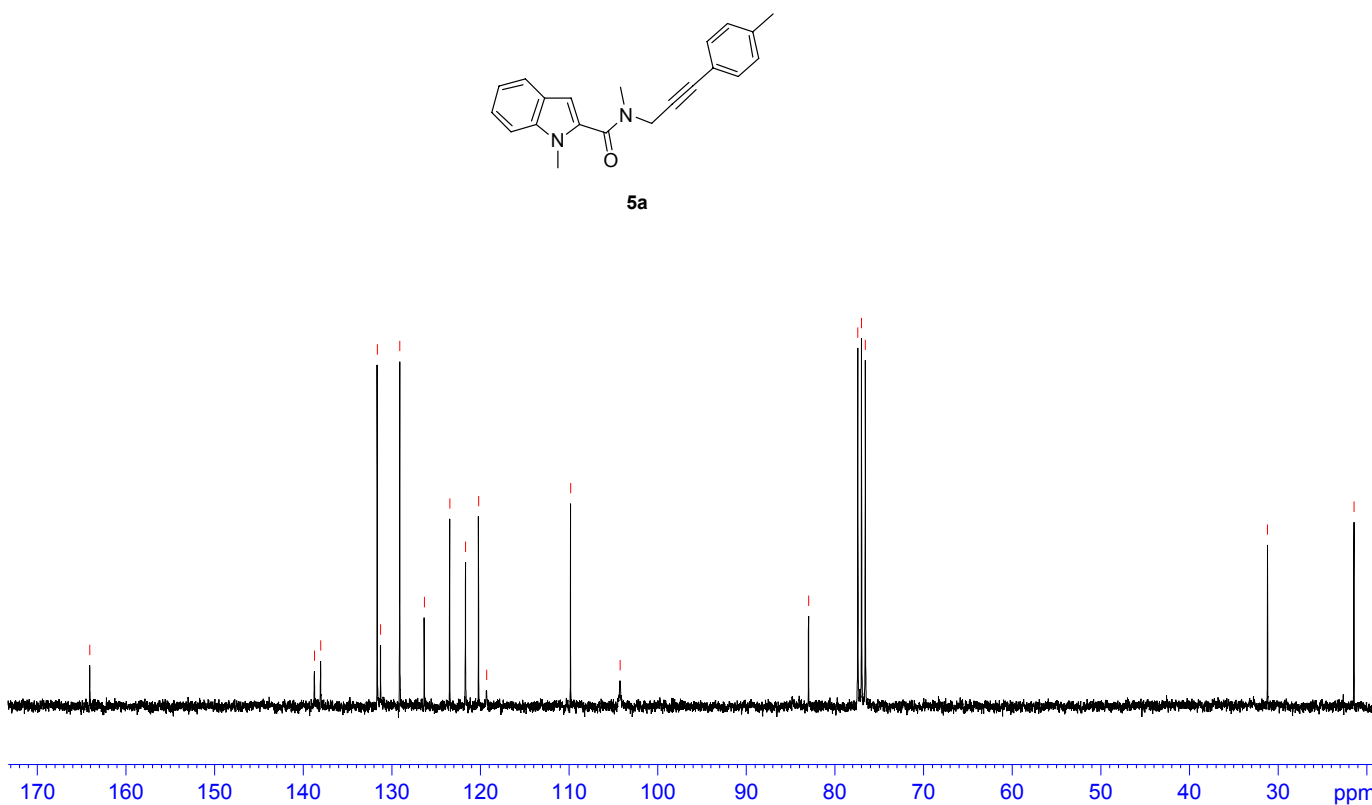
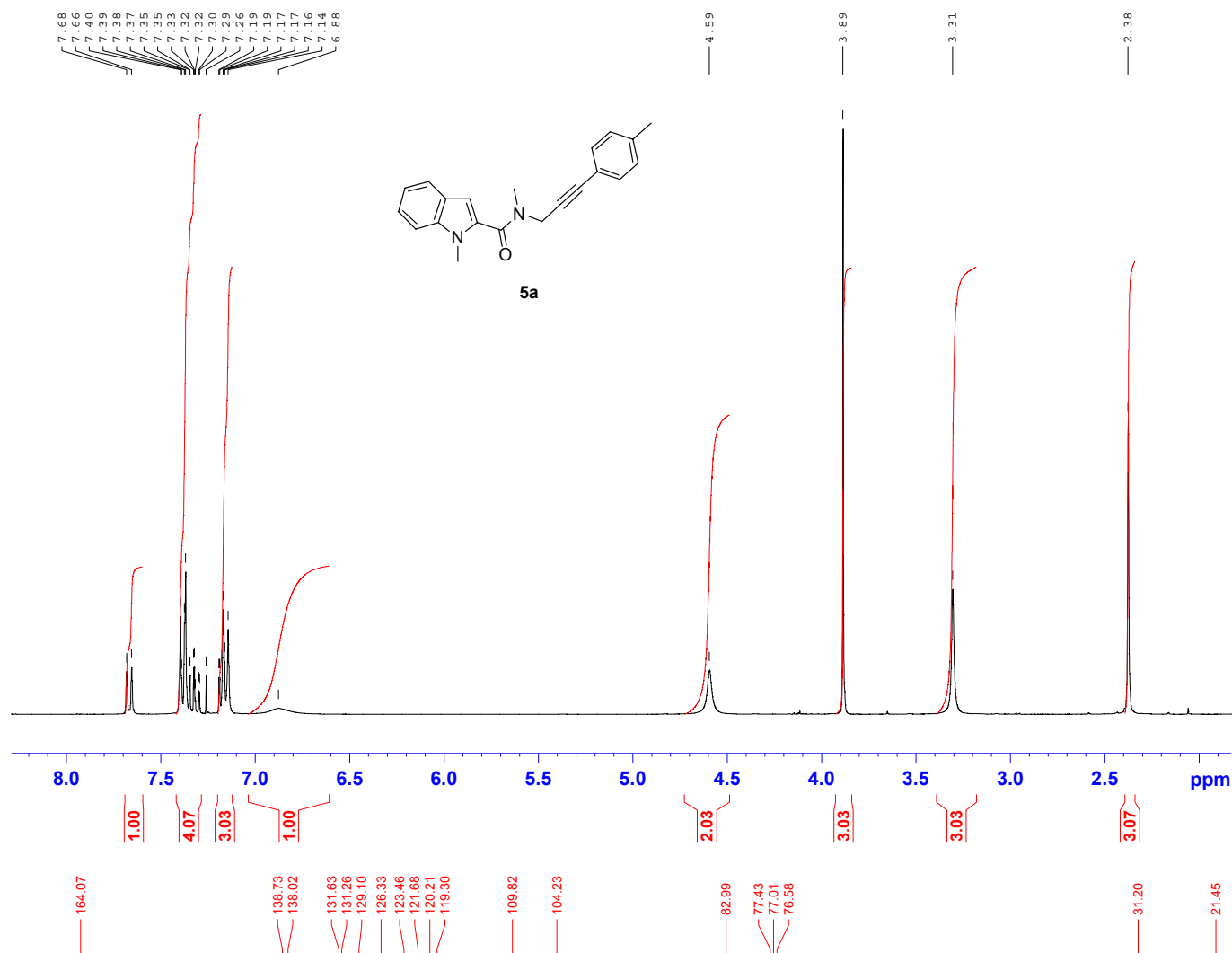
Platinum-catalyzed Cyclization Reaction of Alkynes: Synthesis of Azepino[3,4-b]indol-1-ones

Marina Gruit, Anahit Pews-Davtyan, and Matthias Beller*

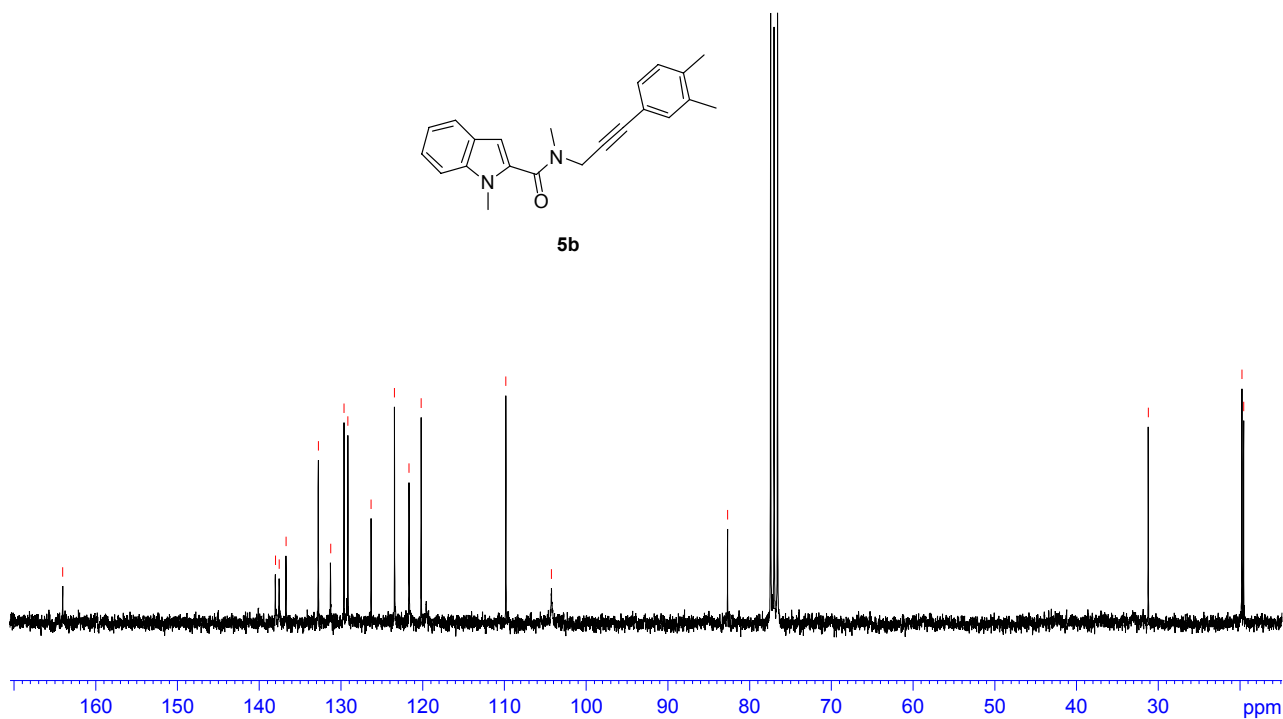
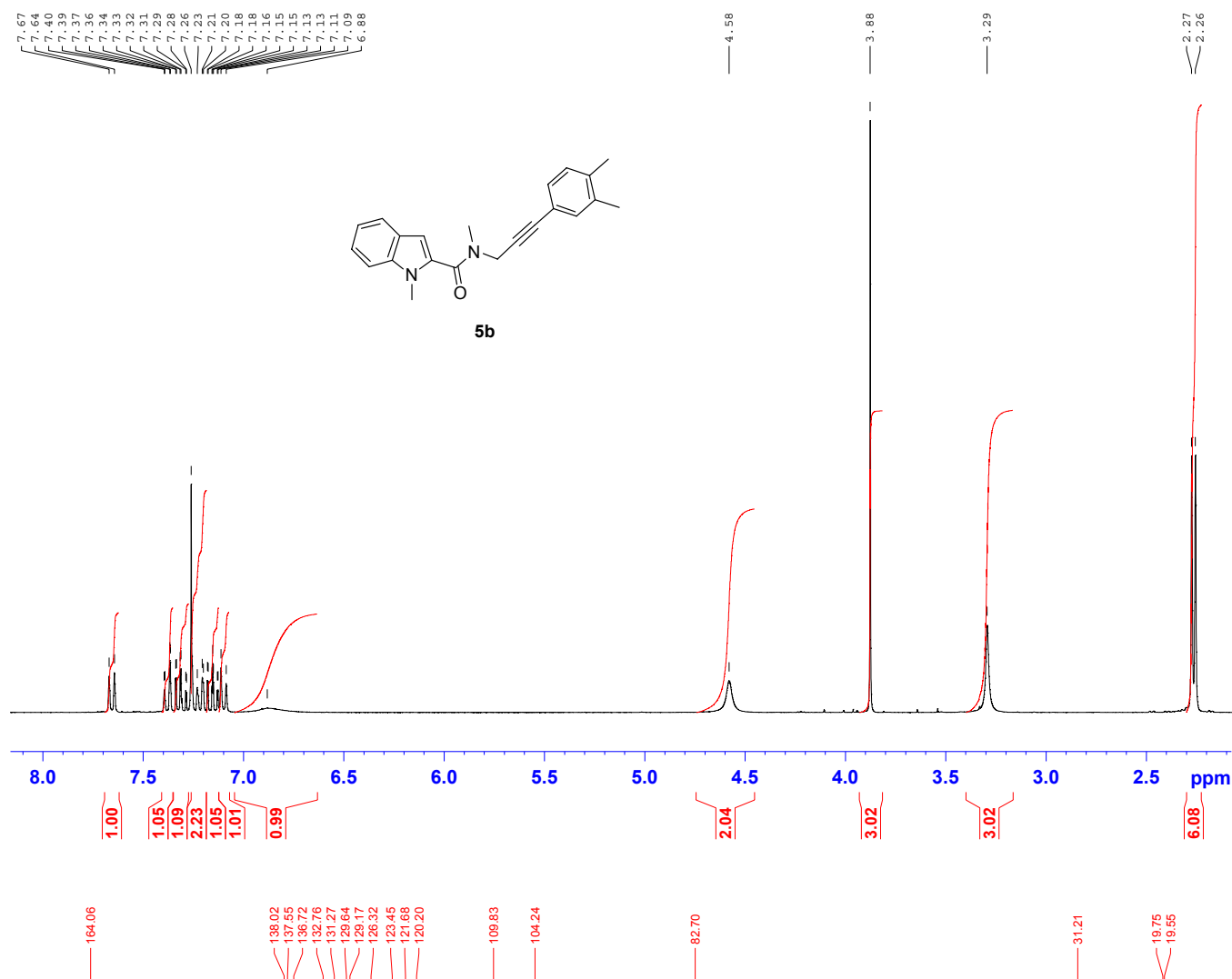
1-Methyl-1*H*-indole-2-carboxylic acid methyl-prop-2-ynyl-amide (4a)



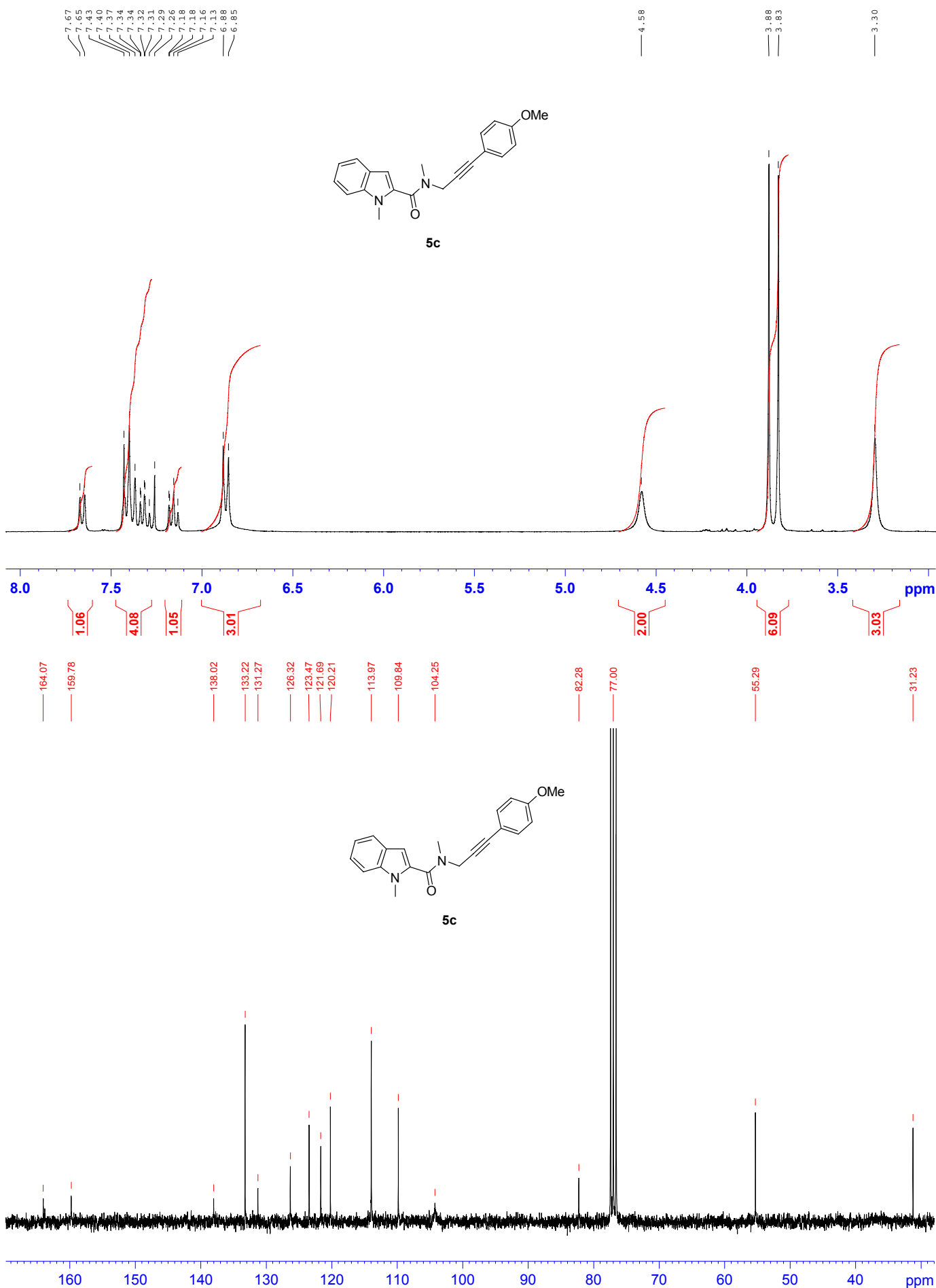
1-Methyl-1*H*-indole-2-carboxylic acid methyl-(3-*p*-tolyl-prop-2-ynyl)-amide (5a)



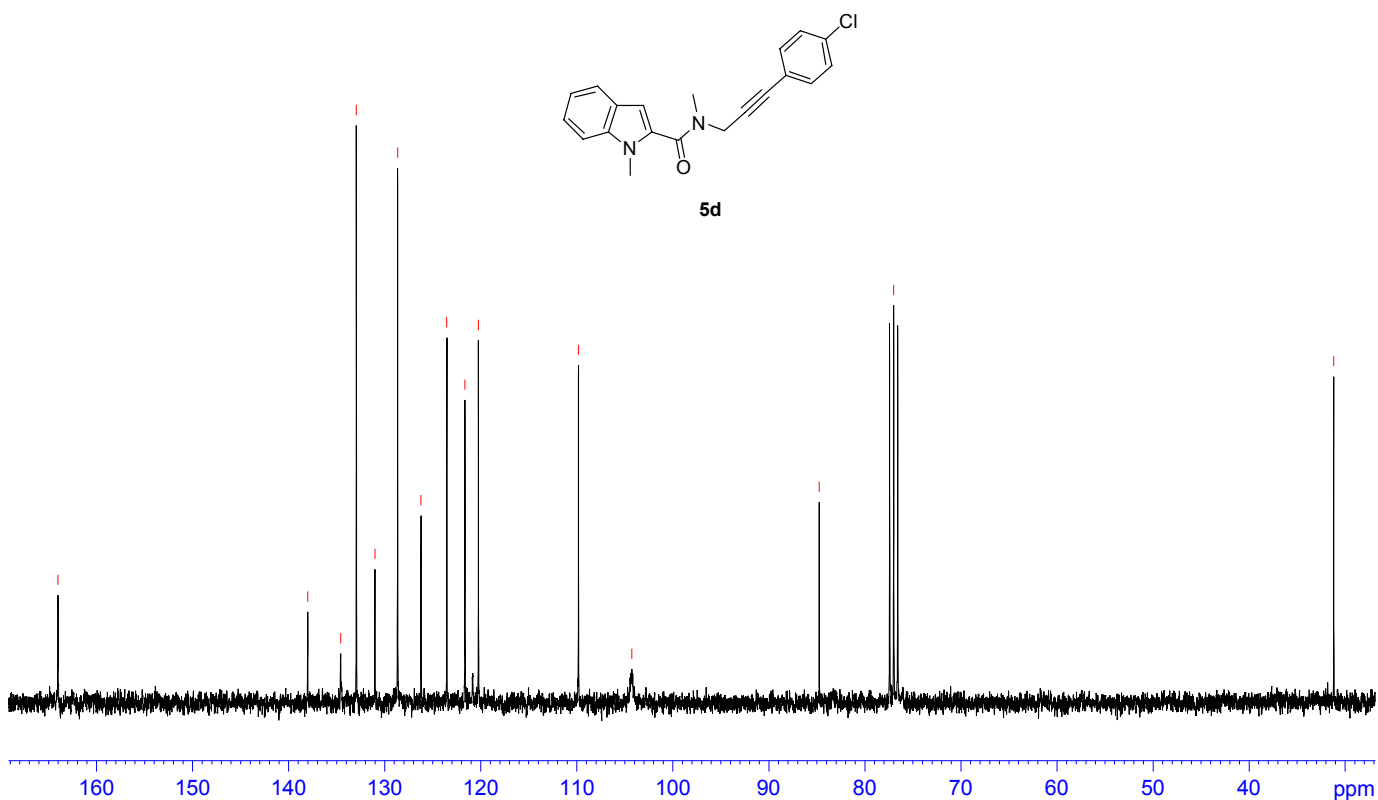
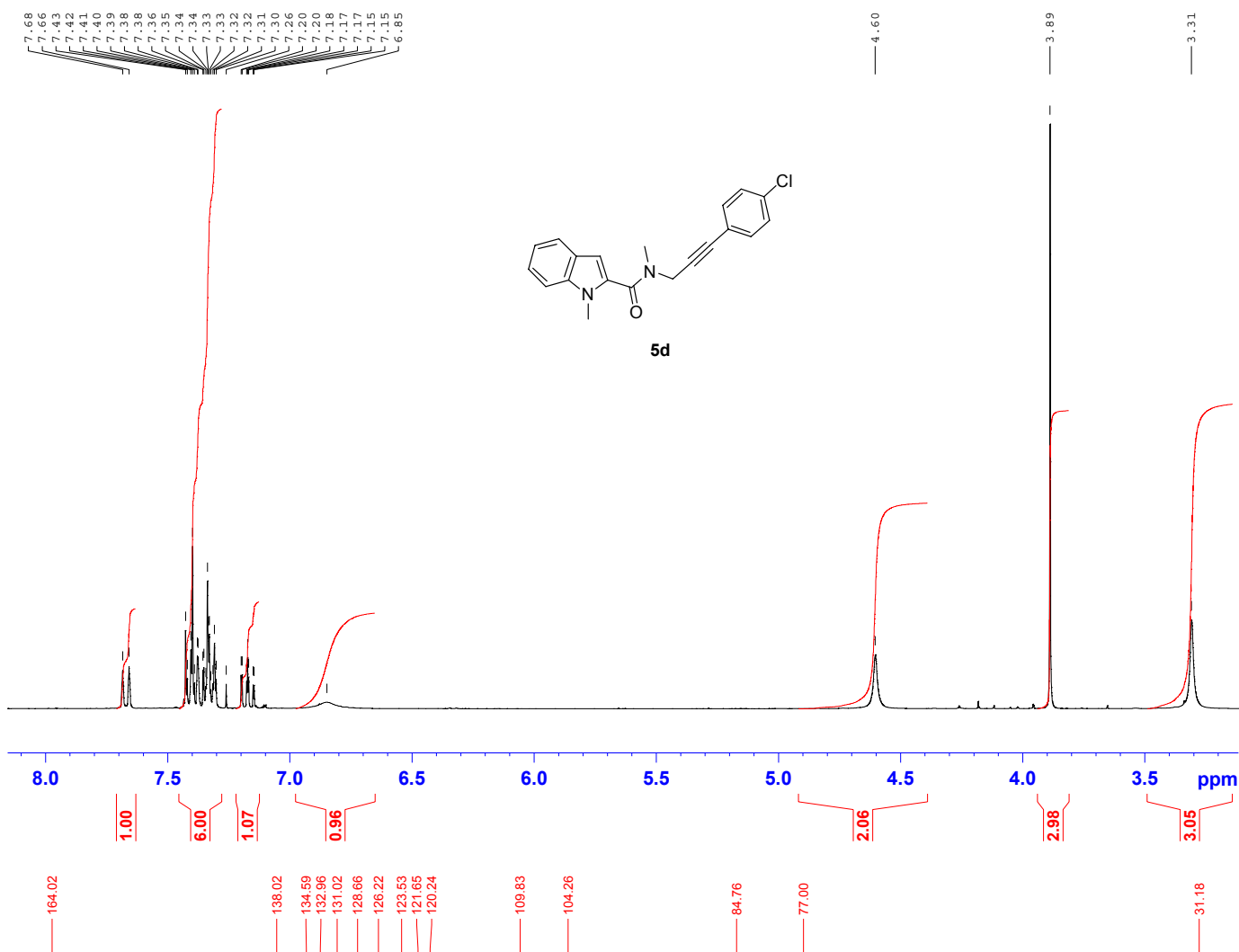
1-Methyl-1*H*-indole-2-carboxylic acid [3-(3,4-dimethyl-phenyl)-prop-2-ynyl]-methyl-amide (5b)



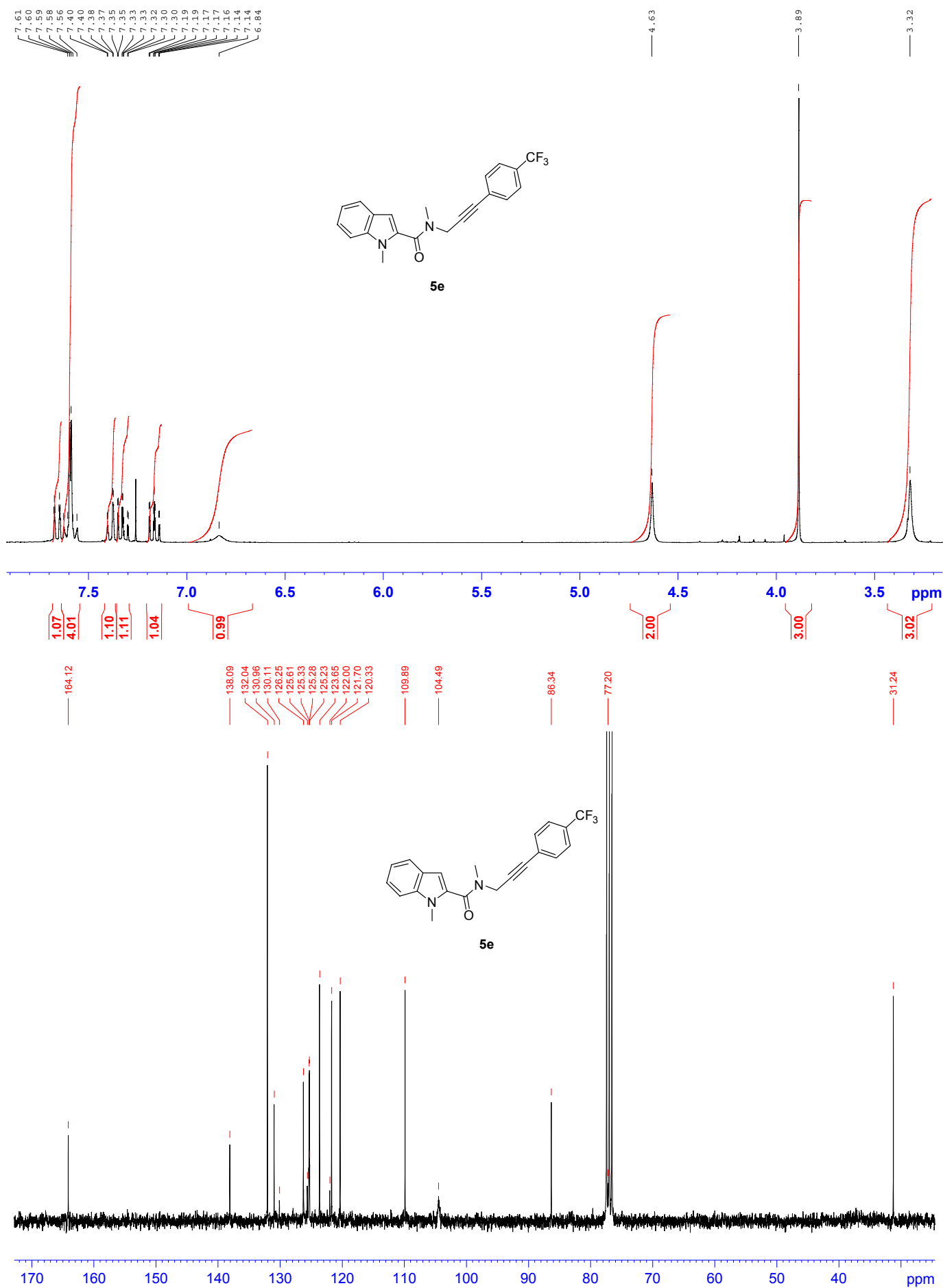
1-Methyl-1*H*-indole-2-carboxylic acid [3-(4-methoxy-phenyl)-prop-2-ynyl]-methyl-amide (5c)



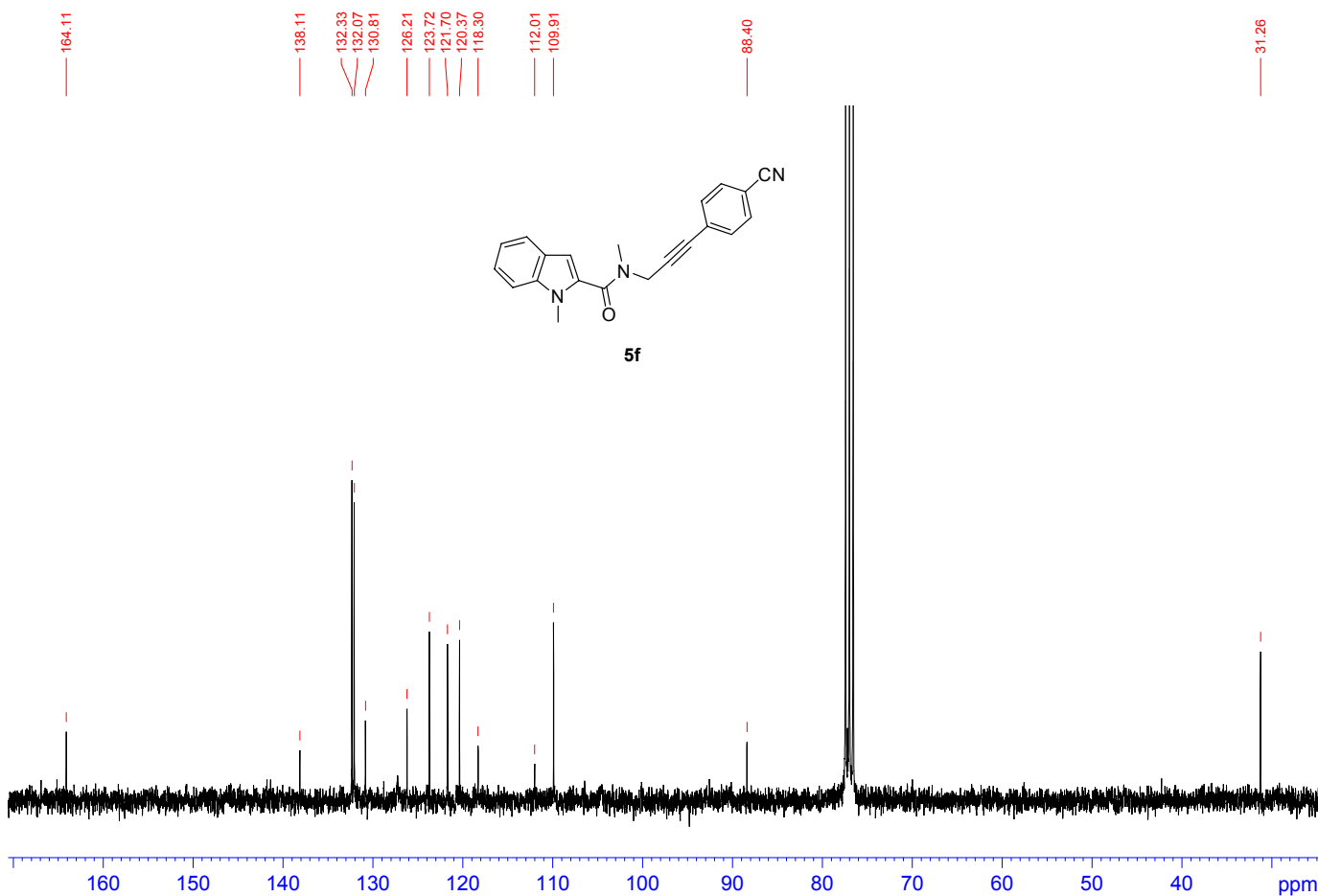
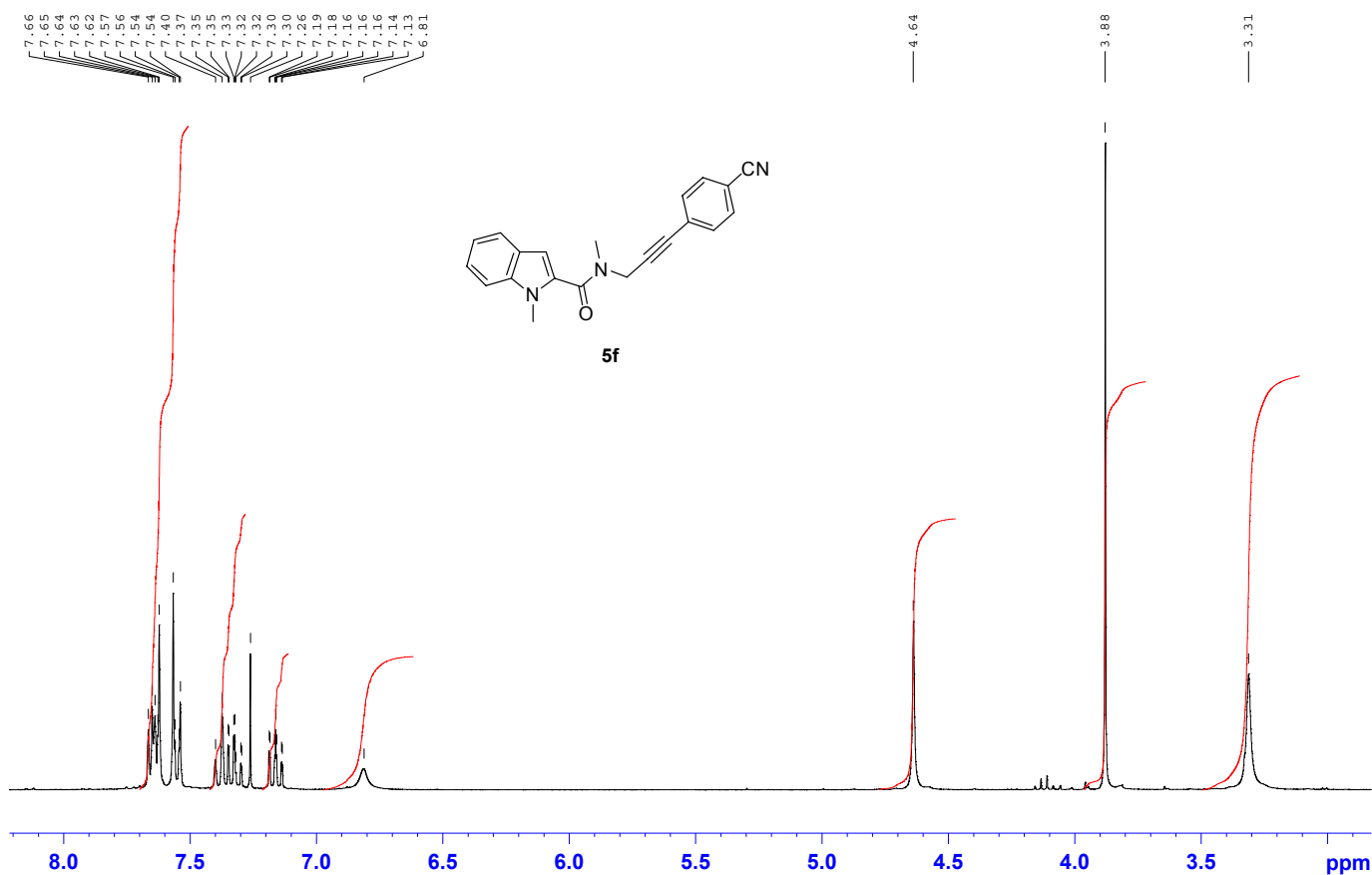
1-Methyl-1*H*-indole-2-carboxylic acid [3-(4-chloro-phenyl)-prop-2-ynyl]-methyl-amide (5d)



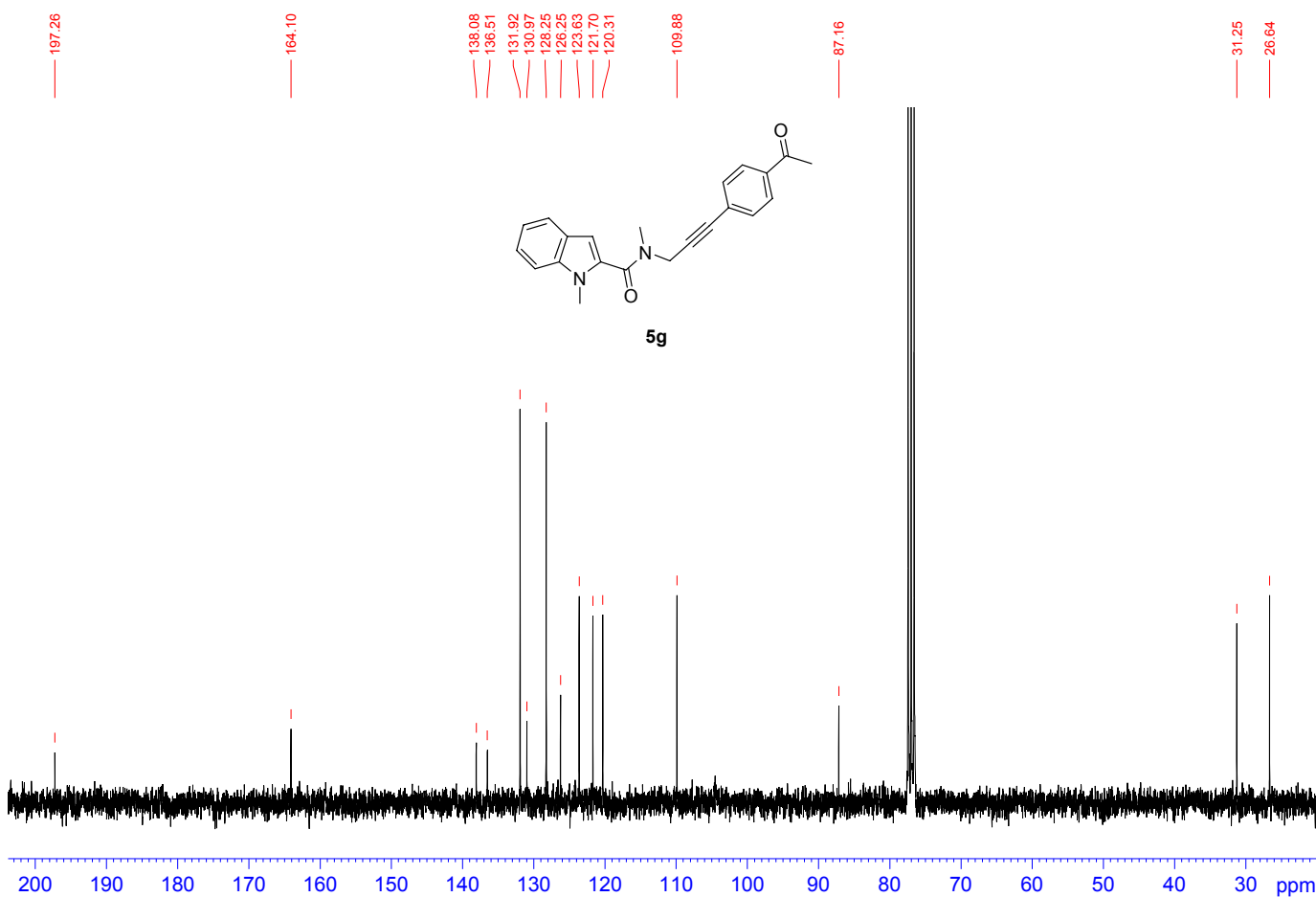
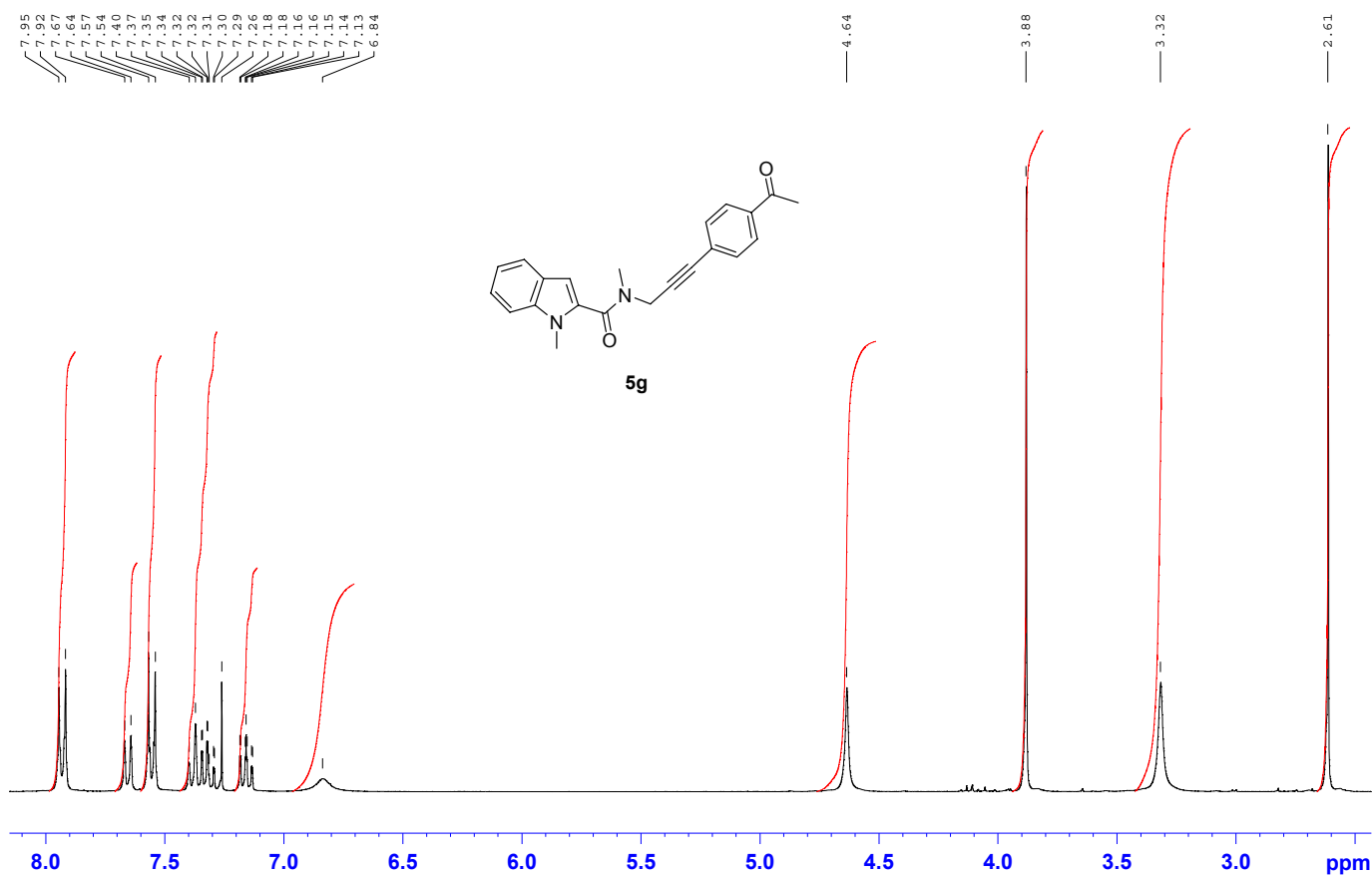
1-Methyl-1*H*-indole-2-carboxylic acid methyl-[3-(4-trifluoromethyl-phenyl)-prop-2-ynyl]-amide (5e)



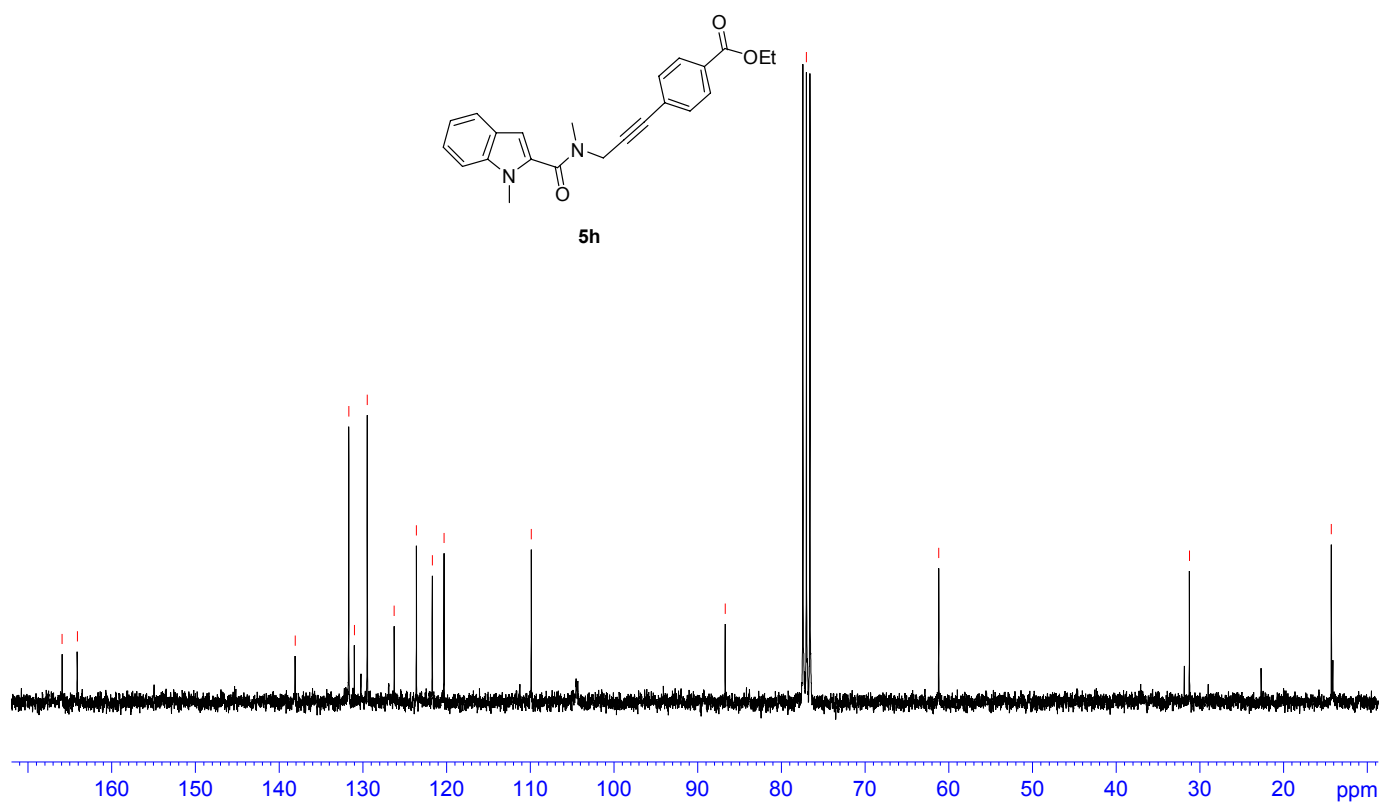
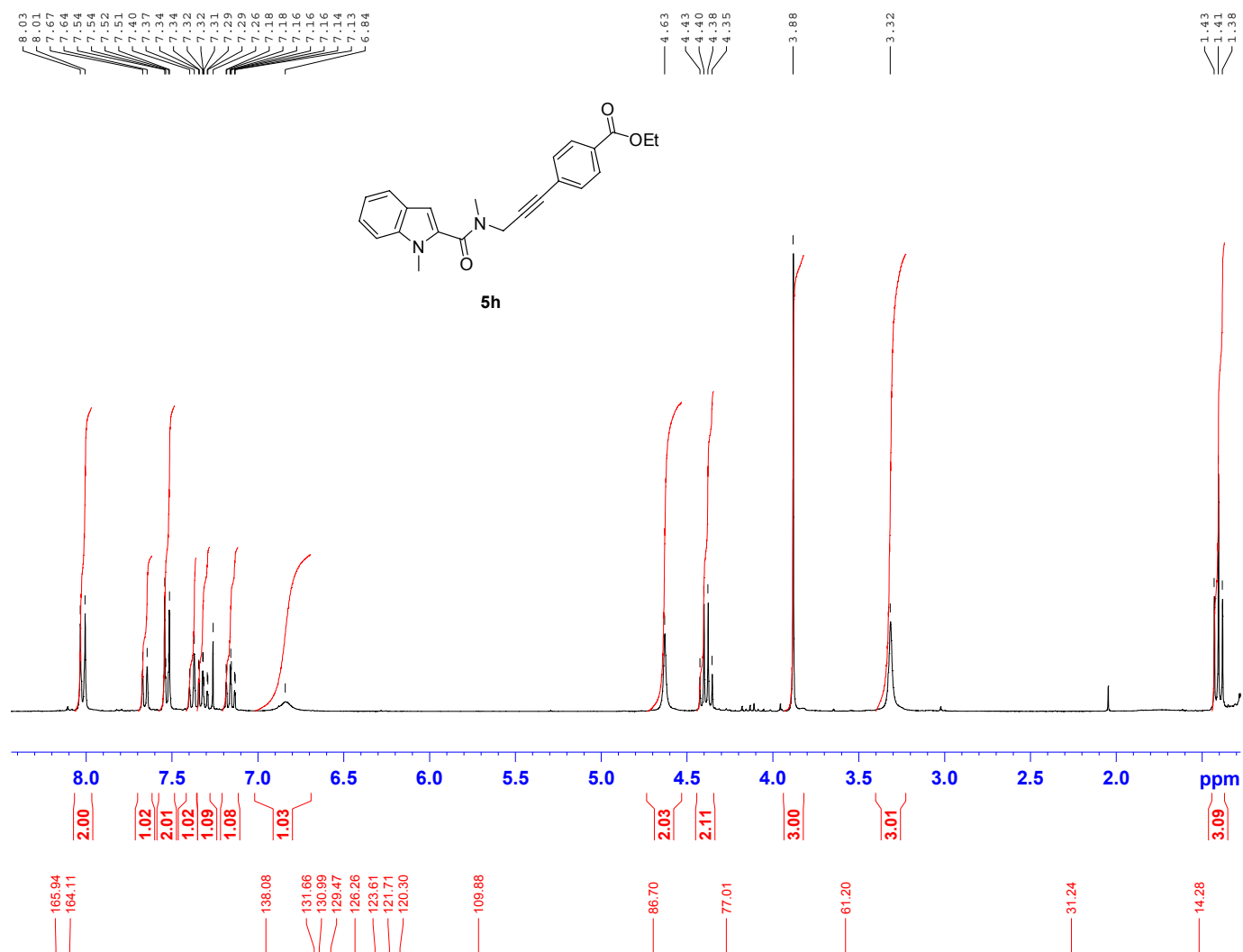
1-Methyl-1*H*-indole-2-carboxylic acid [3-(4-cyano-phenyl)-prop-2-ynyl]-methyl-amide (5f)



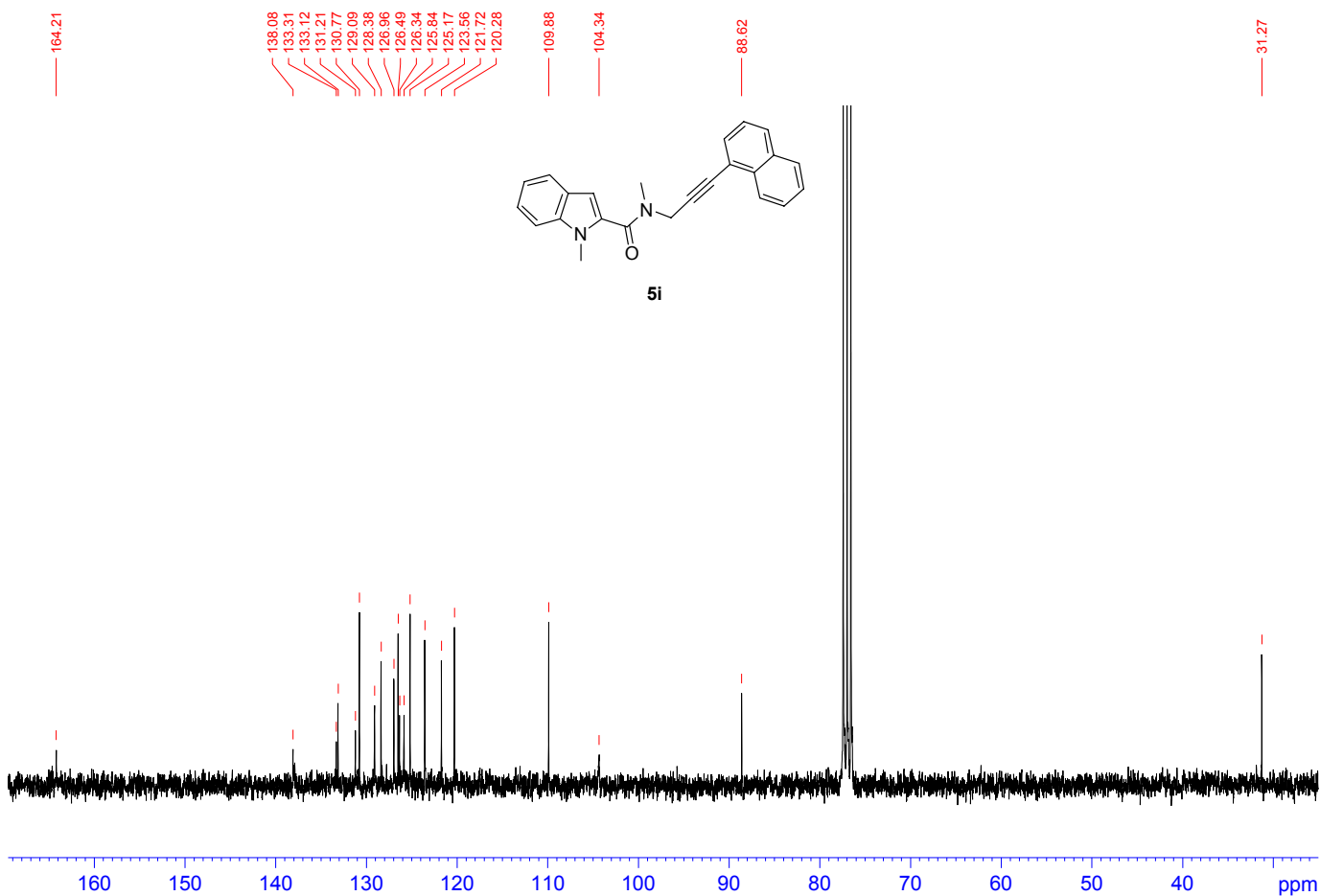
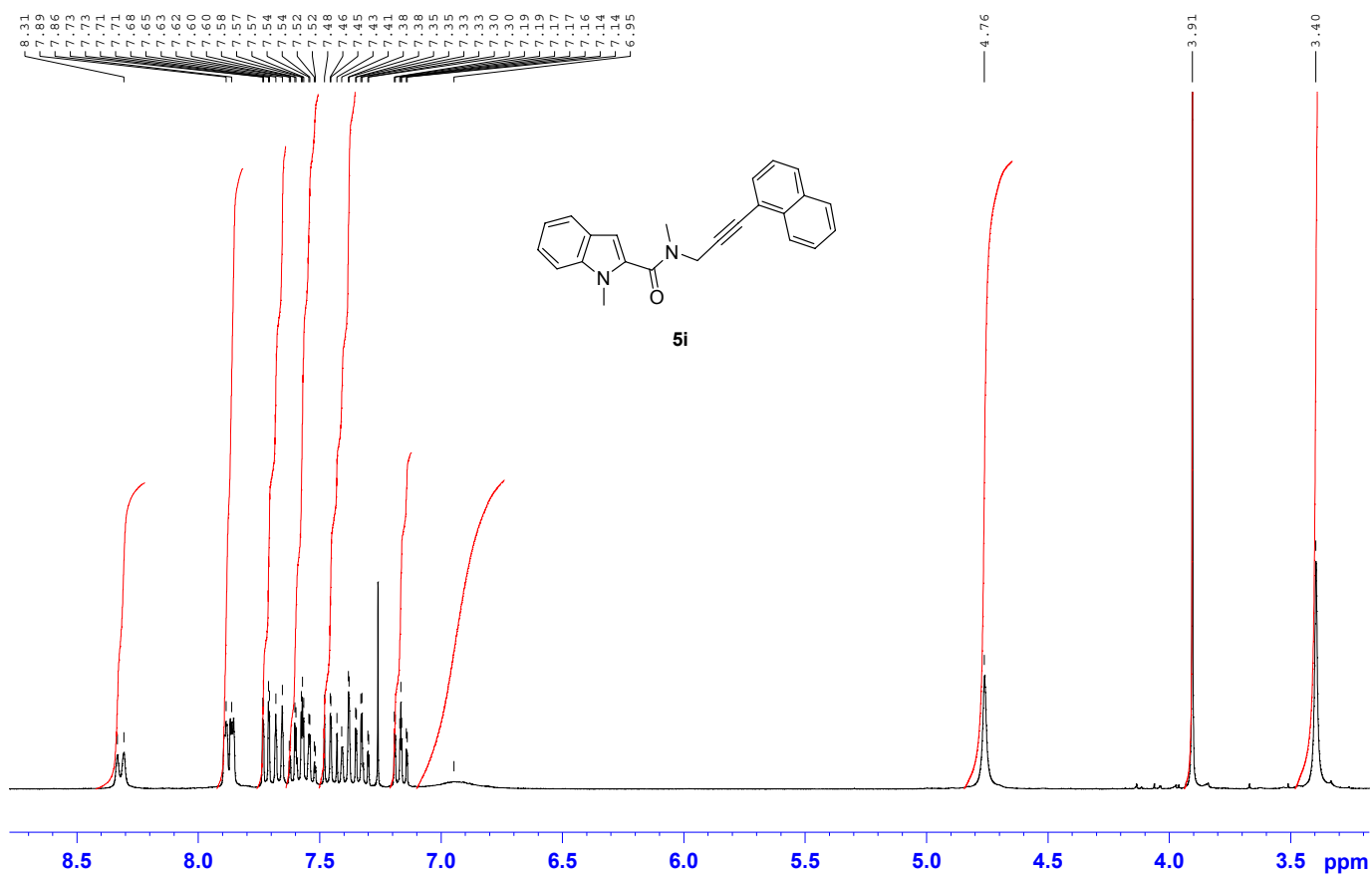
1-Methyl-1*H*- indole-2-carboxylic acid [3-(4-acetyl-phenyl)-prop-2-ynyl]-methyl-amide (5g)



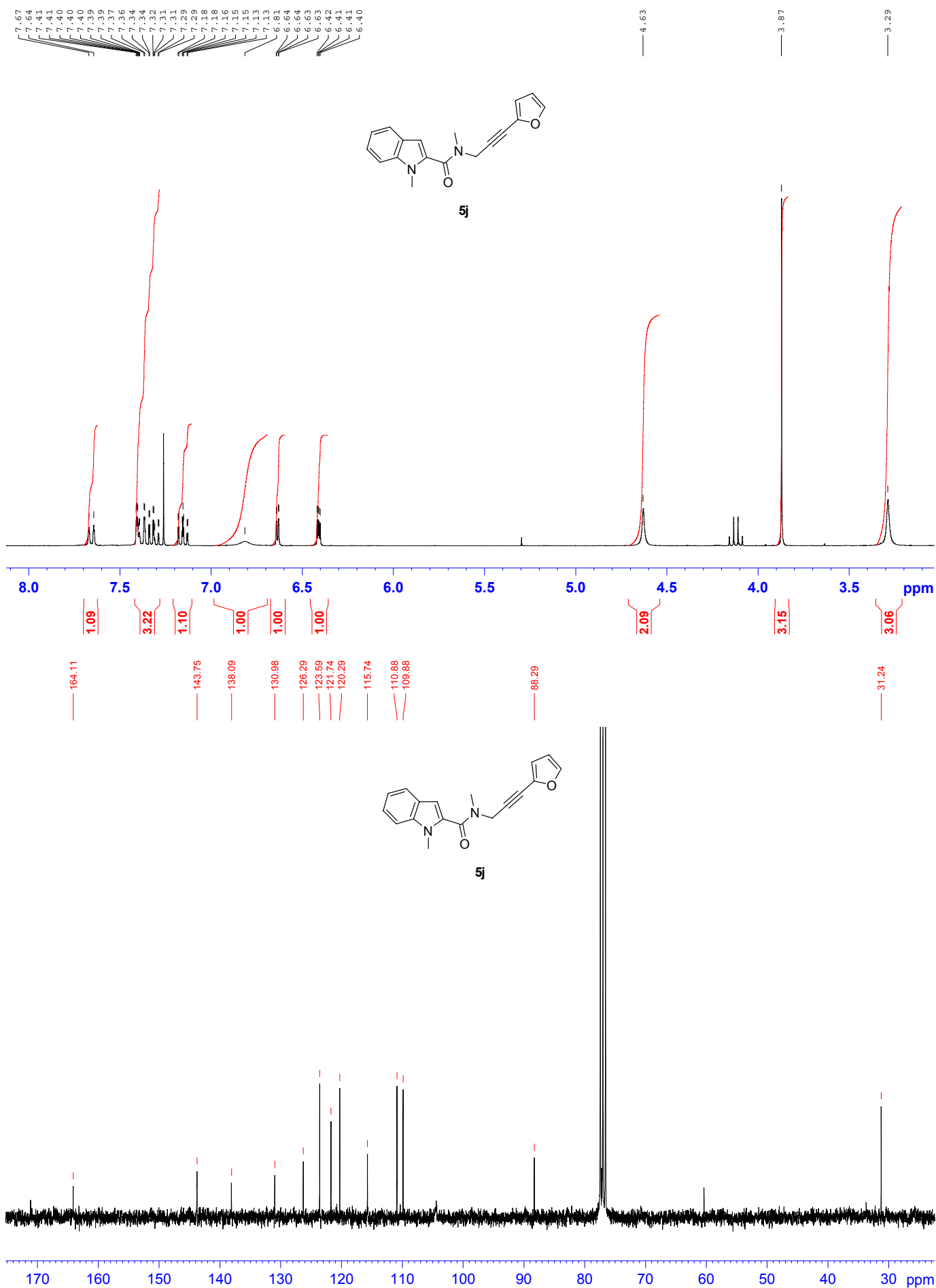
4-{3-[Methyl-(1-methyl-1*H*-indole-2-carbonyl)-amino]-prop-1-ynyl}-benzoic acid ethyl ester (5h)



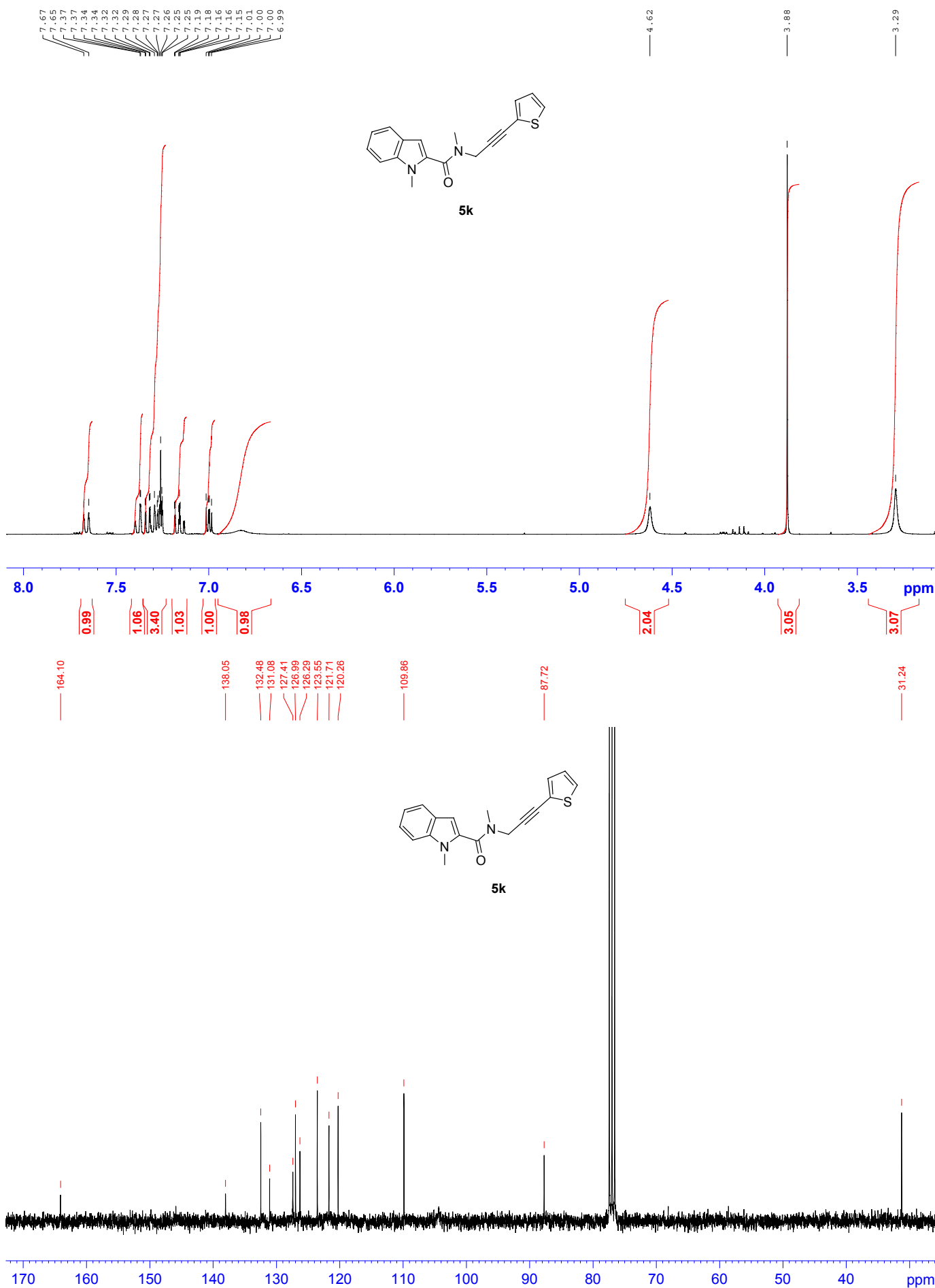
1-Methyl-1*H*-indole-2-carboxylic acid methyl-(3-naphthalen-1-yl-prop-2-ynyl)-amide (5i)



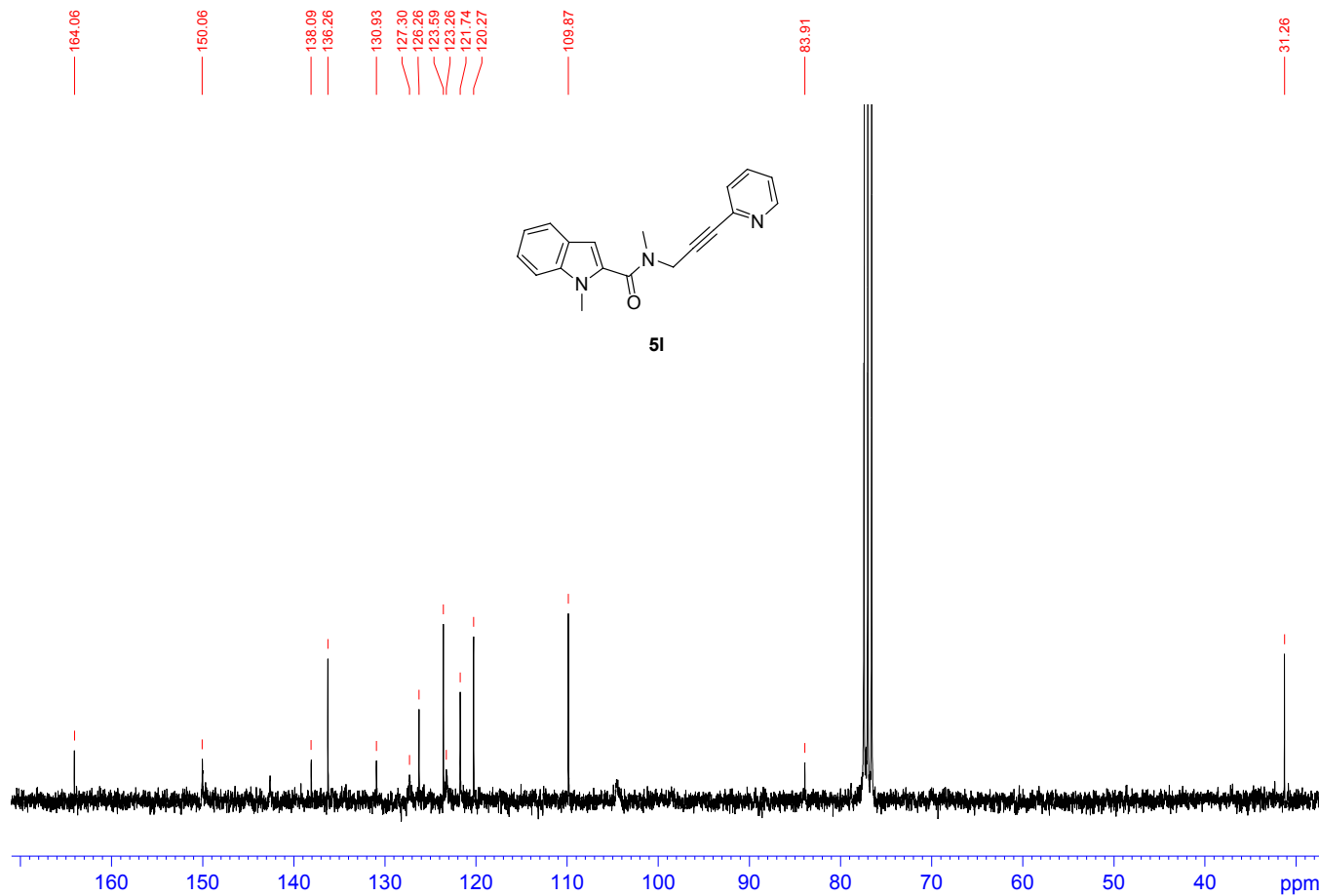
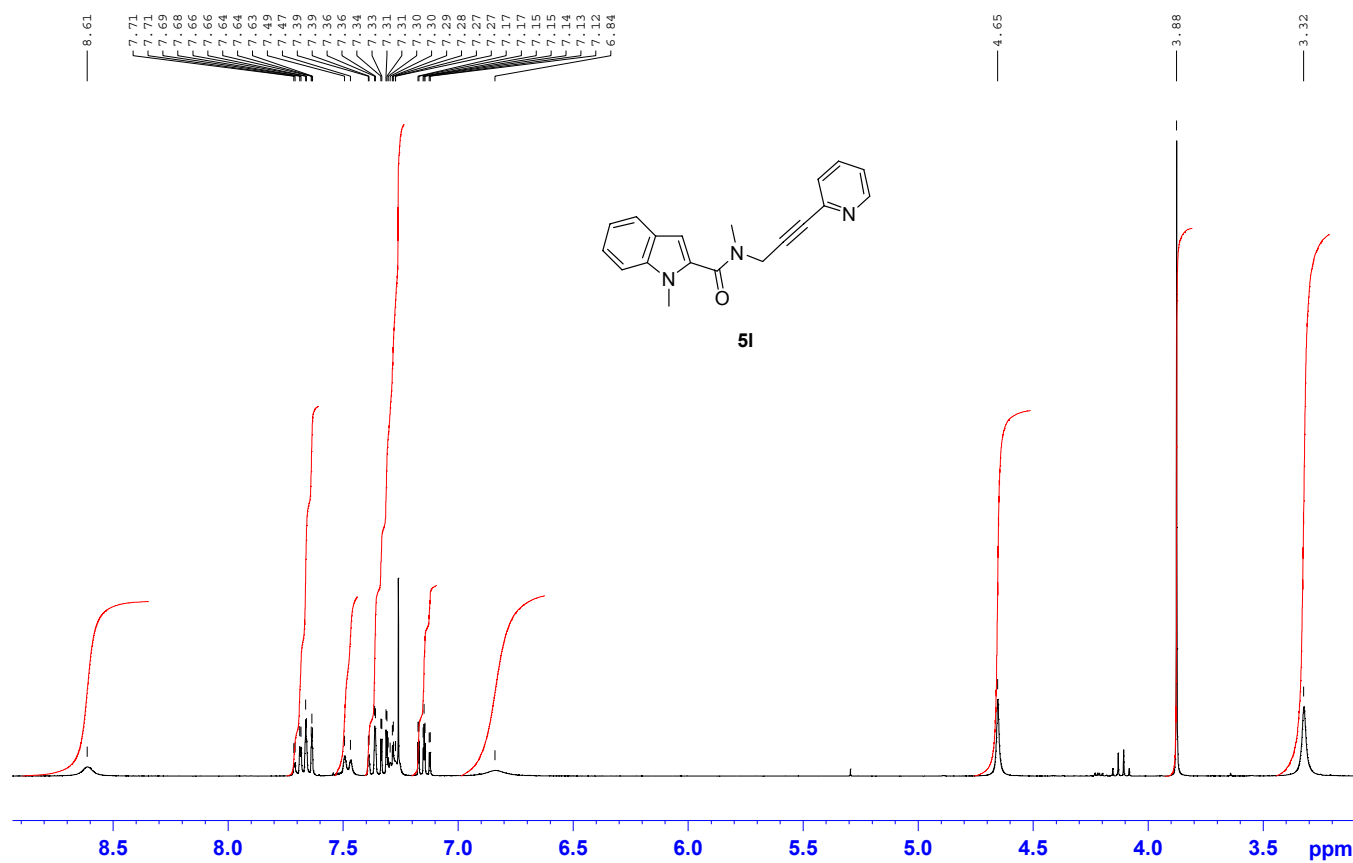
1-Methyl-1*H*-indole-2-carboxylic acid (3-furan-2-yl-prop-2-ynyl)-methyl-amide (5j)



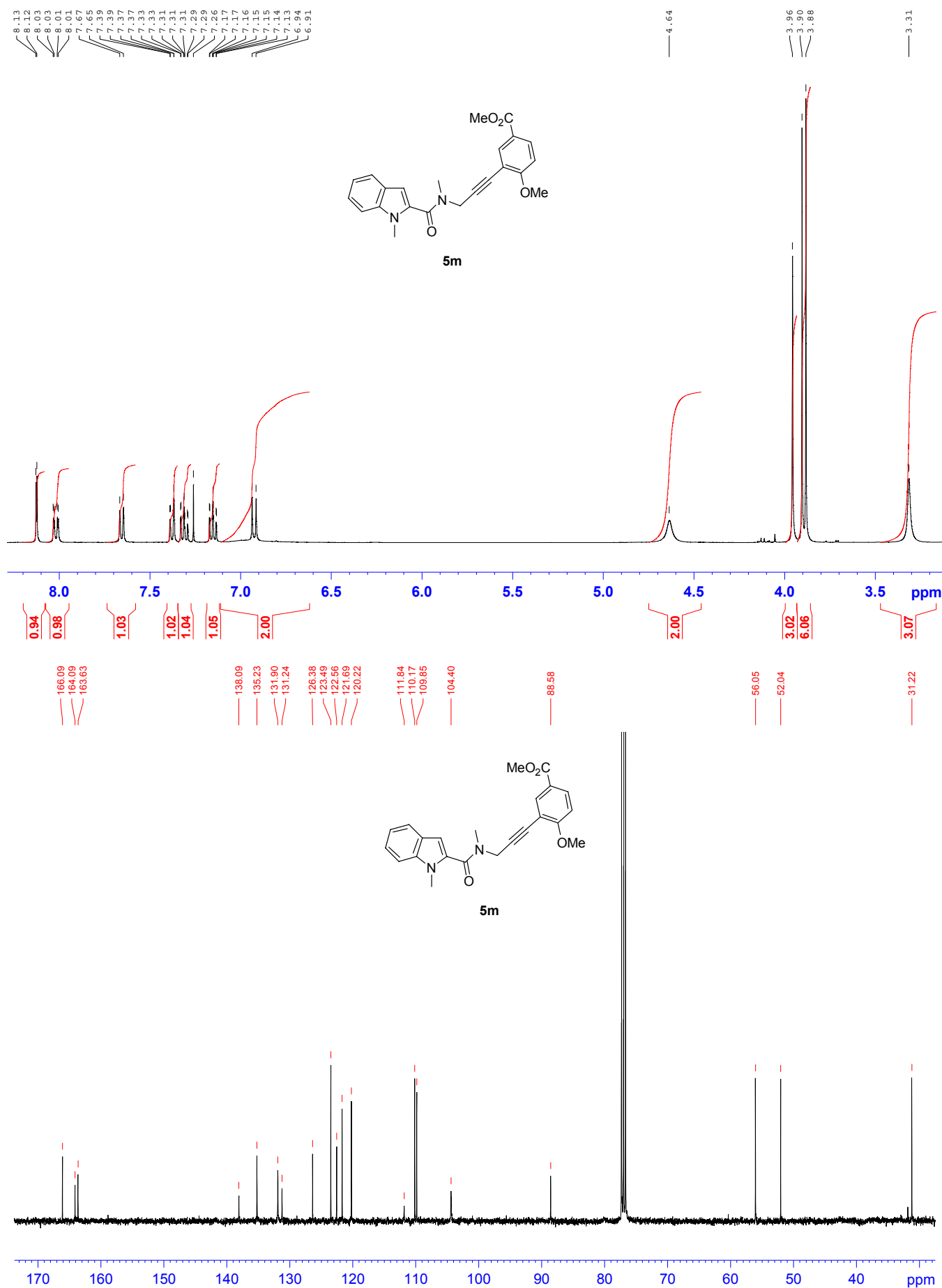
1-Methyl-1*H*-indole-2-carboxylic acid methyl-(3-thiophen-2-yl-prop-2-ynyl)-amide (5k)



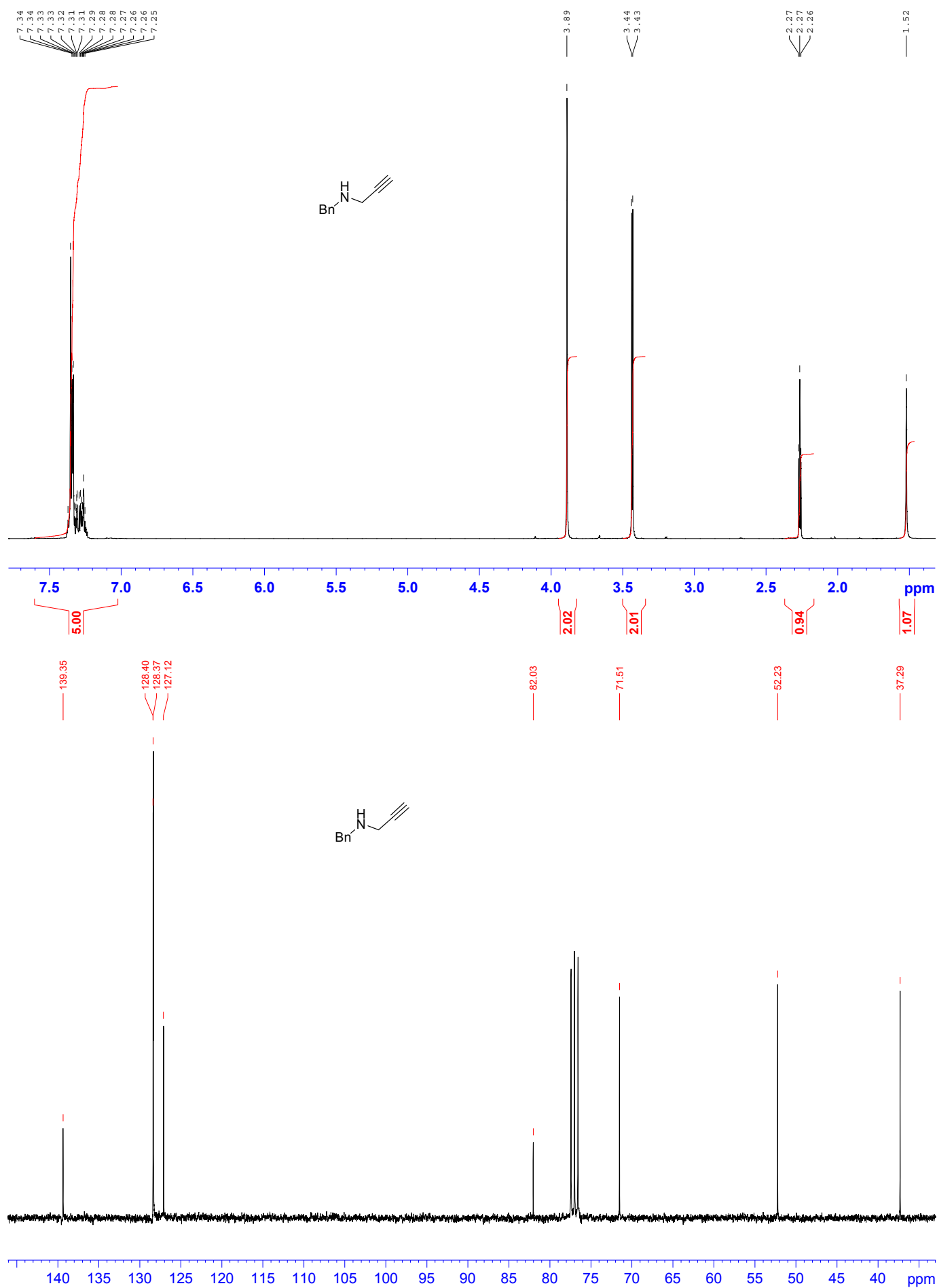
1-Methyl-1*H*- indole-2-carboxylic acid methyl-(3-pyridin-2-yl-prop-2-ynyl)-amide (51)



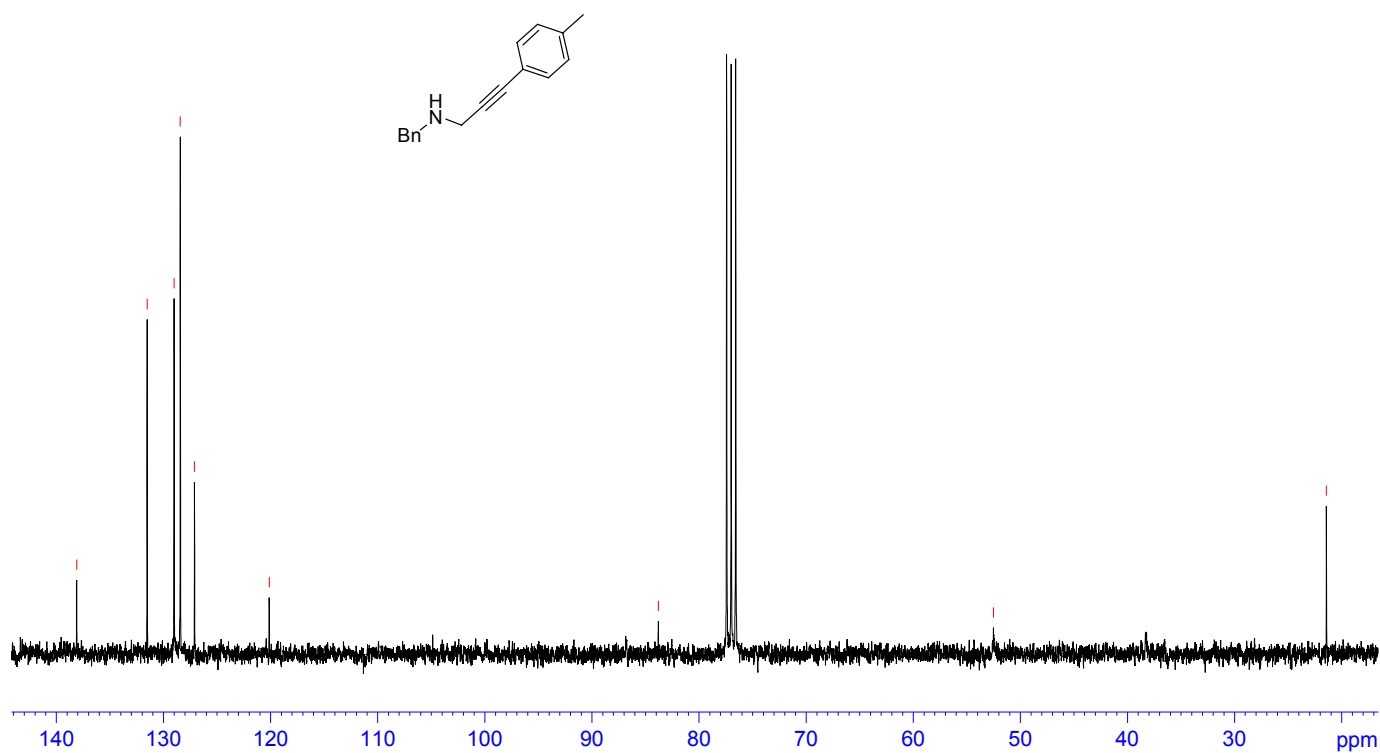
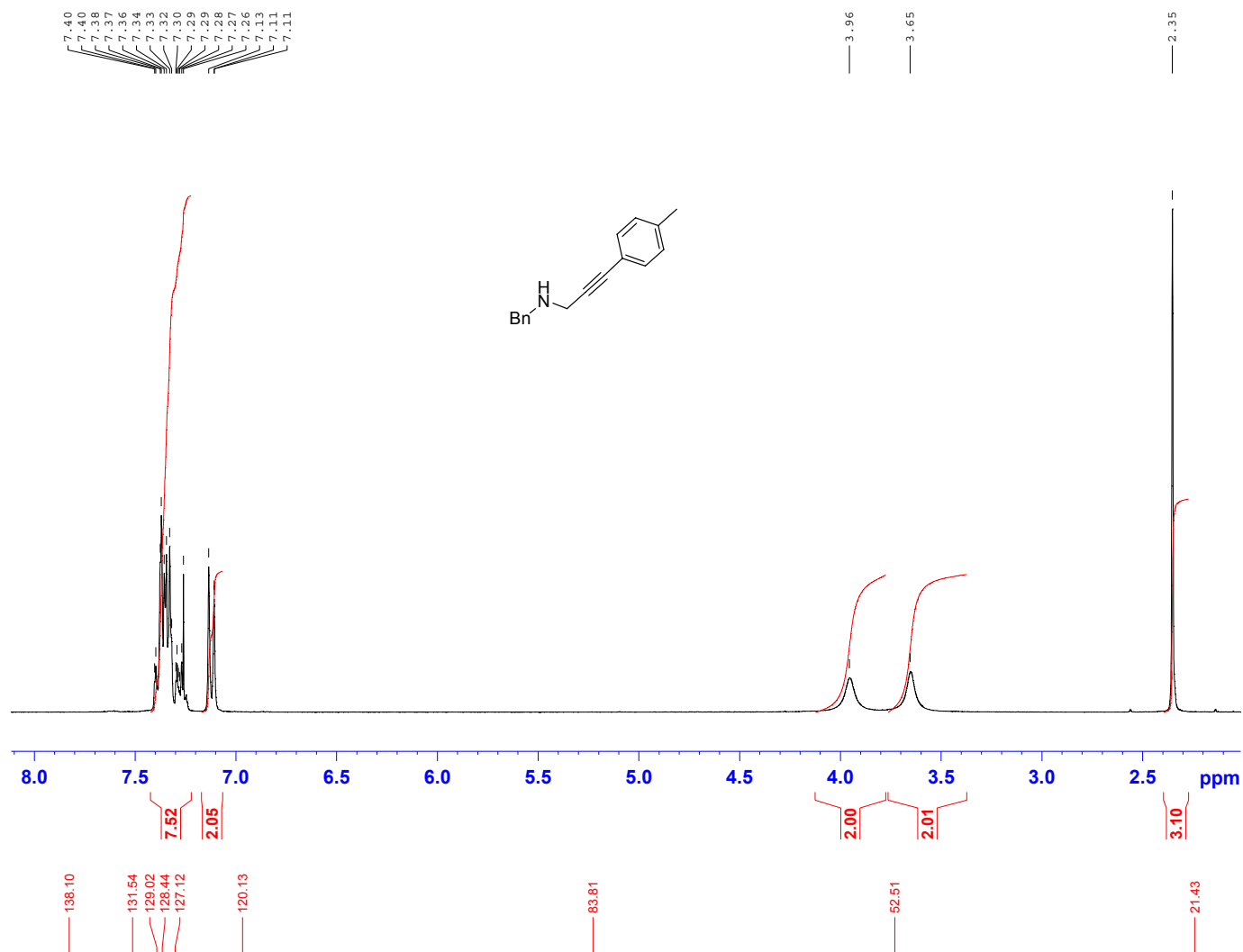
4-Methoxy-3-{3-[methyl-(1-methyl-1*H*-indole-2-carbonyl)-amino]-prop-1-ynyl}-benzoic acid methyl ester (5m)



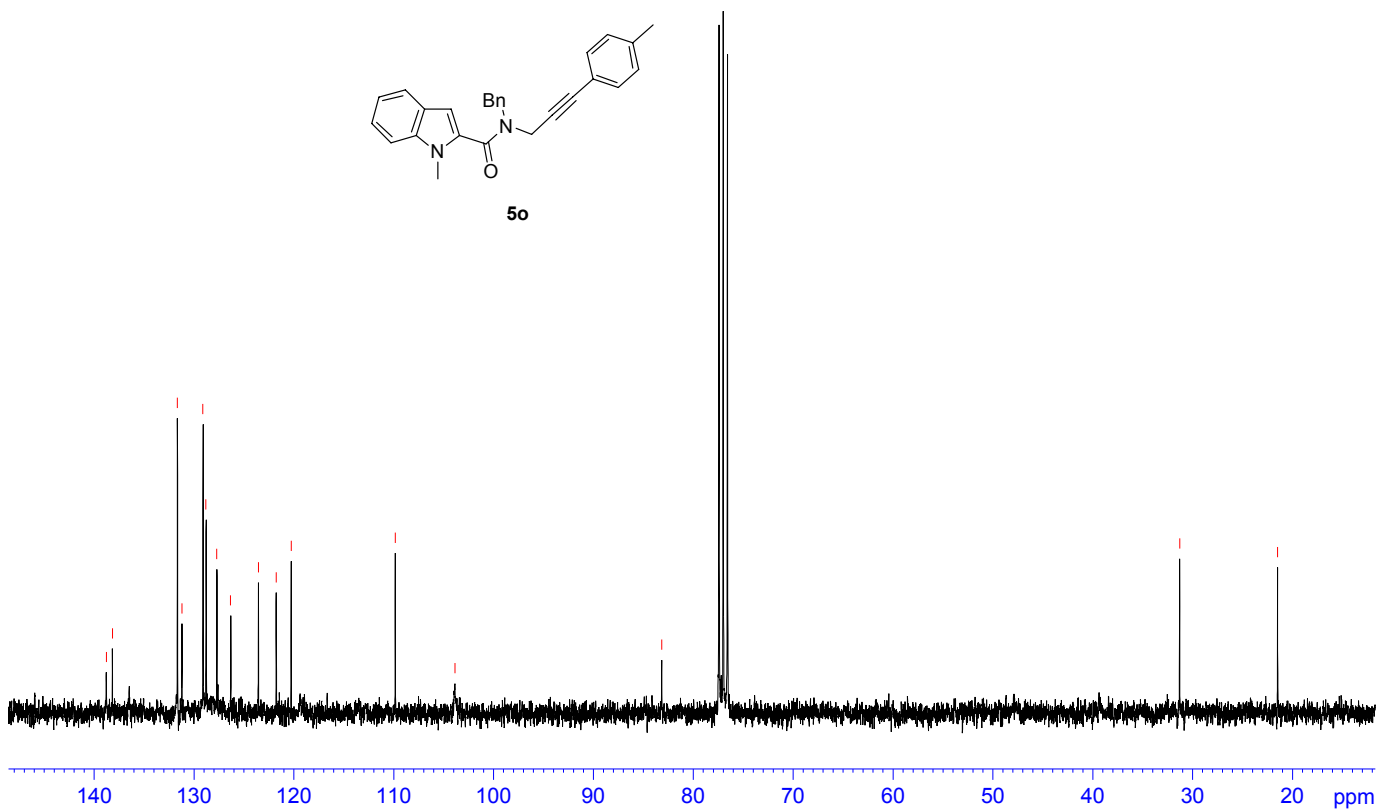
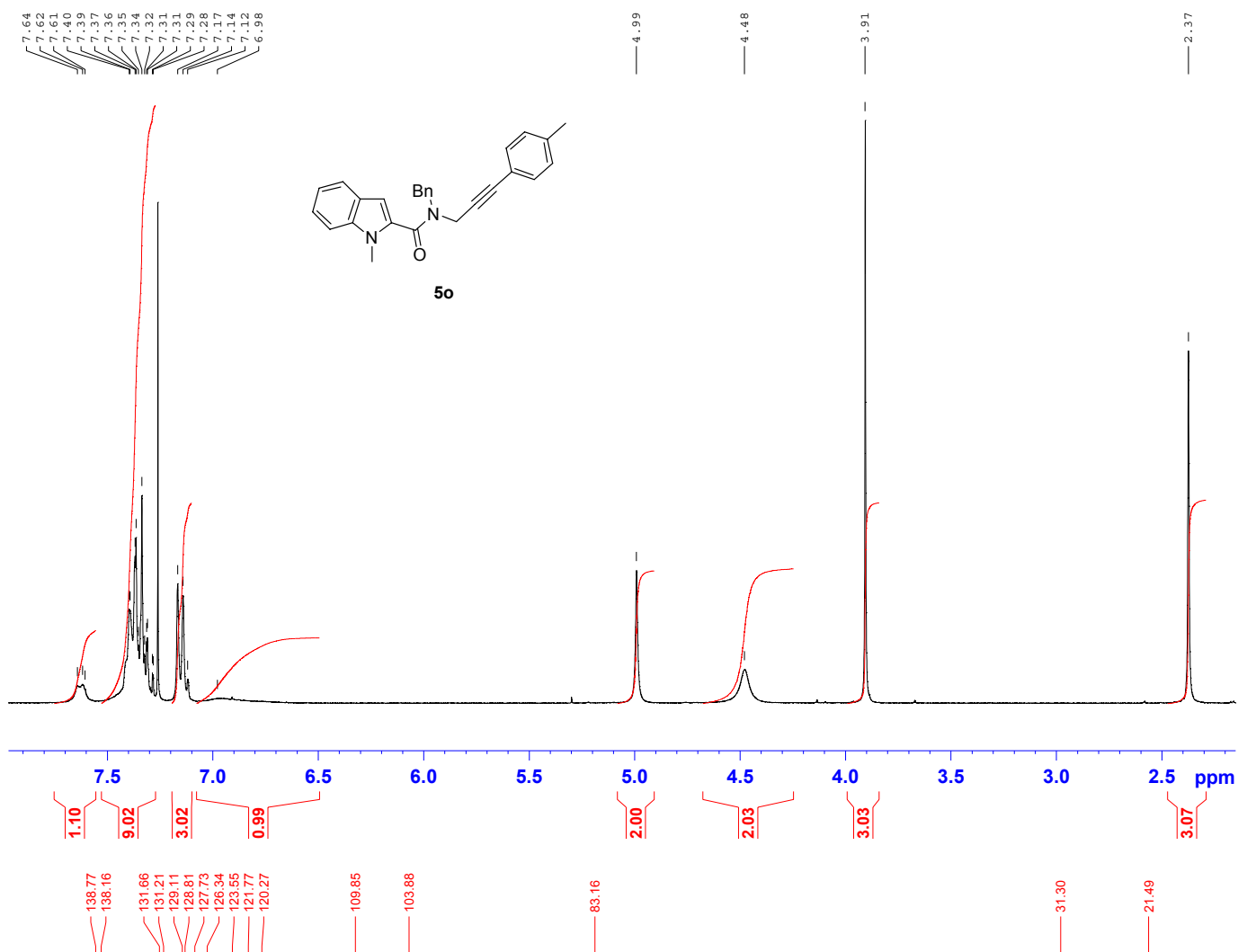
Benzyl-(prop-2-ynyl)-amine



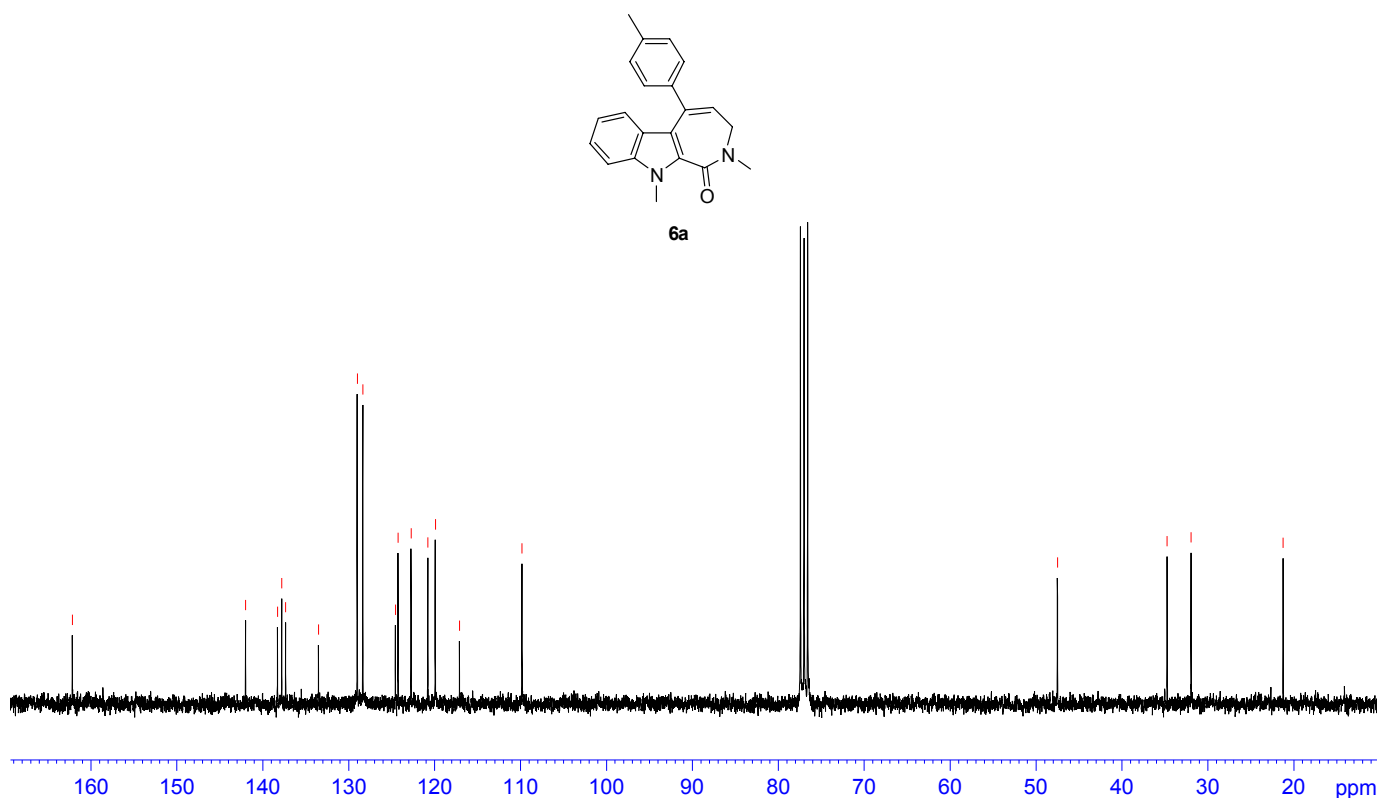
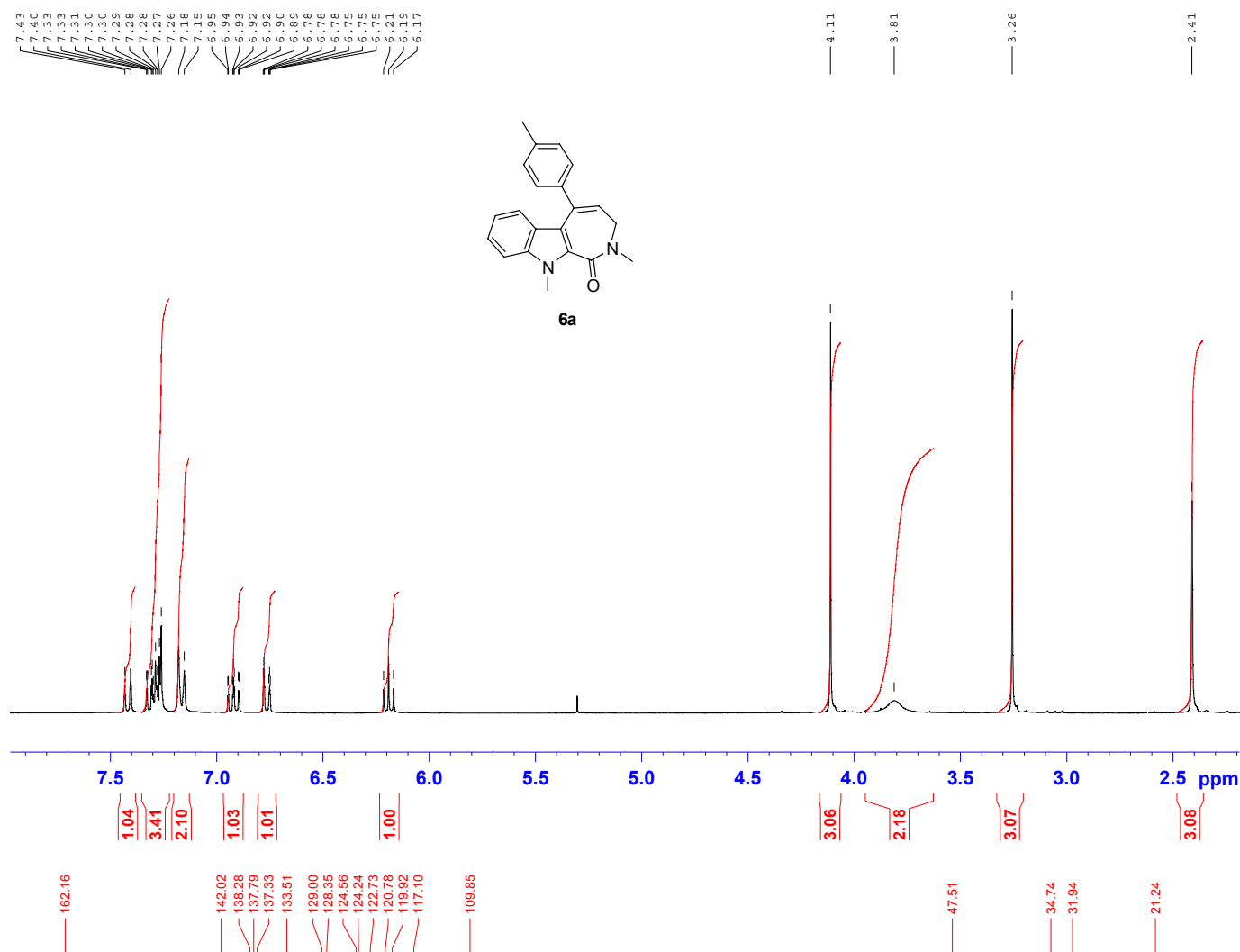
Benzyl-(3-*p*-tolyl-prop-2-ynyl)-amine



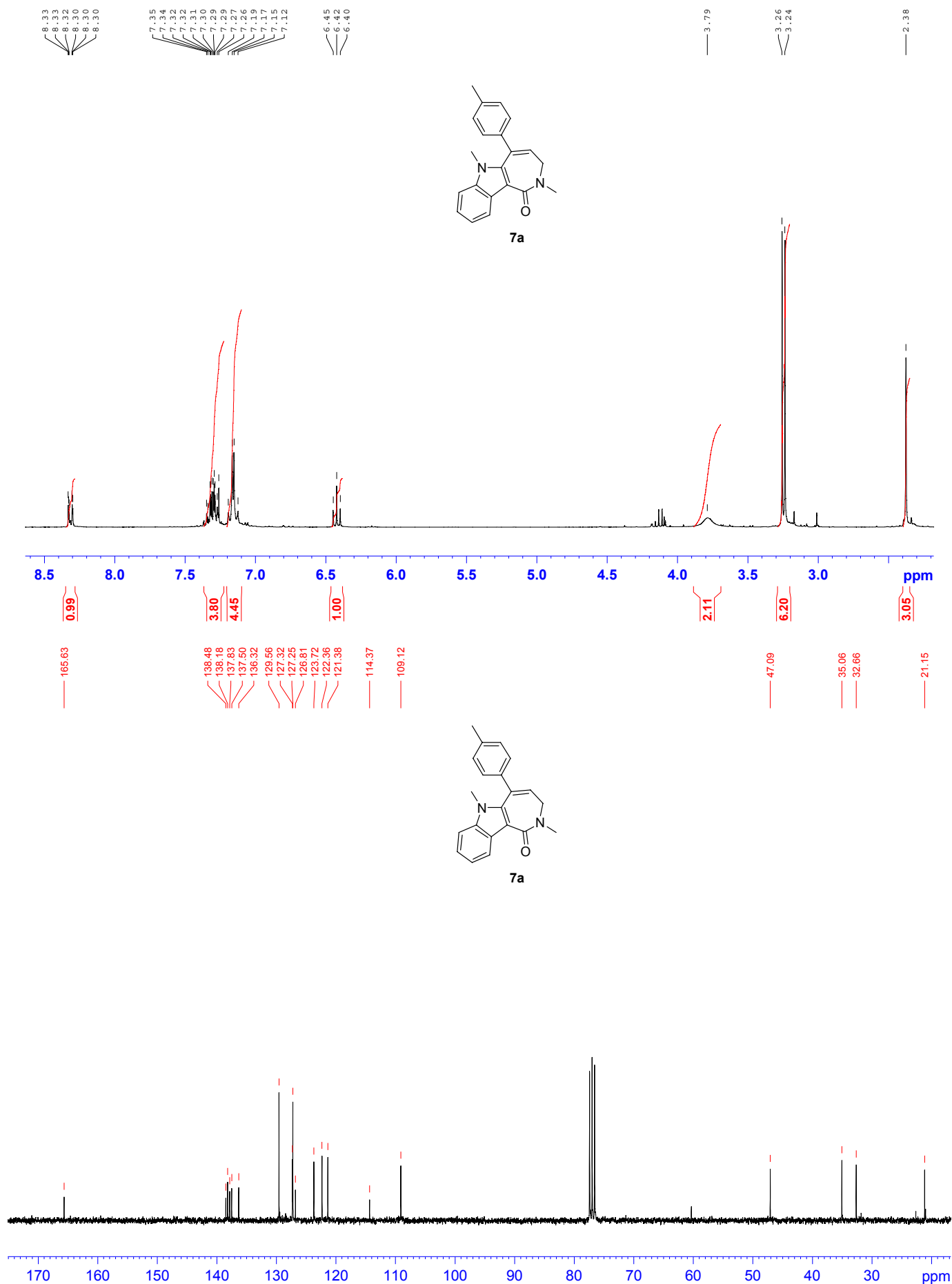
1-Methyl-1H-indole-2-carboxylic acid benzyl-(3-p-tolyl-prop-2-ynyl)-amide (5o)



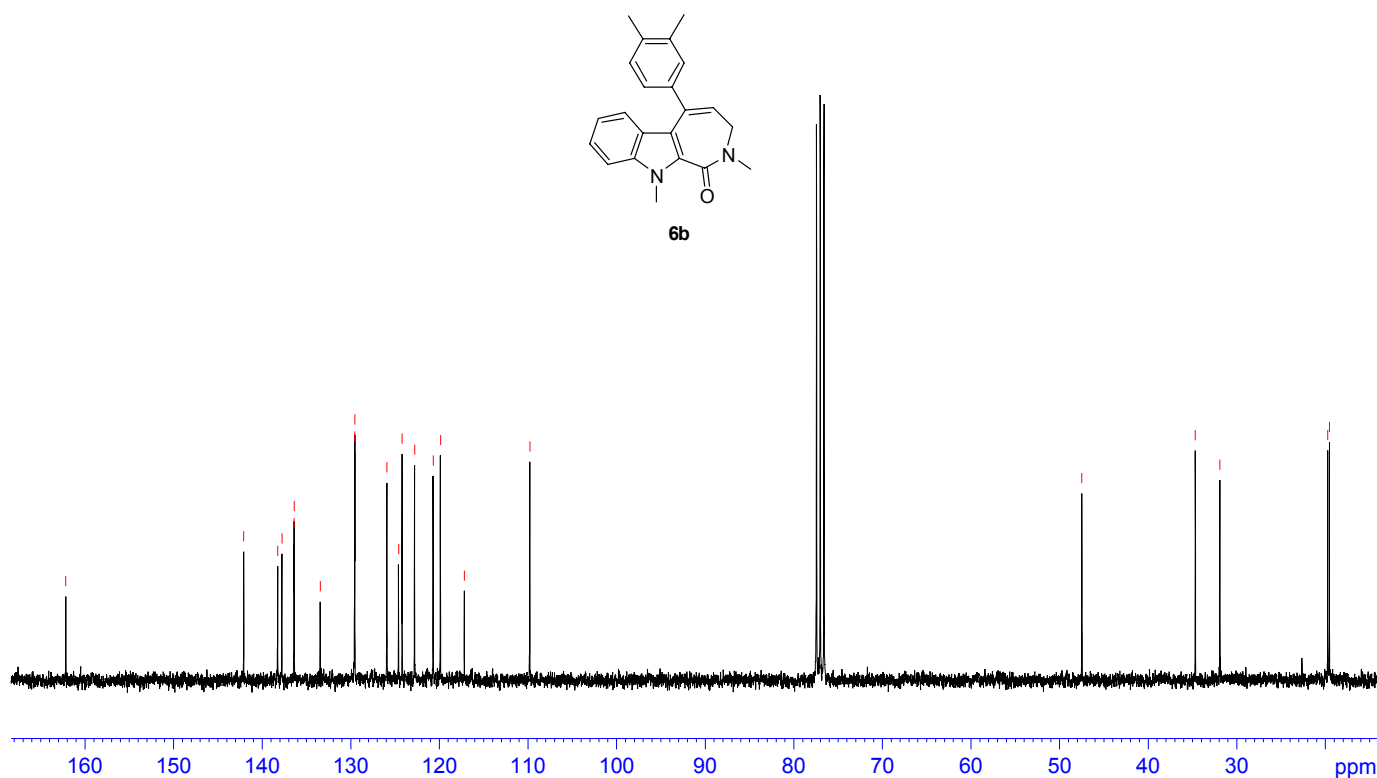
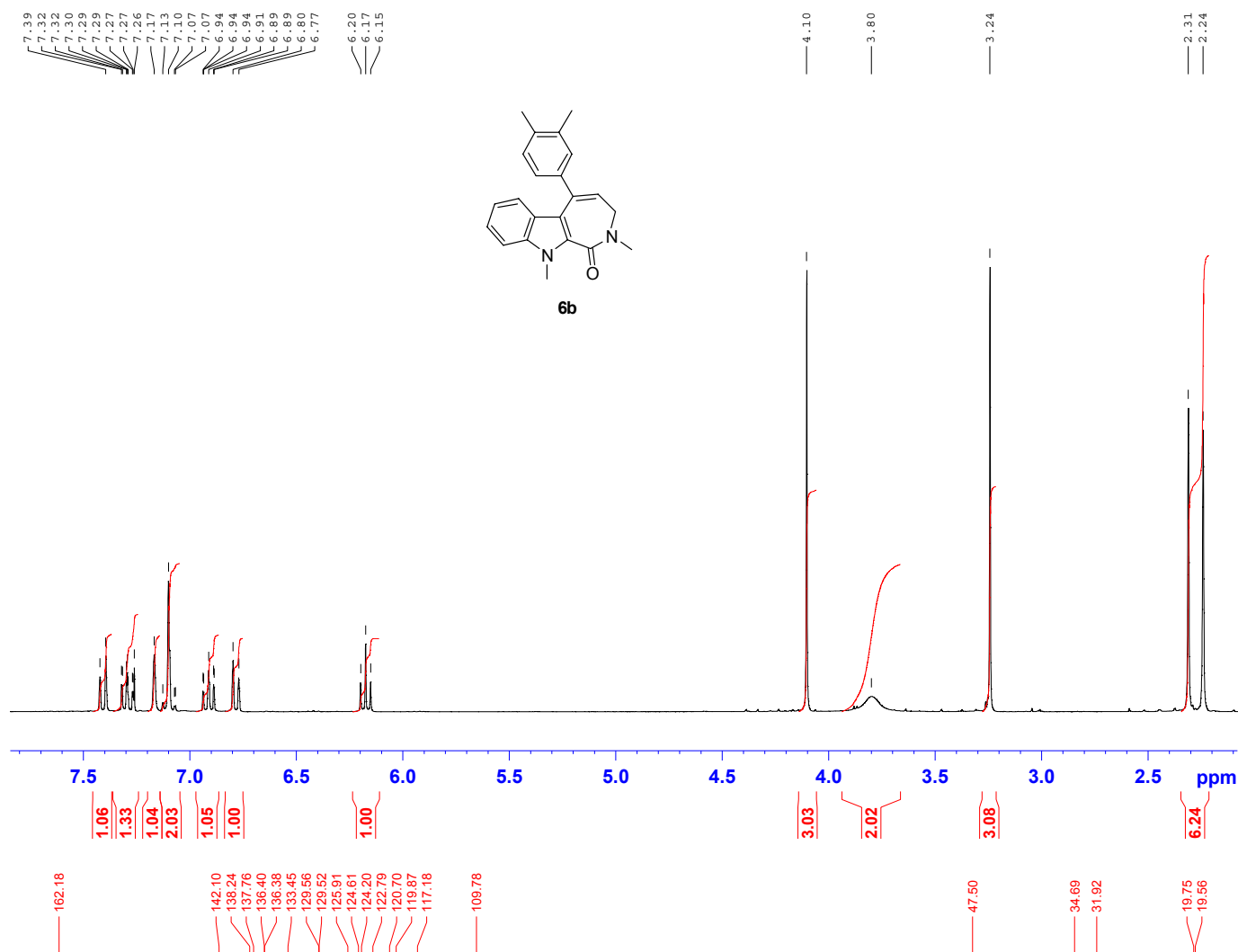
2,10-Dimethyl-5-*p*-tolyl-3,10-dihydro-2*H*-azepino[3,4-*b*]indol-1-one (6a)



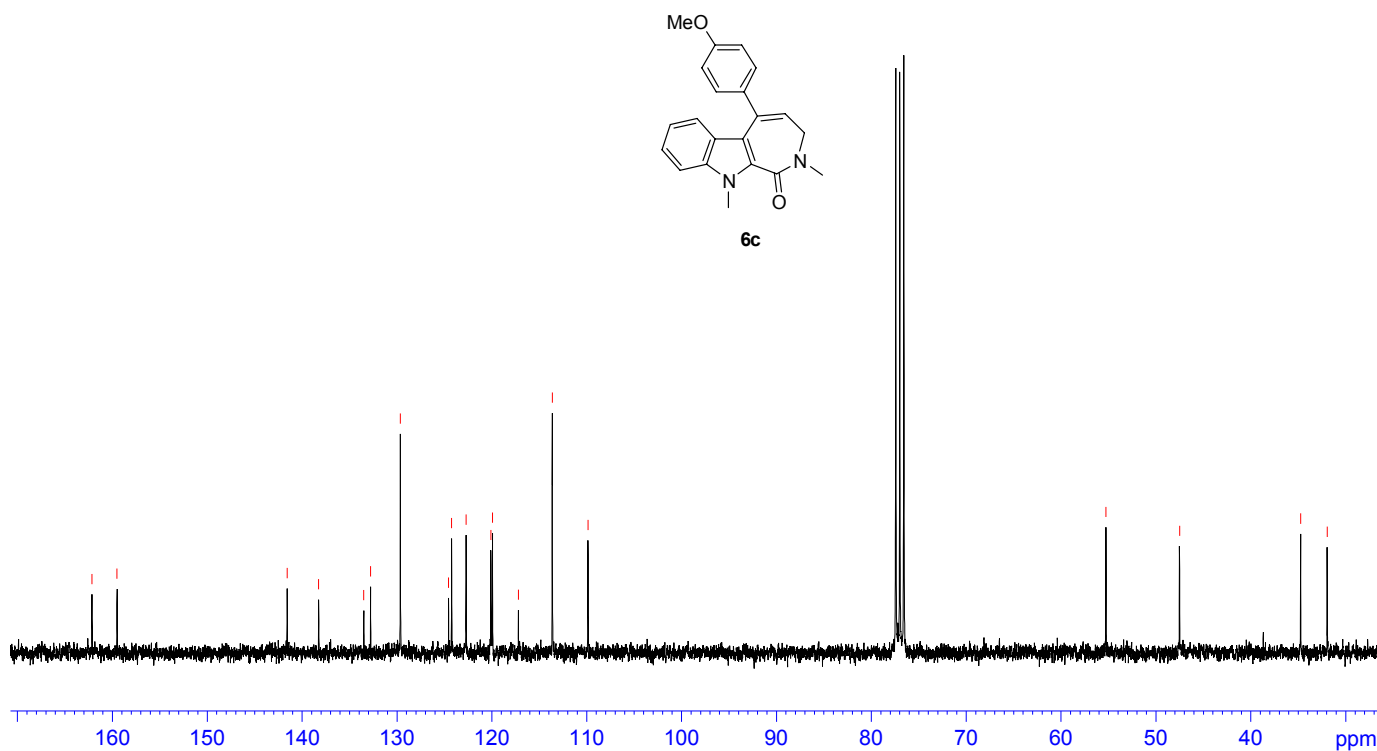
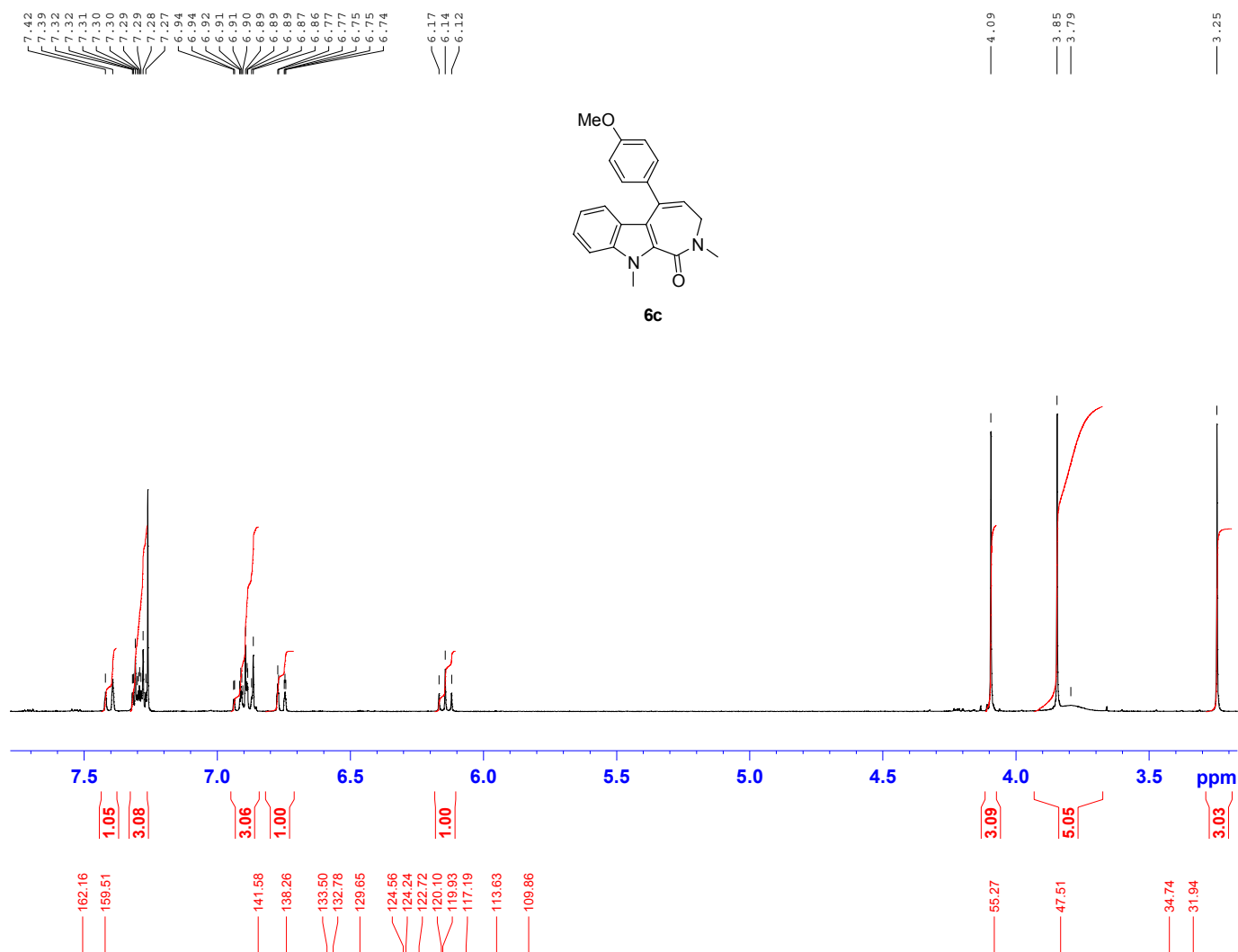
2,6-Dimethyl-5-*p*-tolyl-3,6-dihydro-2*H*-azepino[4,3-*b*]indol-1-one (7a)



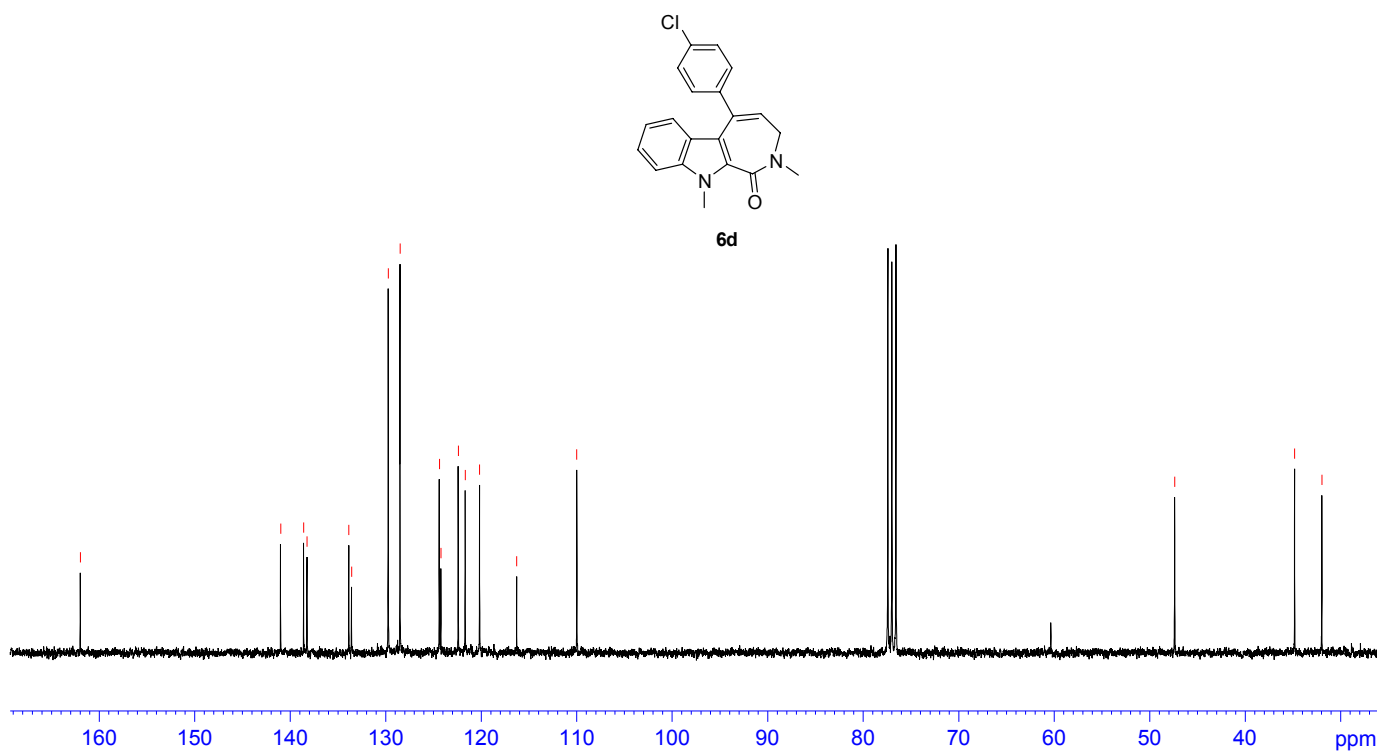
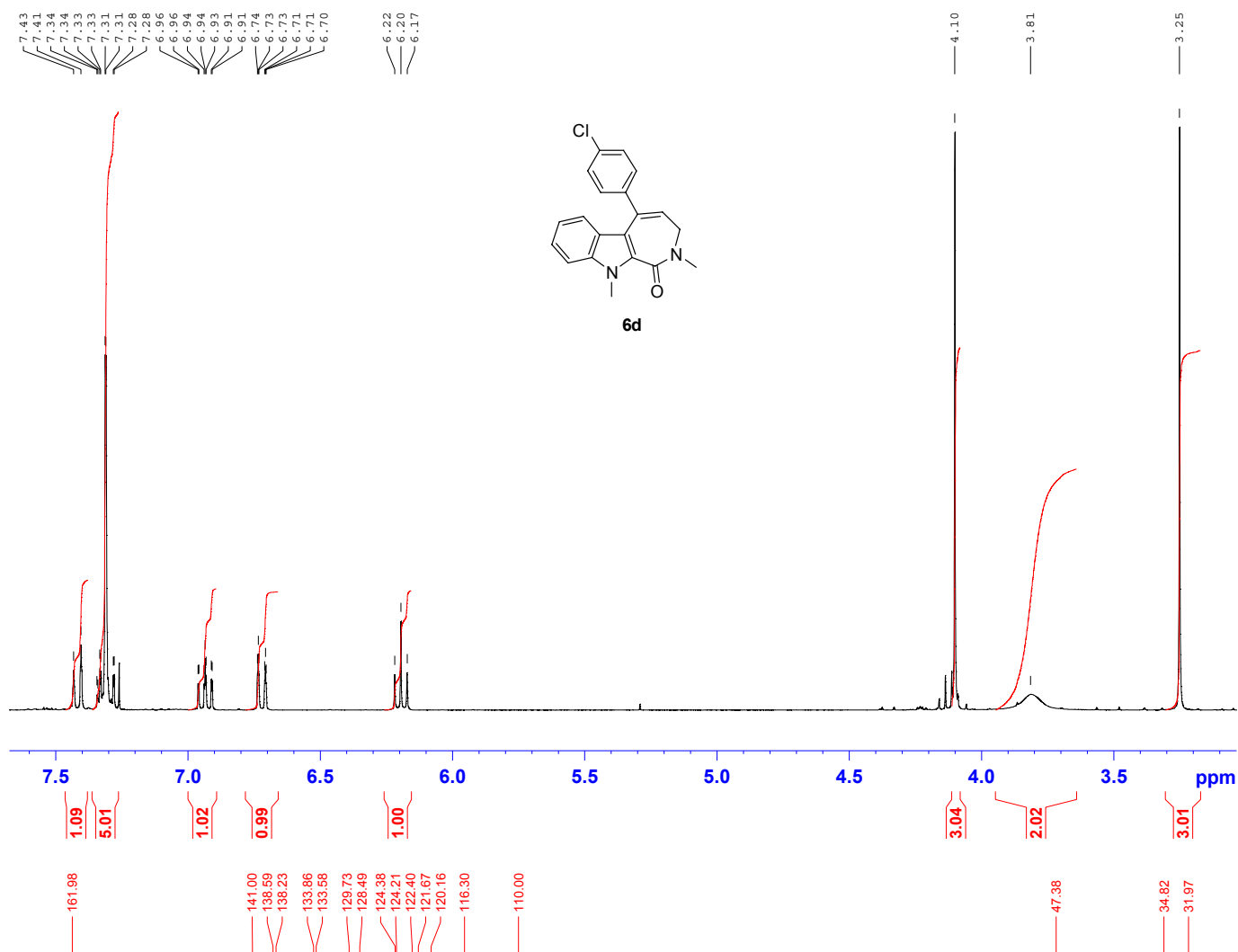
5-(3,4-Dimethylphenyl)-2,10-dimethyl-3,10-dihydro-2*H*-azepino[3,4-*b*]indol-1-one (6b)



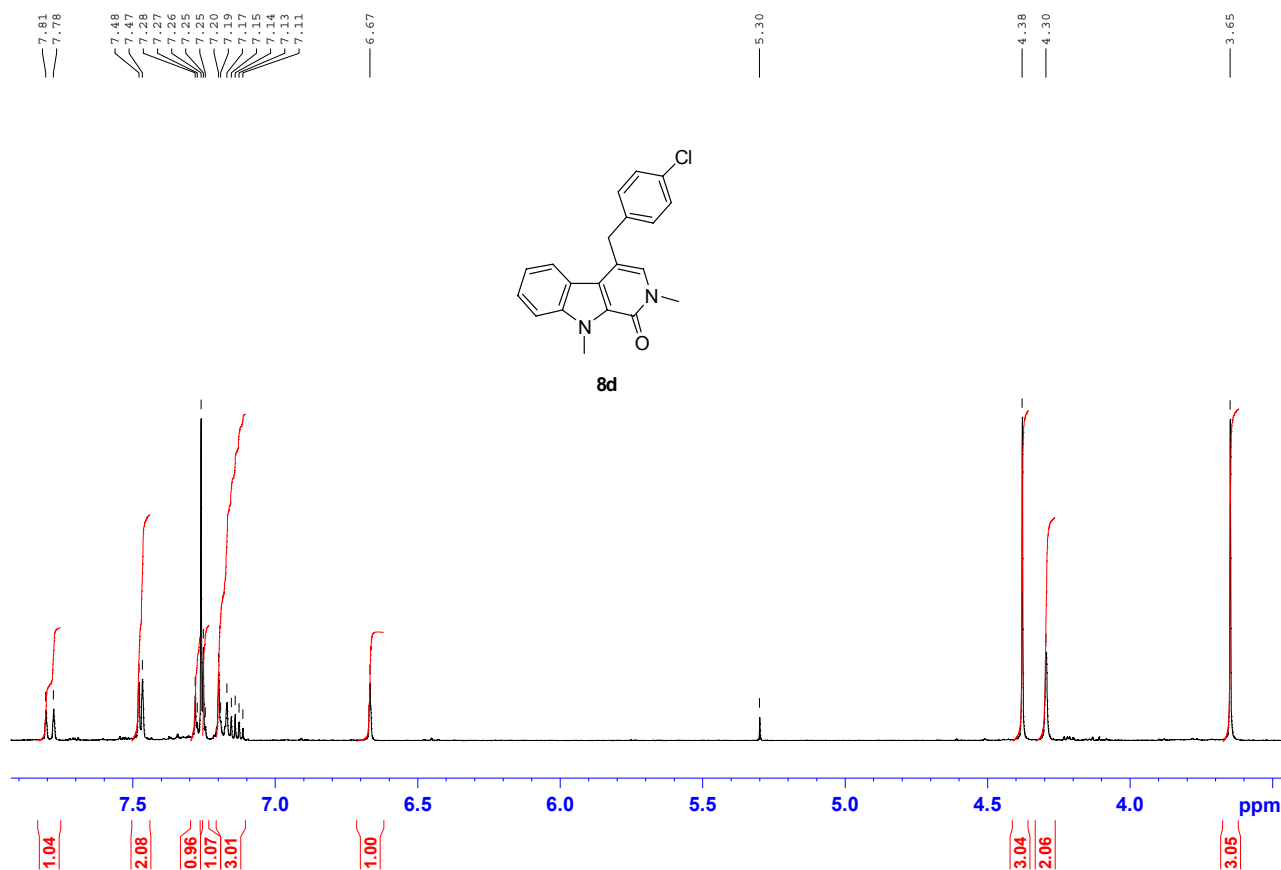
5-(4-Methoxyphenyl)-2,10-dimethyl-3,10-dihydro-2*H*-azepino[3,4-*b*]indol-1-one (6c)



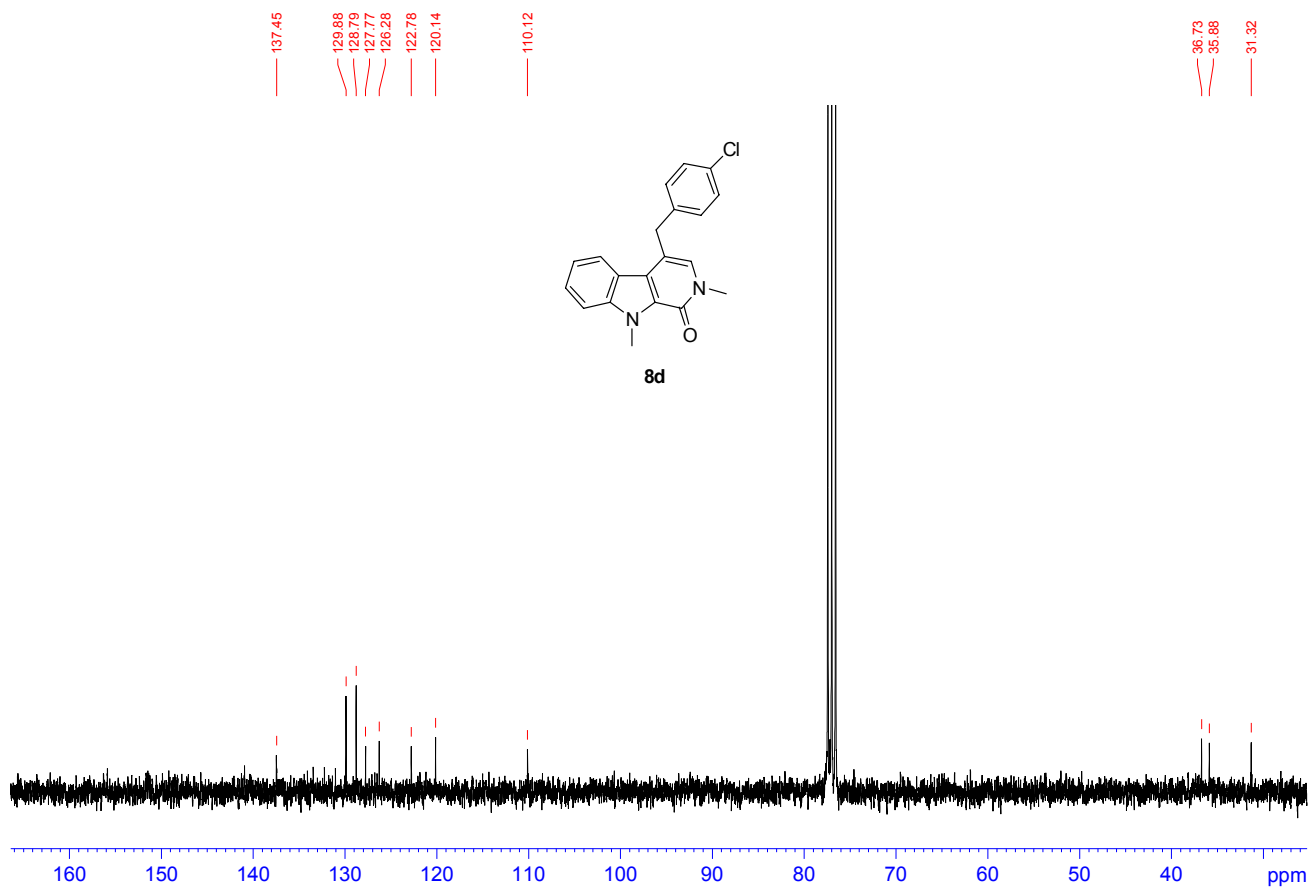
5-(4-Chlorophenyl)-2,10-dimethyl-3,10-dihydro-2*H*-azepino[3,4-*b*]indol-1-one (6d)



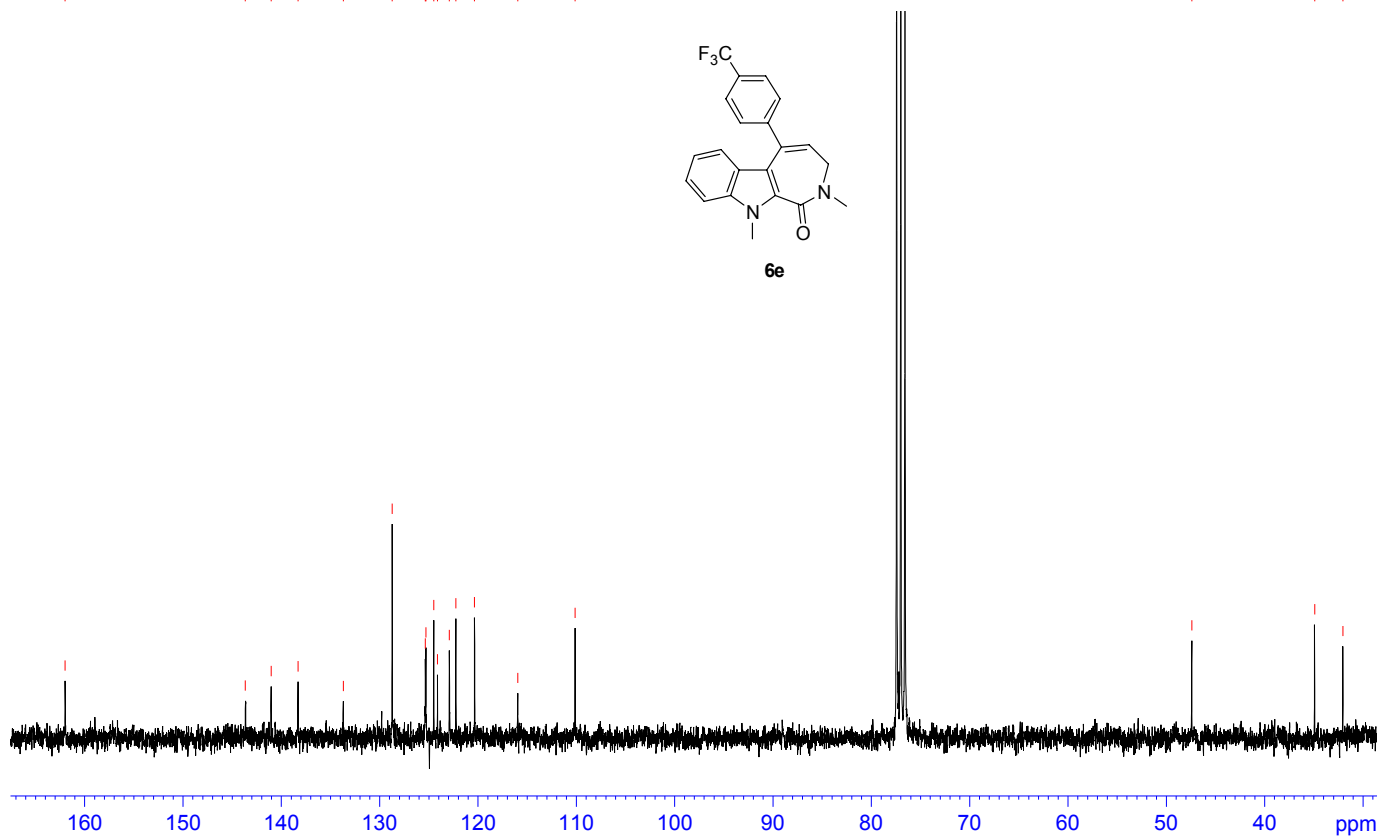
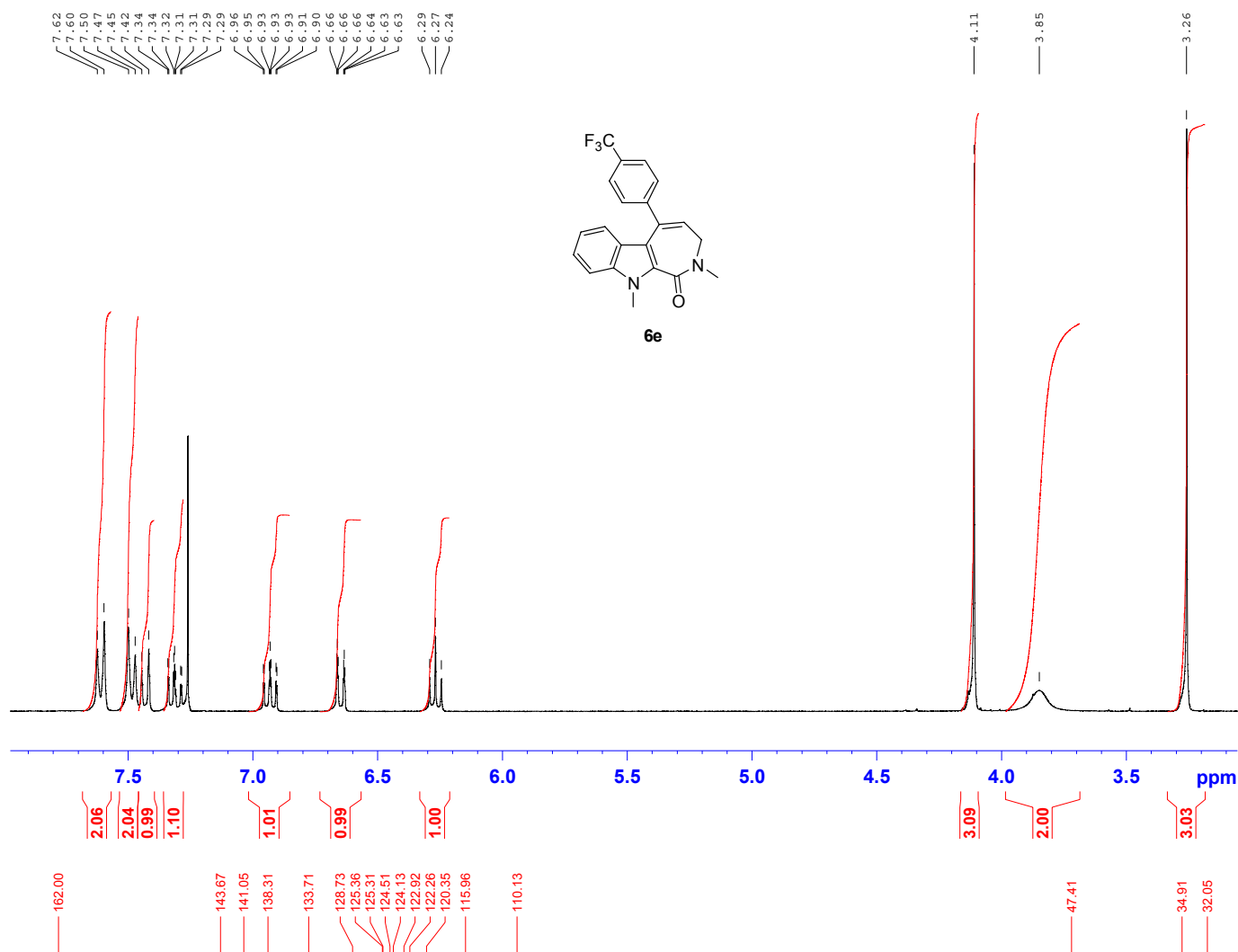
4-(4-Chlorobenzyl)-2,9-dimethyl-2,9-dihydro- β -carbolin-1-one (8d)



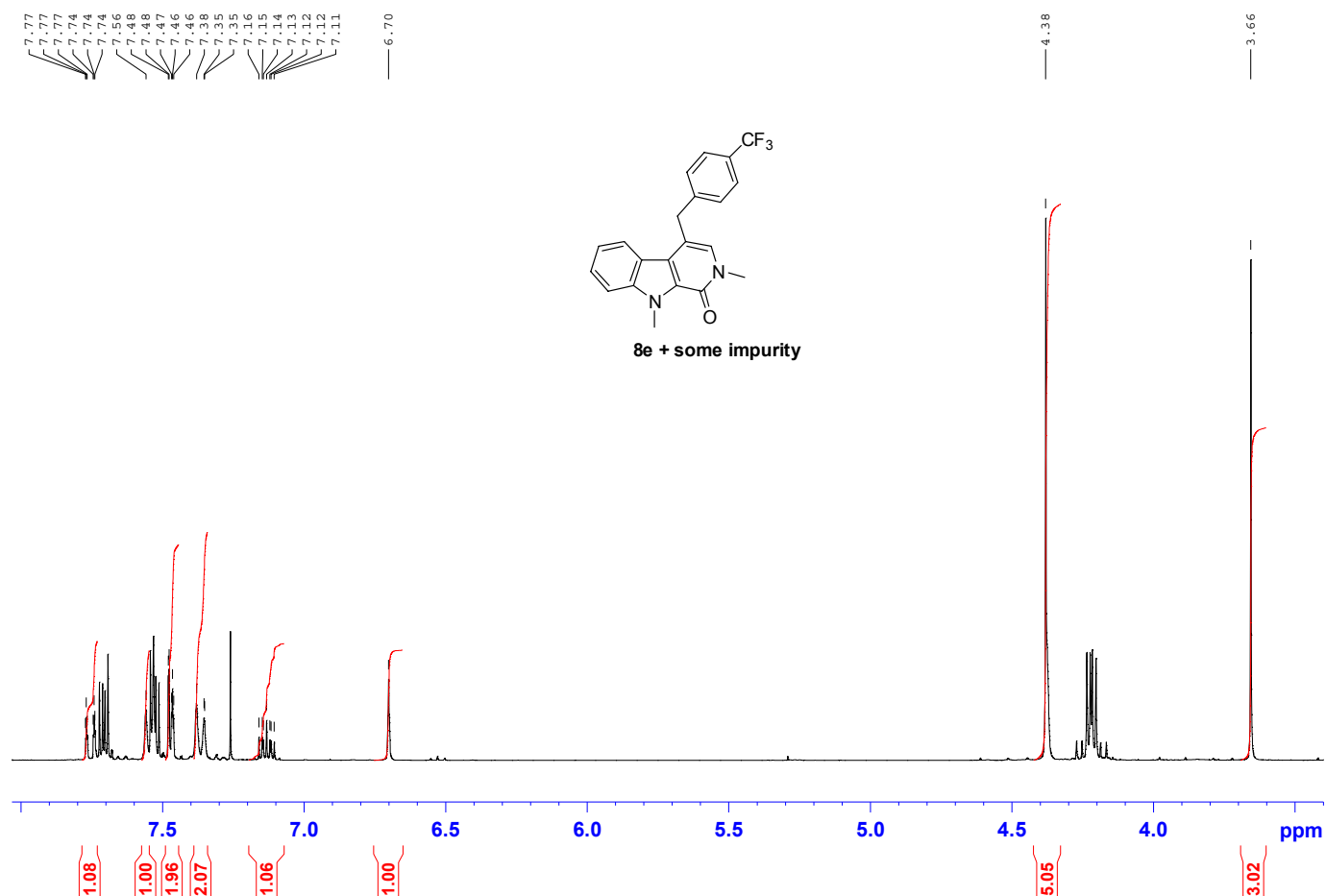
13 C-NMR: not enough product for good spectra!



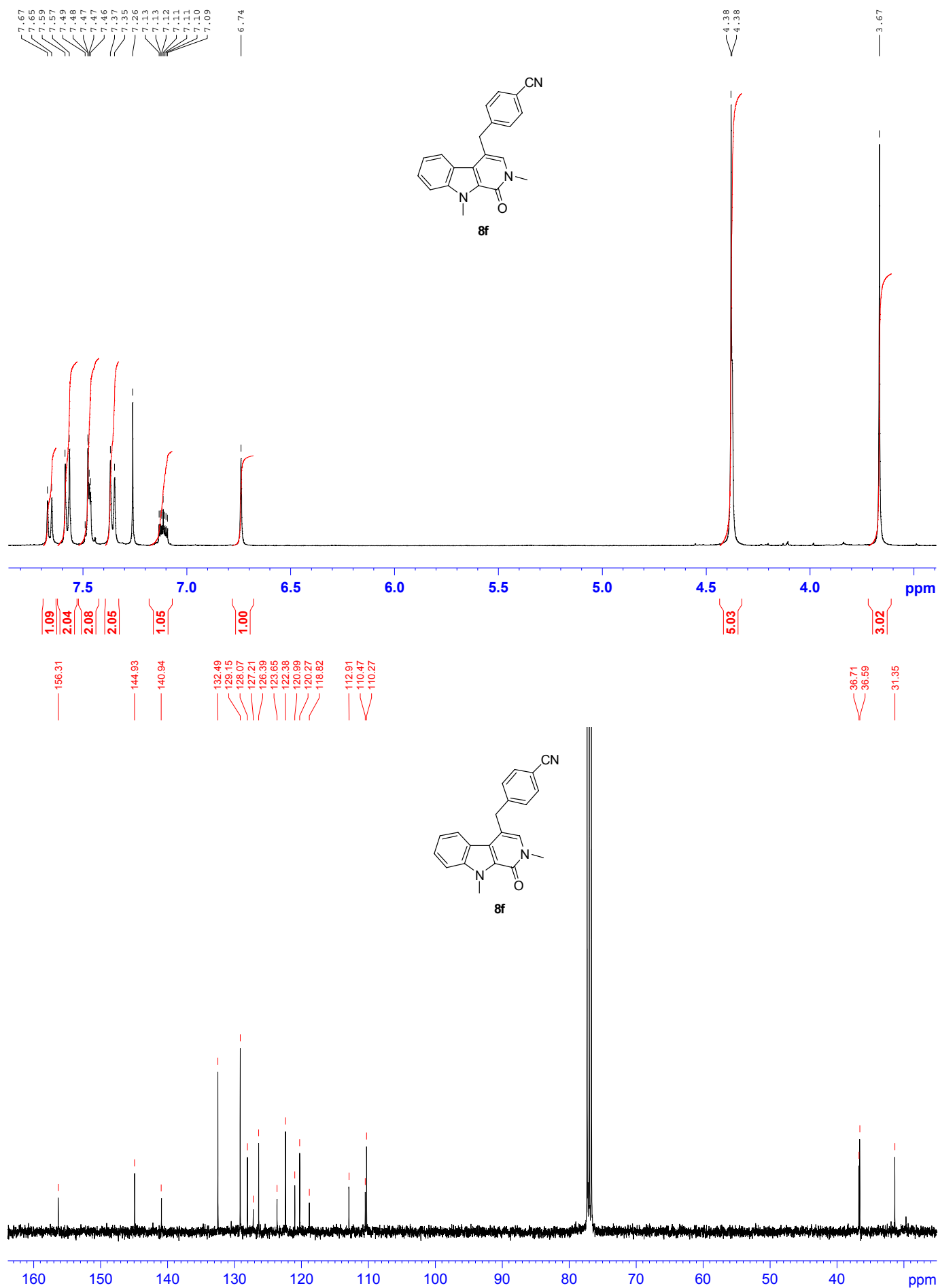
2,10-Dimethyl-5-(4-trifluoromethylphenyl)-3,10-dihydro-2*H*-azepino[3,4-*b*]indol-1-one (6e)



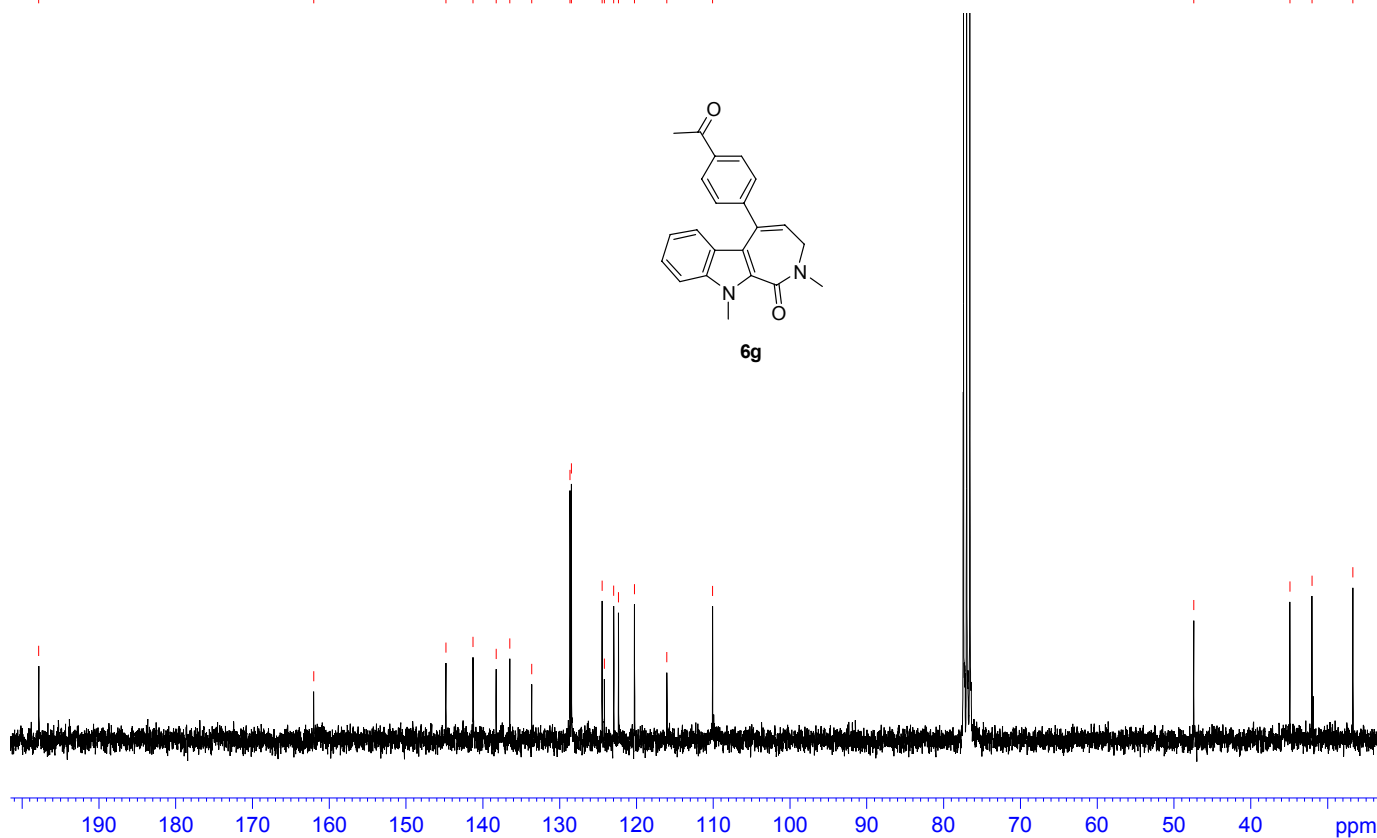
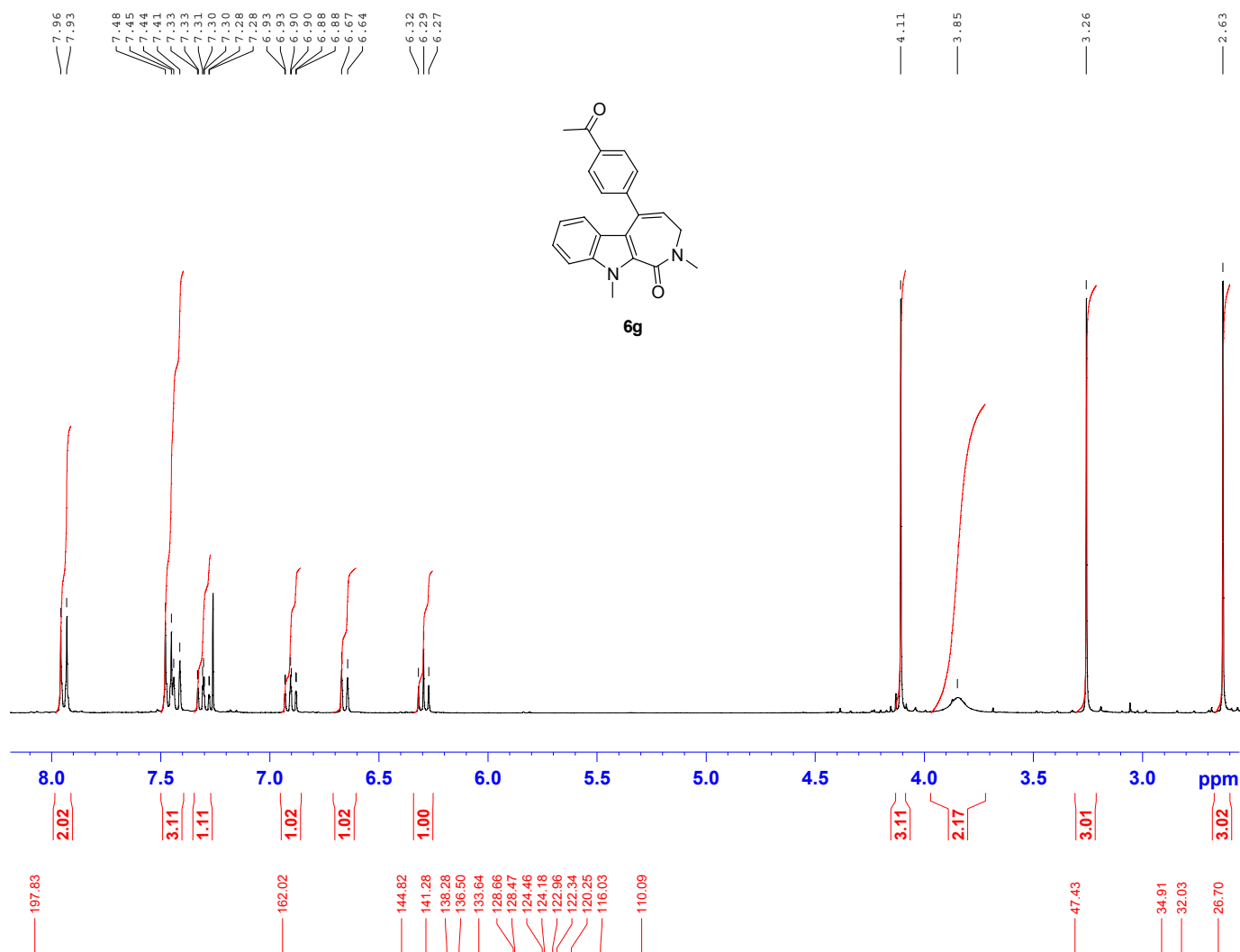
2,9-Dimethyl-4-(4-trifluoromethyl-benzyl)-2,9-dihydro- β -carbolin-1-one (8e)



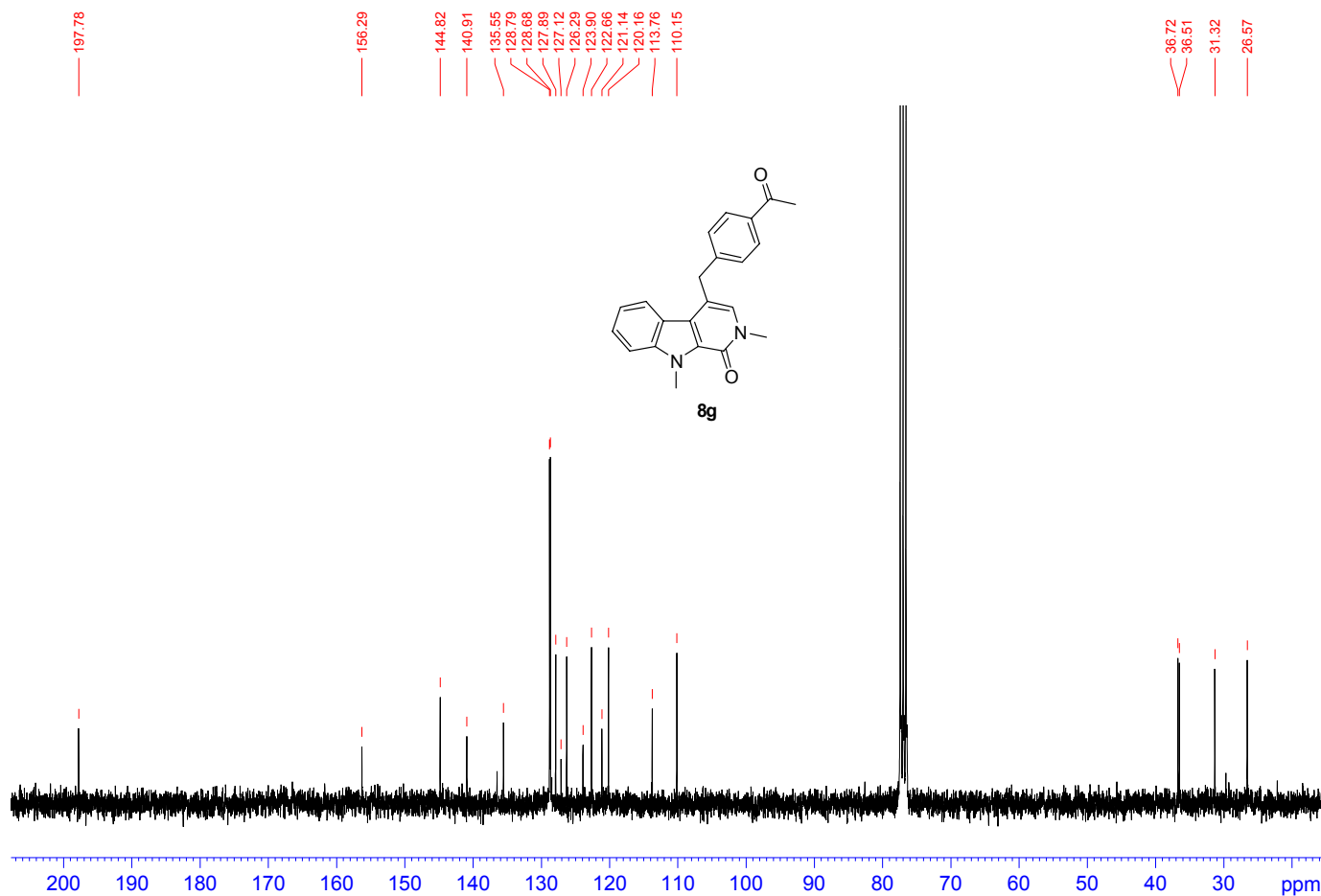
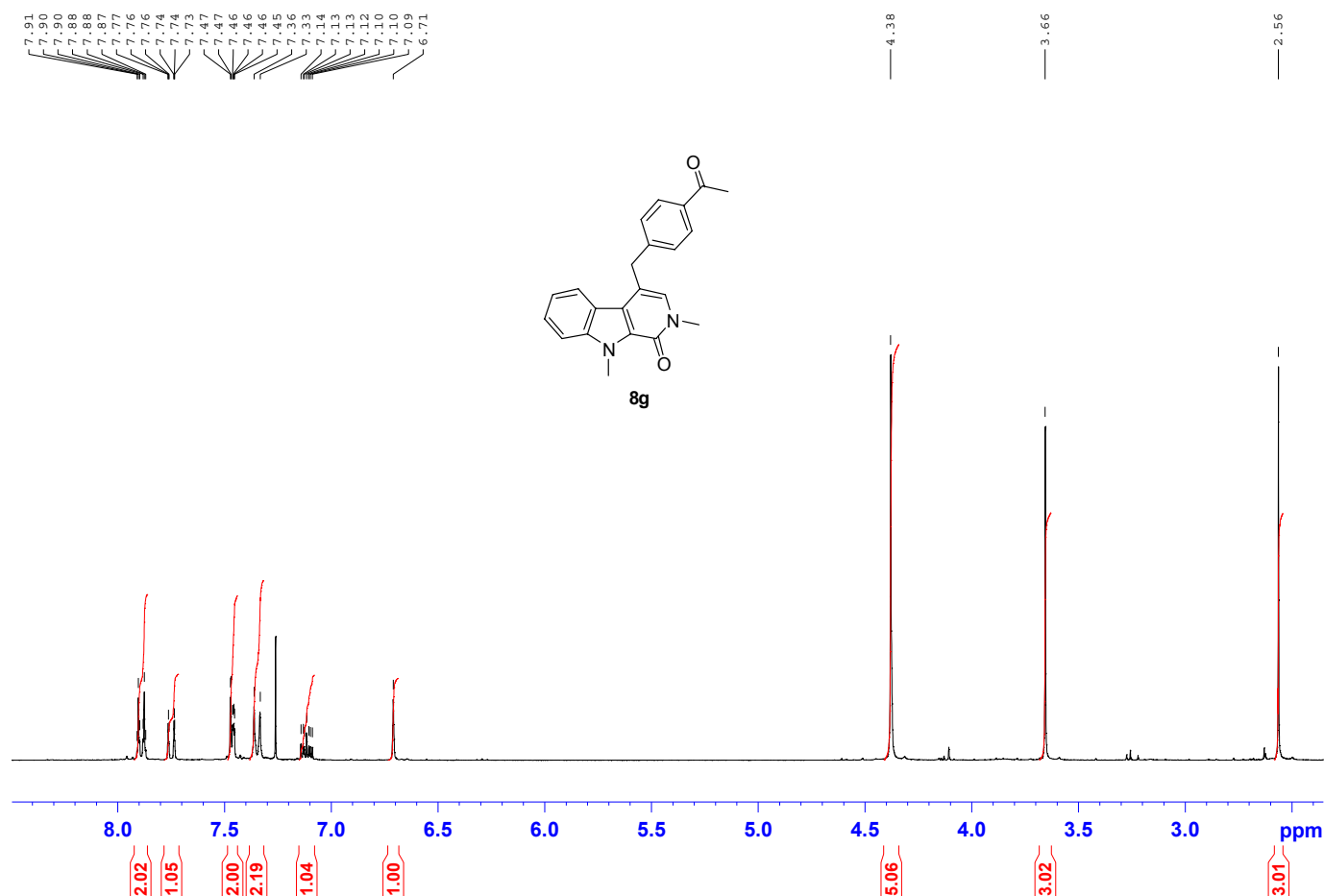
4-(2,9-Dimethyl-1-oxo-2,9-dihydro-1*H*- β -carbolin-4-ylmethyl)-benzonitrile (8f)



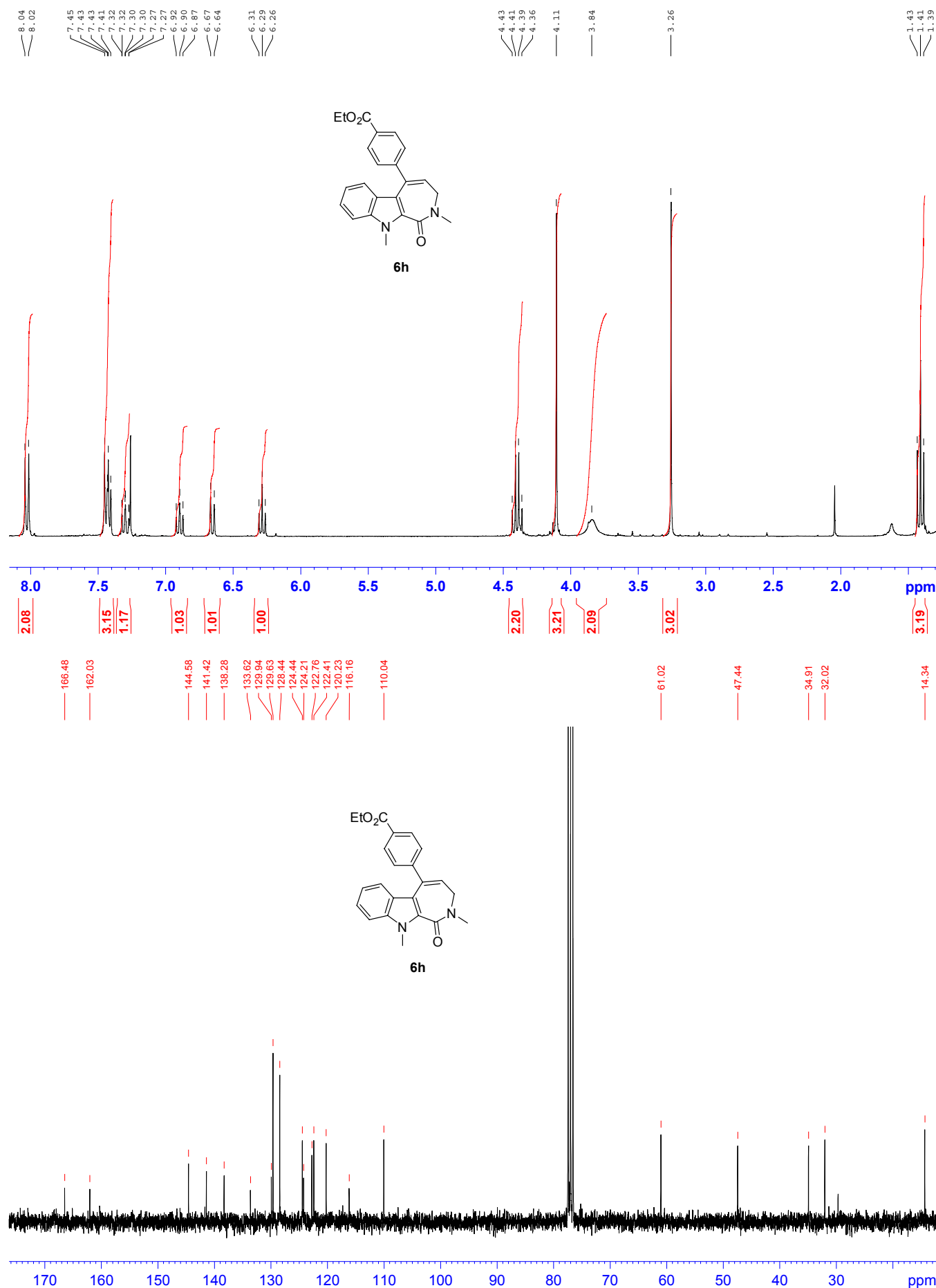
5-(4-Acetylphenyl)-2,10-dimethyl-3,10-dihydro-2*H*-azepino[3,4-*b*]indol-1-one (6g)



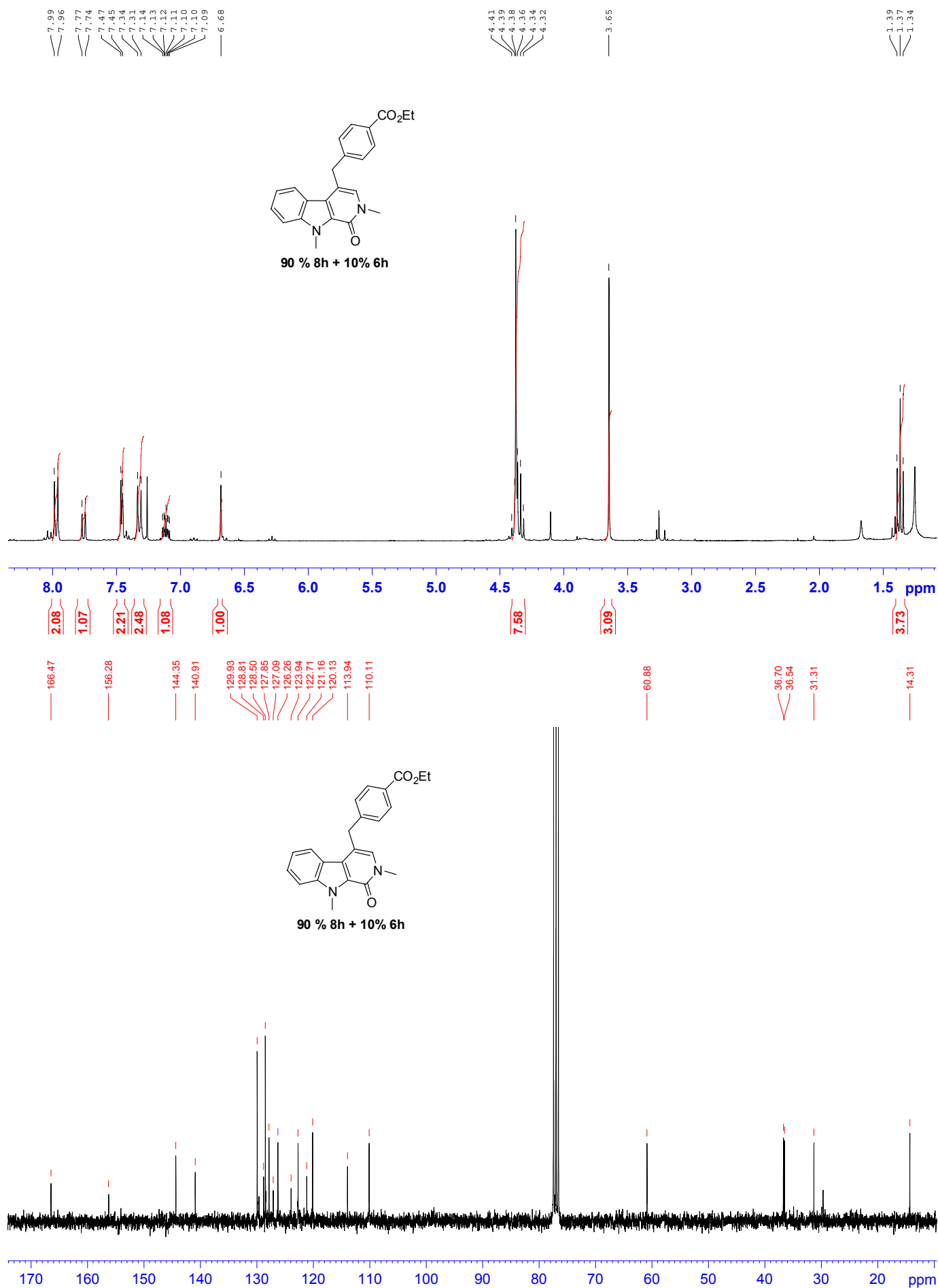
4-(4-Acetylbenzyl)-2,9-dimethyl-2,9-dihydro- β -carbolin-1-one (8g)



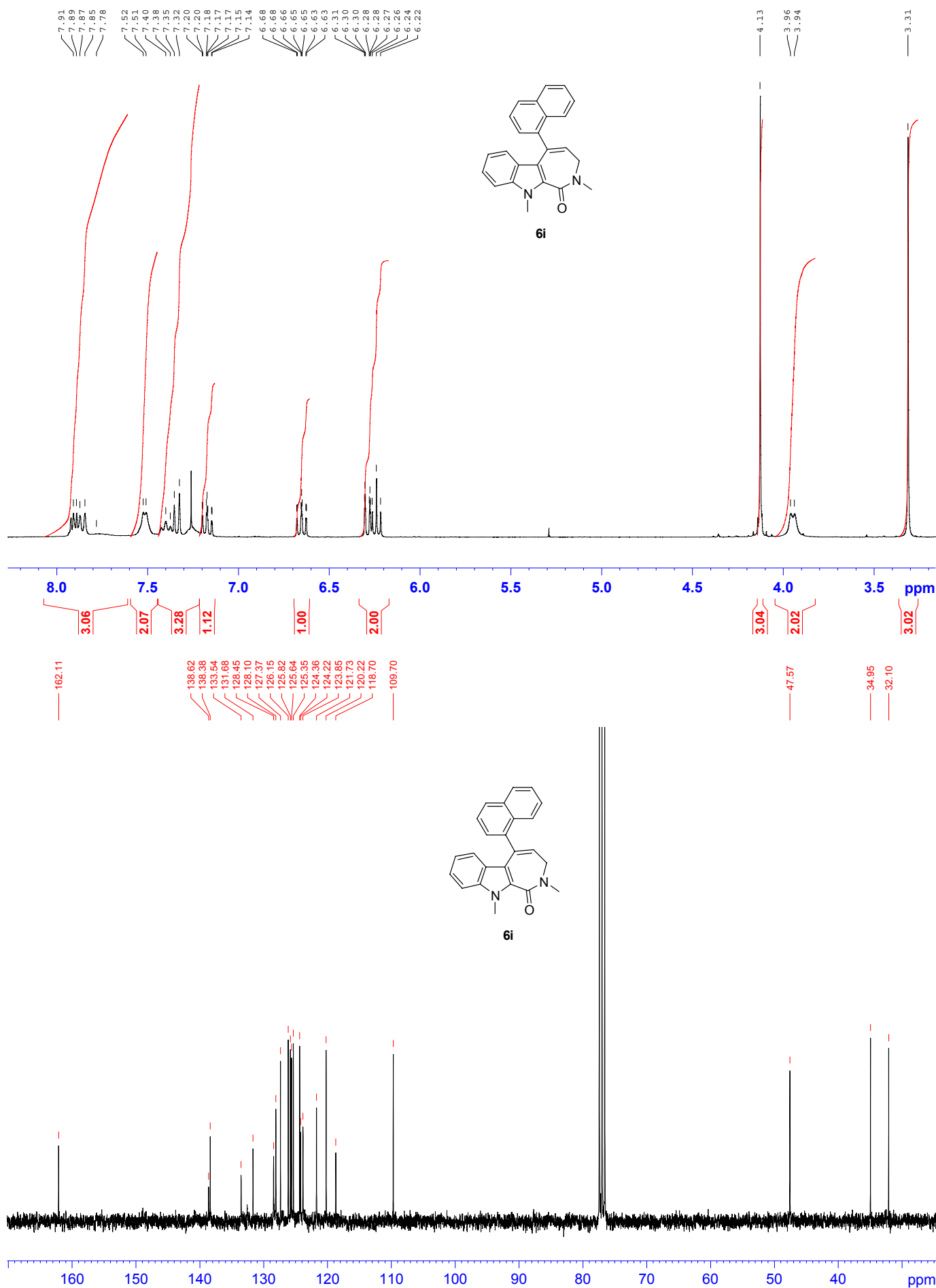
4-(2,10-Dimethyl-1-oxo-1,2,3,10-tetrahydro-azepino[3,4-b]indol-5-yl)-benzoic acid ethyl ester (6h)



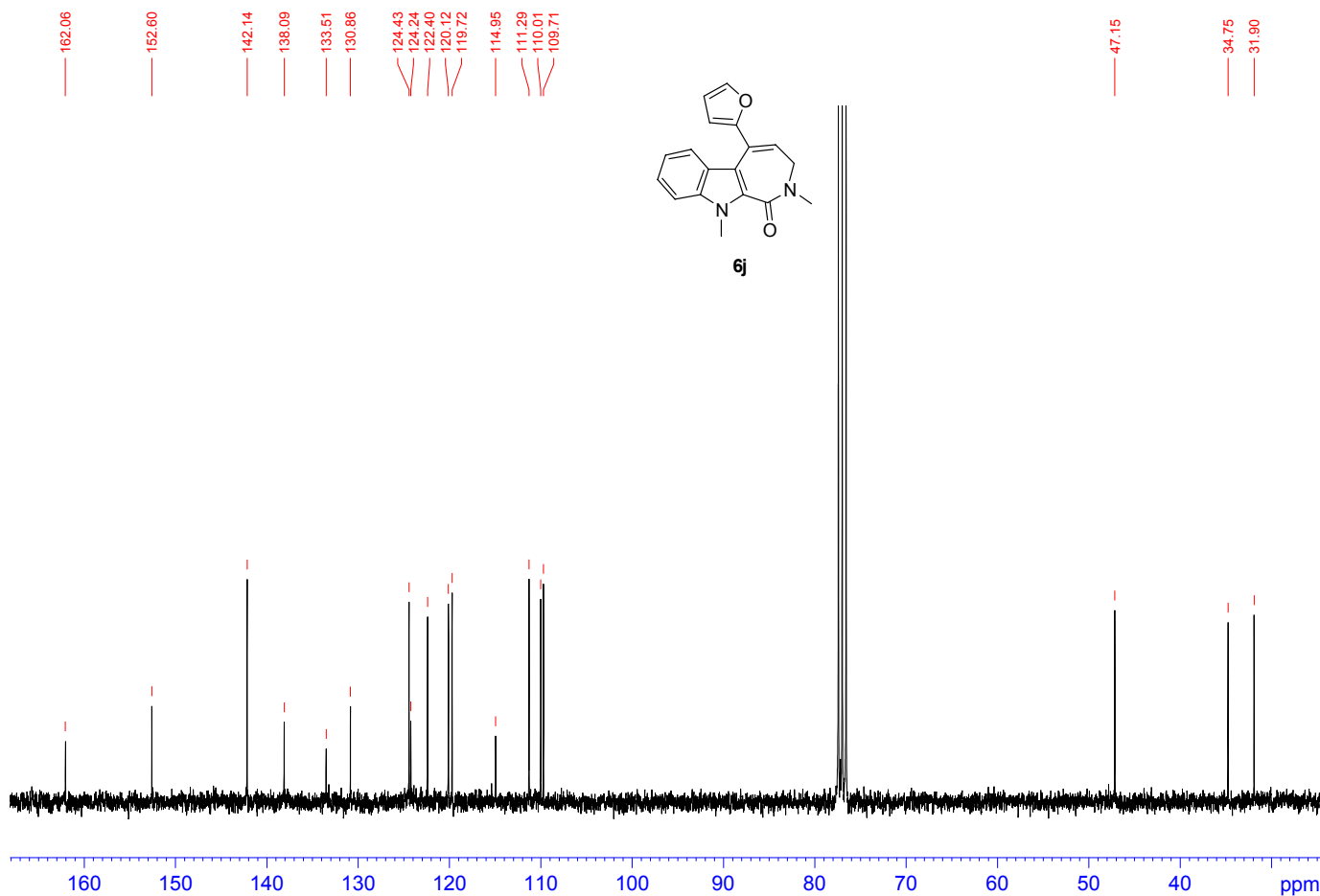
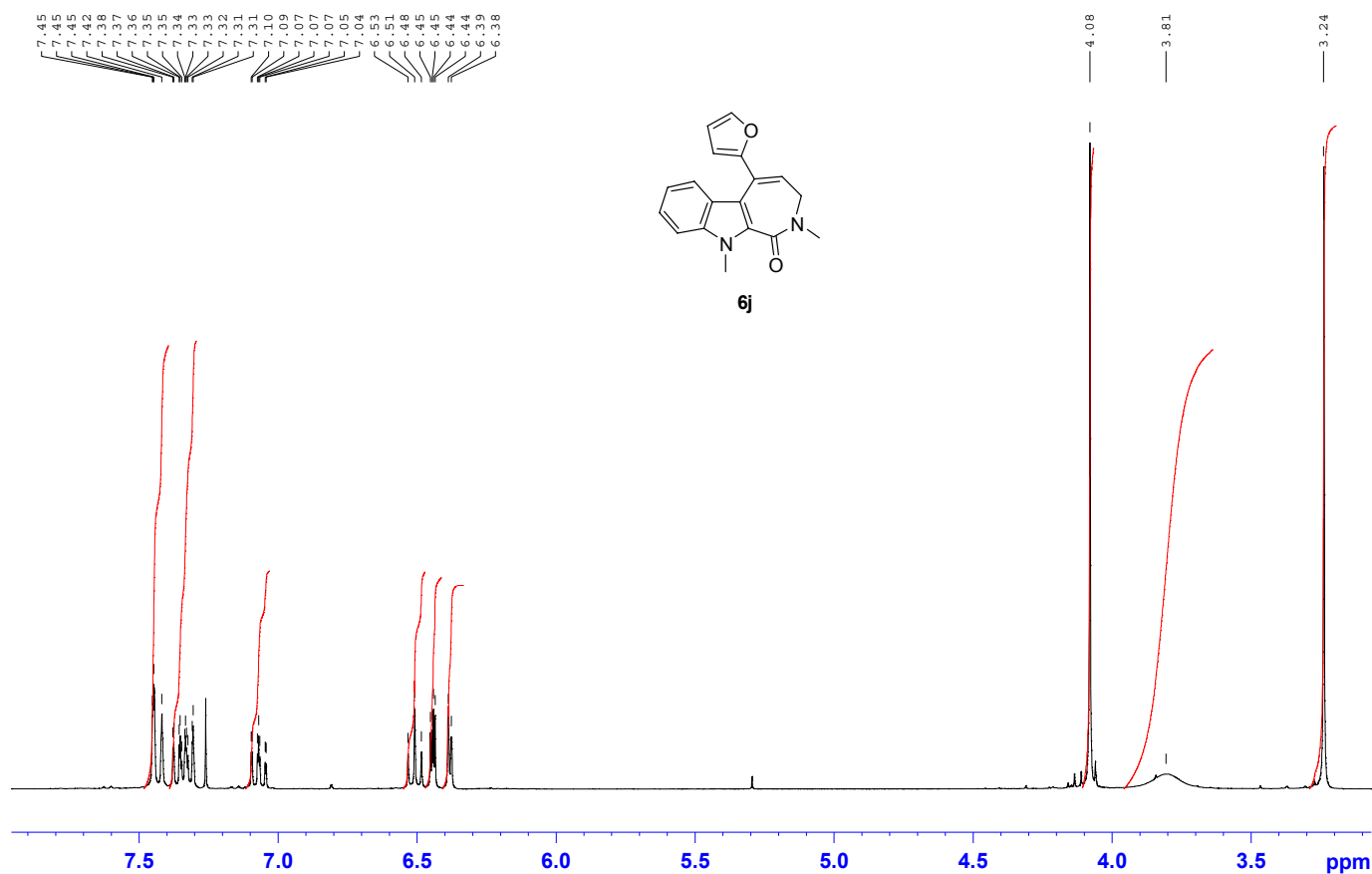
4-(2,9-Dimethyl-1-oxo-2,9-dihydro-1*H*- β -carbolin-4-ylmethyl)-benzoic acid ethyl ester (8h)



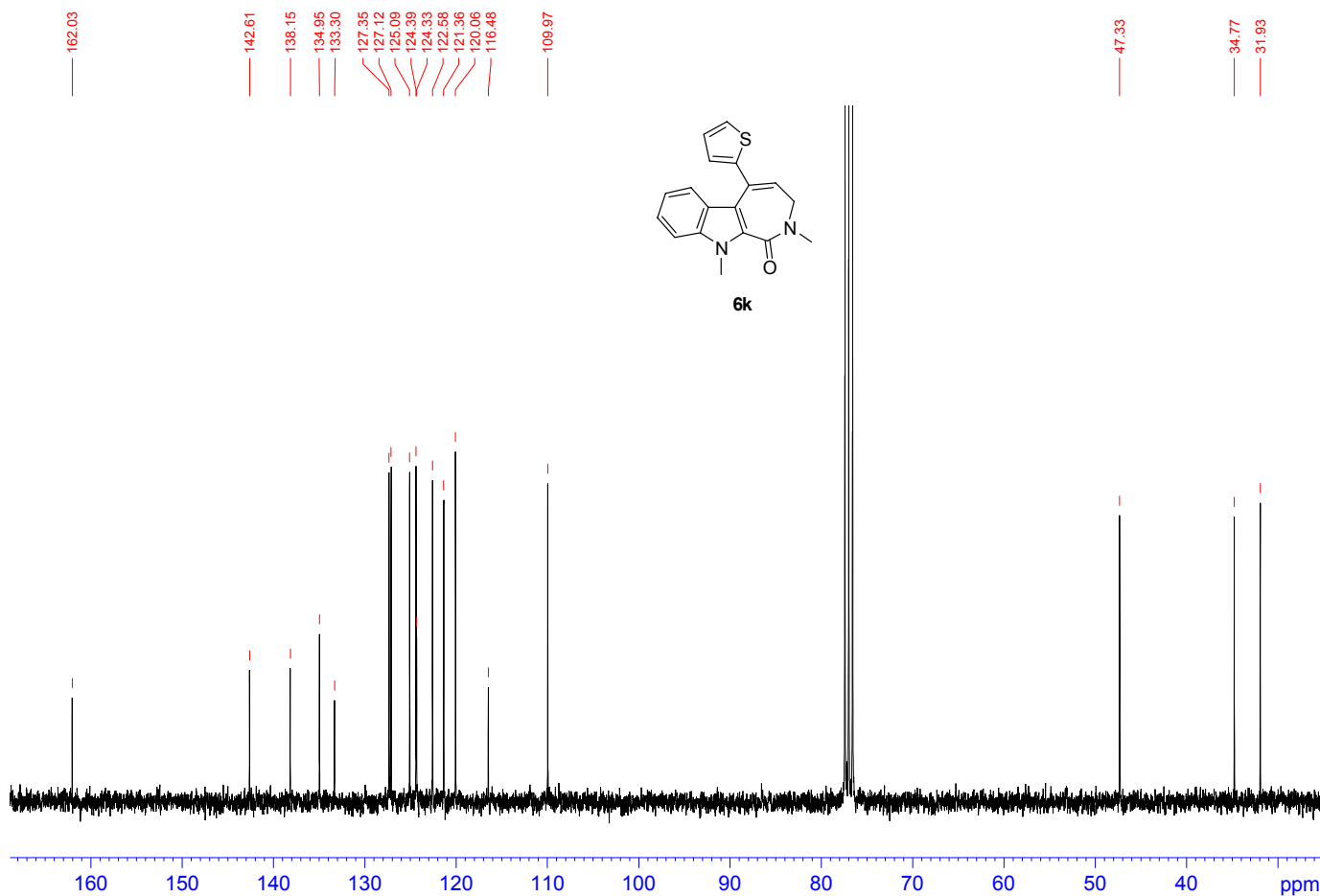
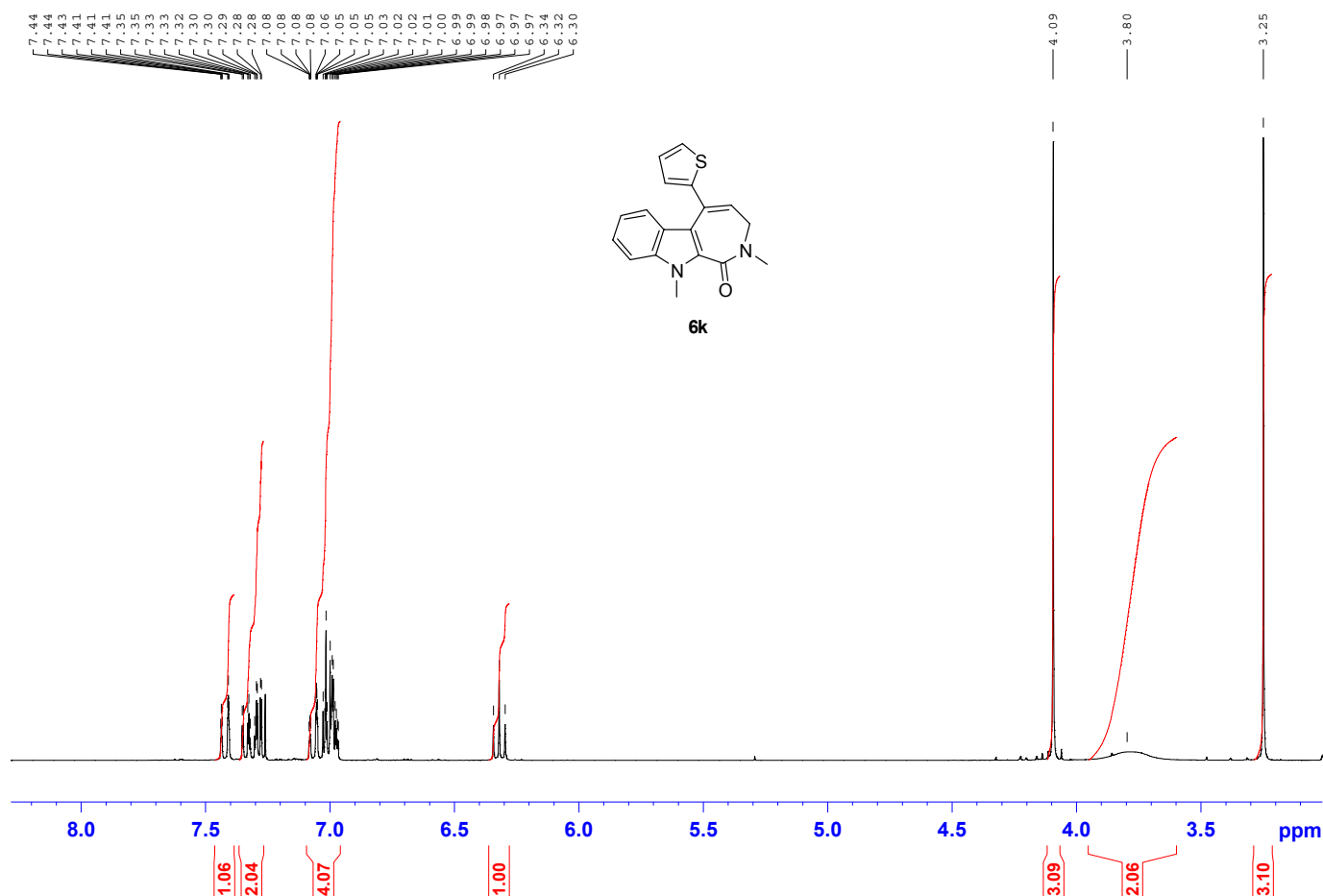
2,10-Dimethyl-5-naphthalen-1-yl-3,10-dihydro-2*H*-azepino[3,4-*b*]indol-1-one (6i)



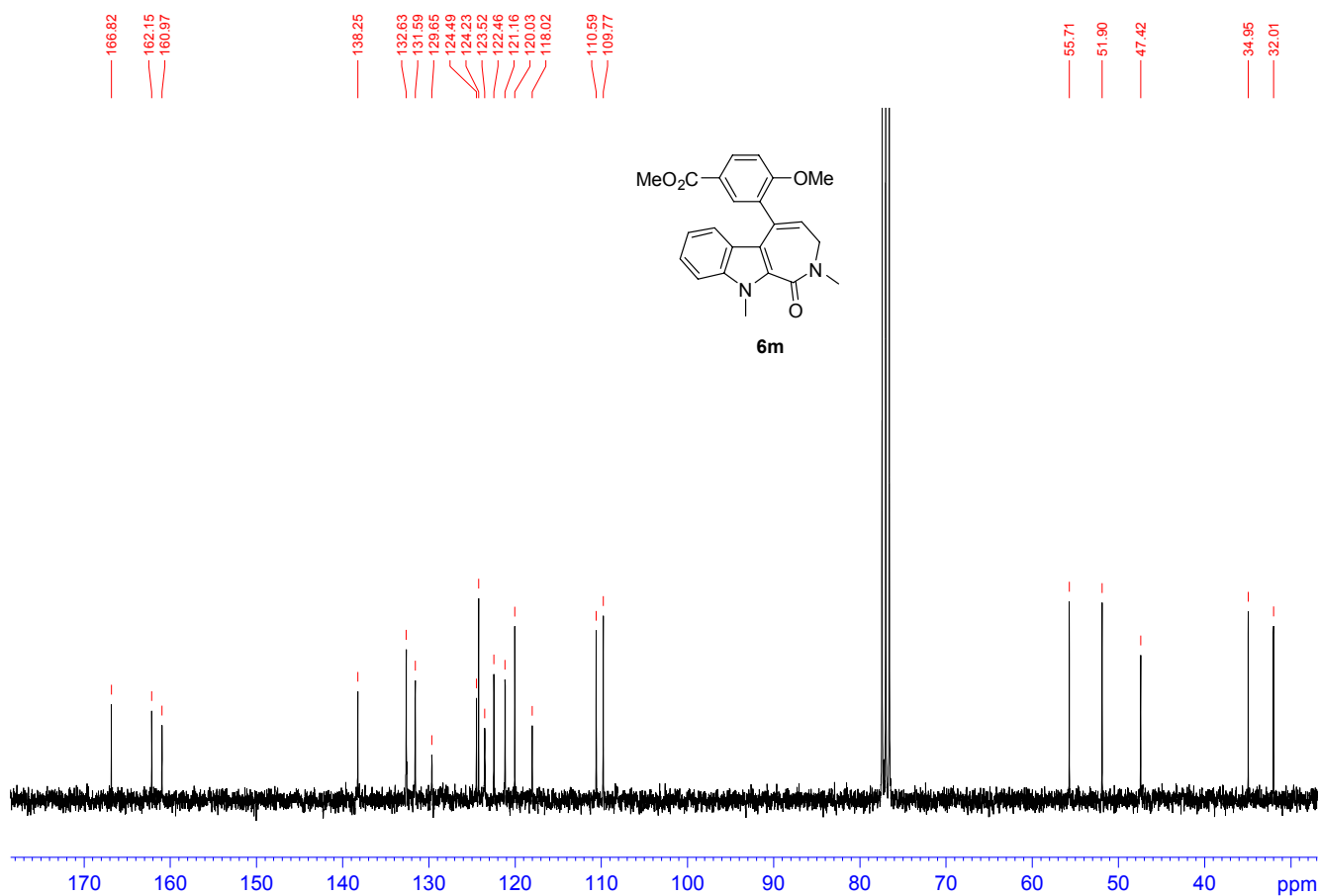
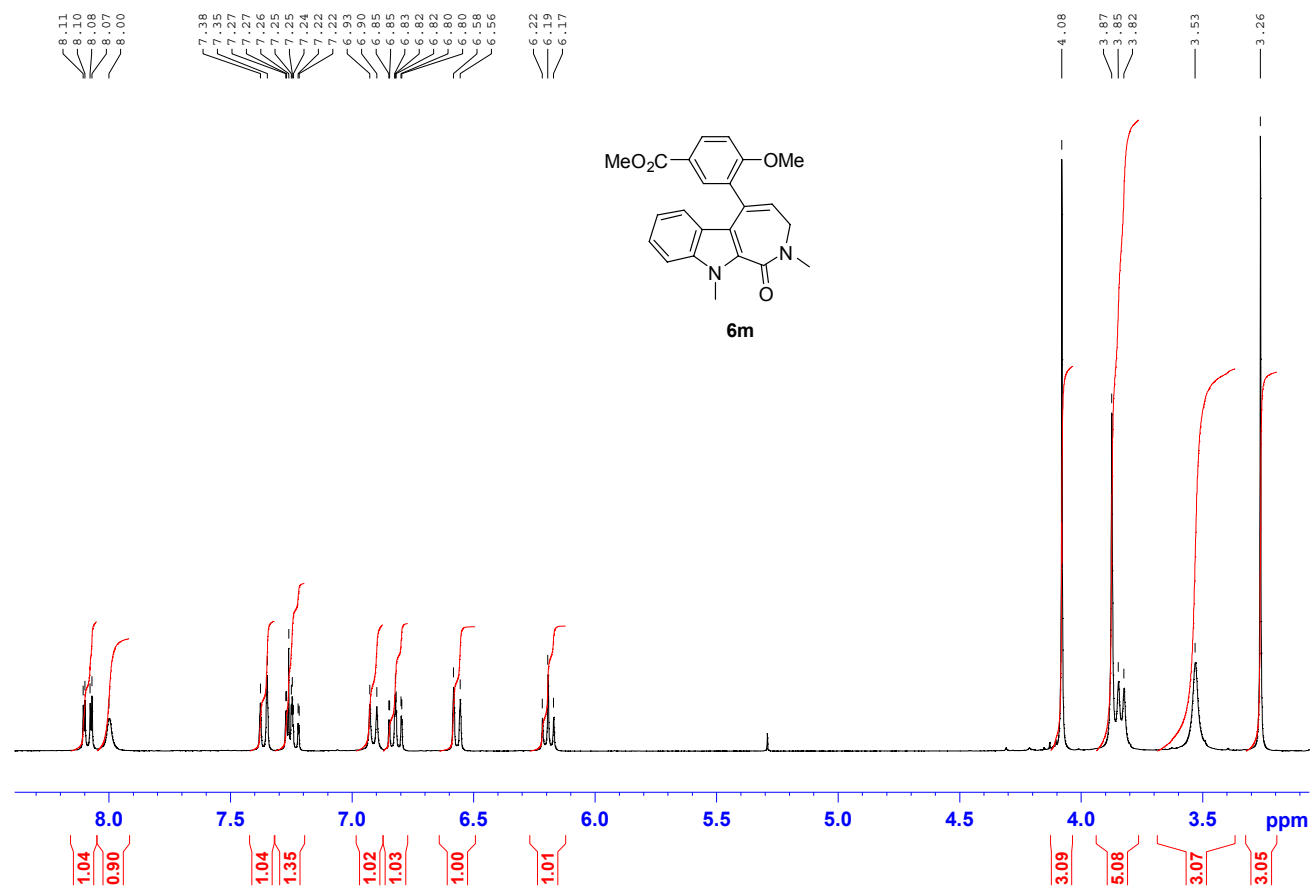
5-Furan-2-yl-2,10-dimethyl-3,10-dihydro-2*H*-azepino[3,4-*b*]indol-1-one (6j)



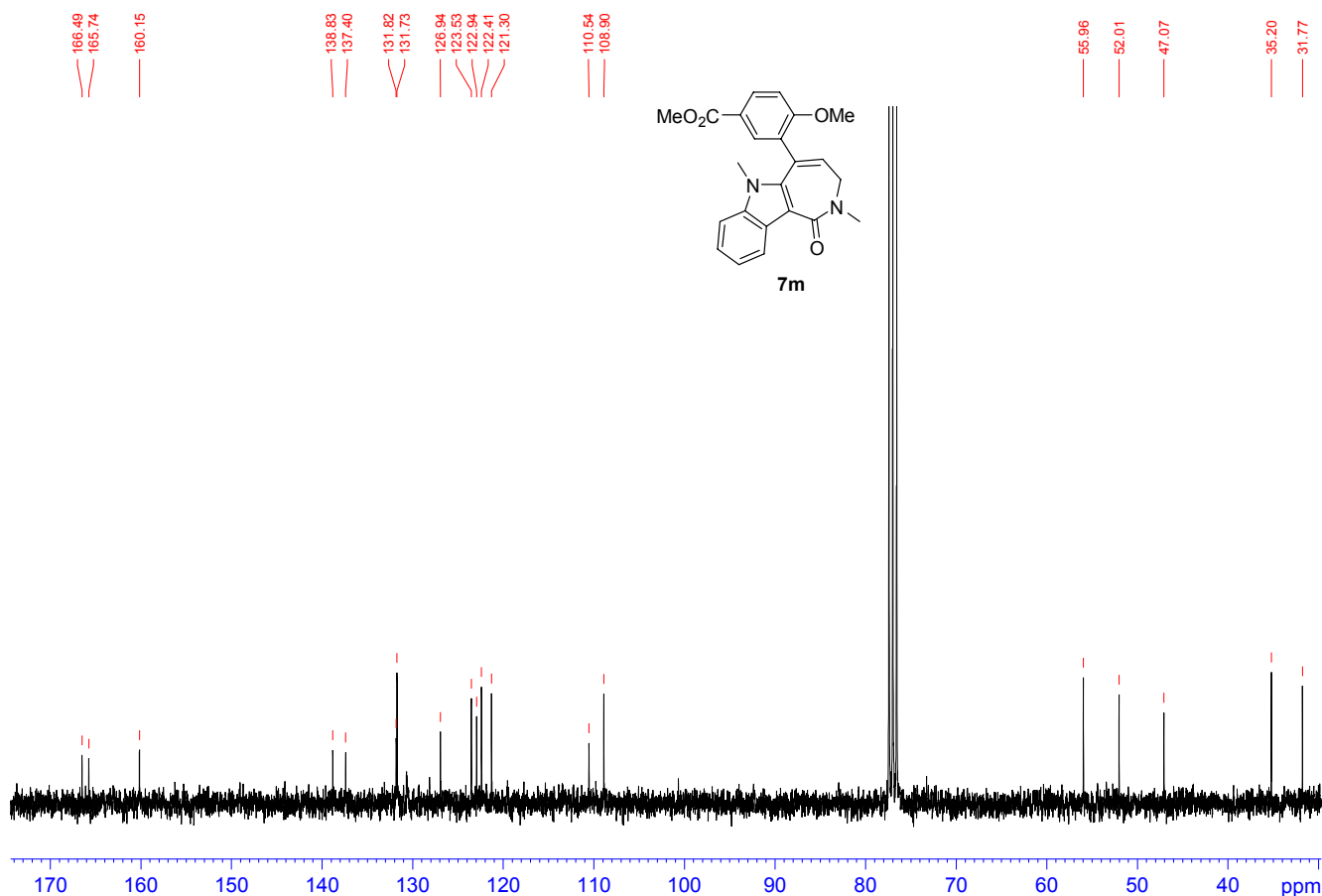
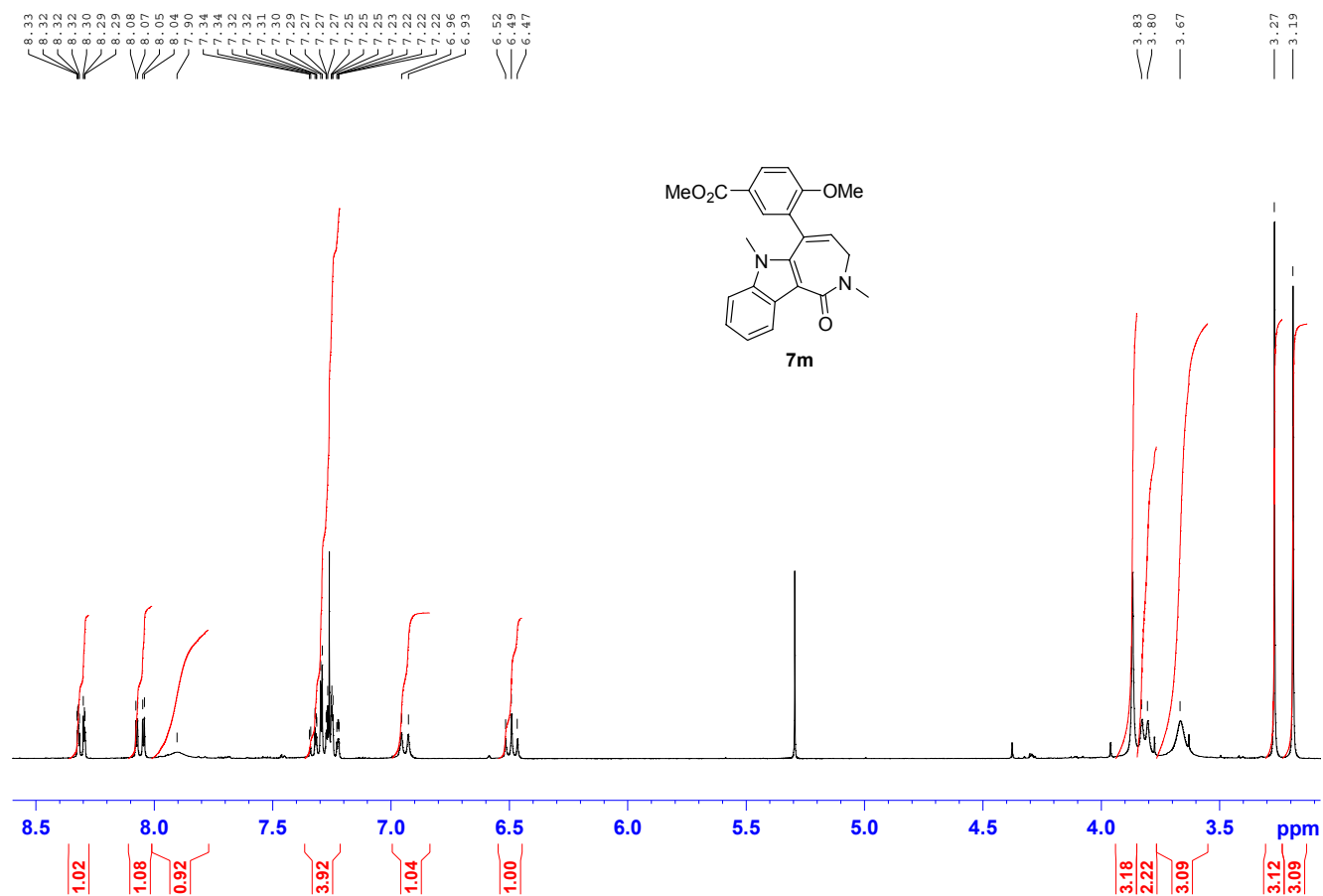
2,10-Dimethyl-5-thiophen-2-yl-3,10-dihydro-2*H*-azepino[3,4-*b*]indol-1-one (6k)



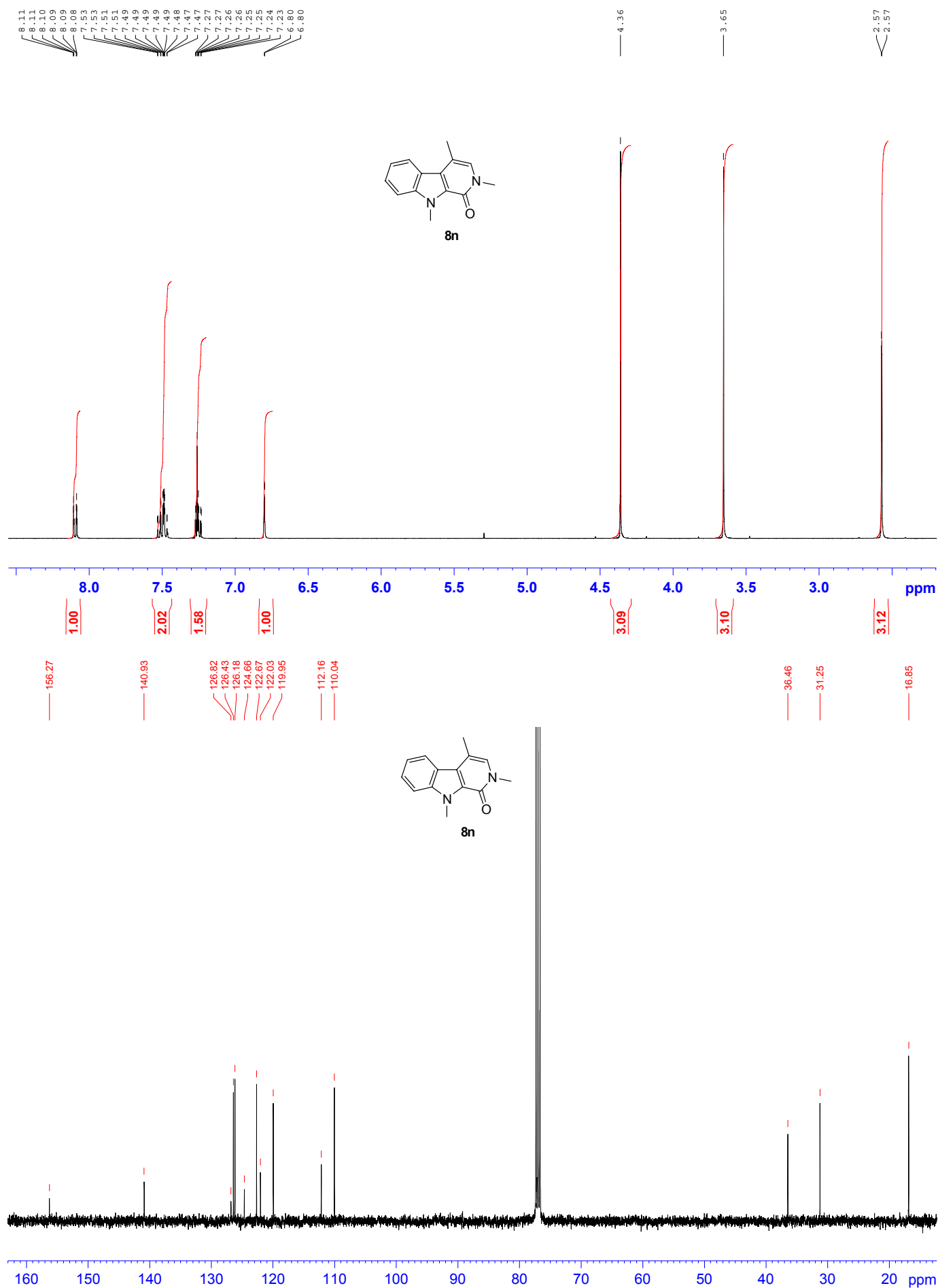
3-(2,10-Dimethyl-1-oxo-1,2,3,10-tetrahydro-azepino[3,4-b]indol-5-yl)-4-methoxy-benzoic acid methyl ester (6m)



3-(2,6-Dimethyl-1-oxo-1,2,3,6-tetrahydro-azepino[4,3-b]indol-5-yl)-4-methoxy-benzoic acid methyl ester (7m)



2,4,9-Trimethyl-2,9-dihydro- β -carbolin-1-one (8n)



2-Benzyl-10-methyl-5-*p*-tolyl-3,10-dihydro-2*H*-azepino[3,4-*b*]indol-1-one (6o)

