

# One-pot sequential Ti- / Cu-catalysis for tandem amidation/Ullmann-type cyclization: synthesis of model benzodiazepine(di)ones promoted by microwave irradiation

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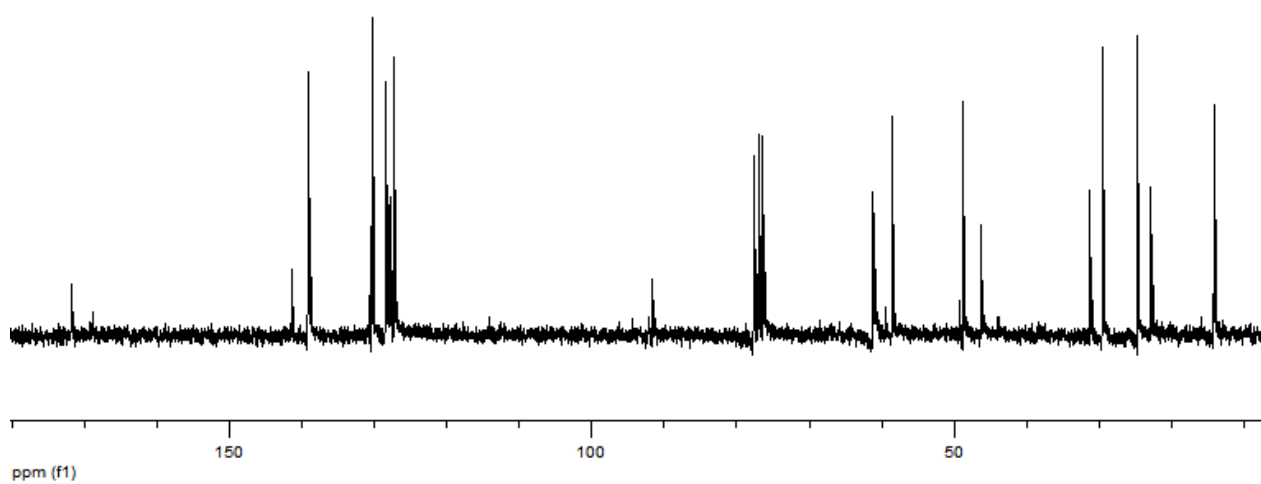
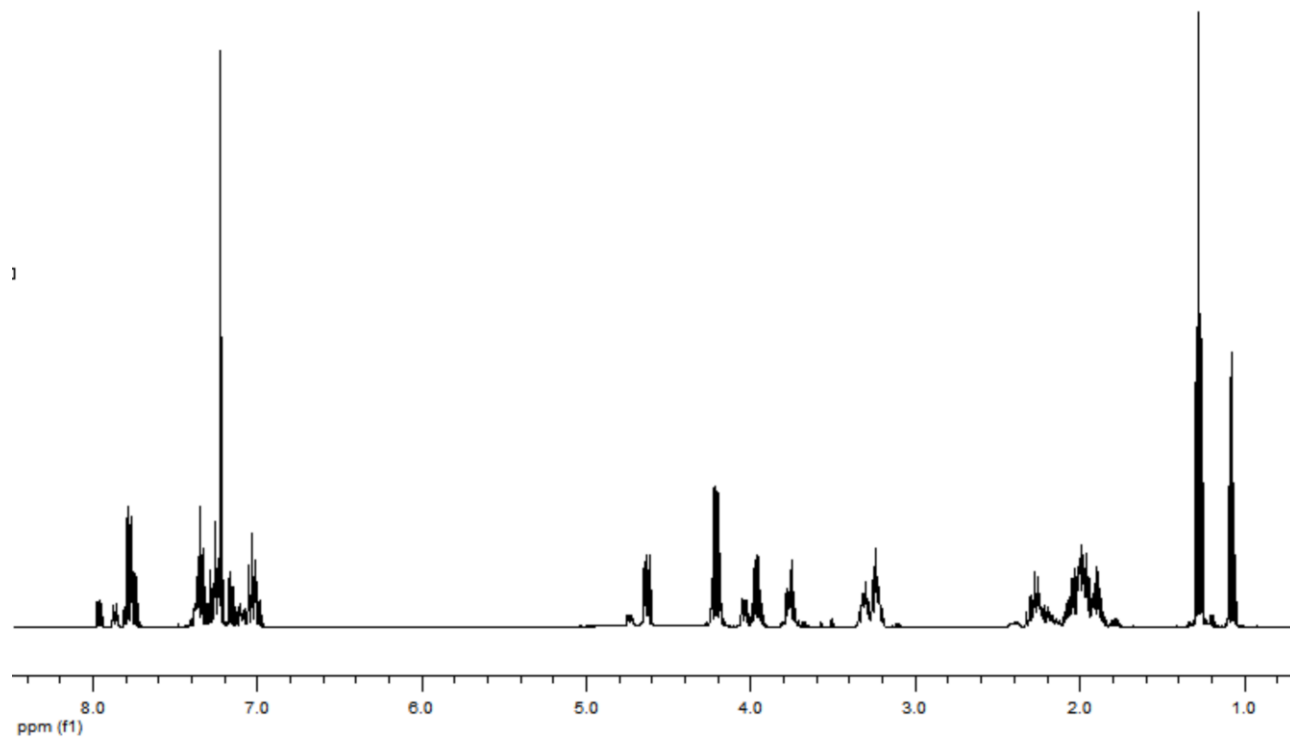
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## ELECTRONIC SUPPLEMENTARY INFORMATION

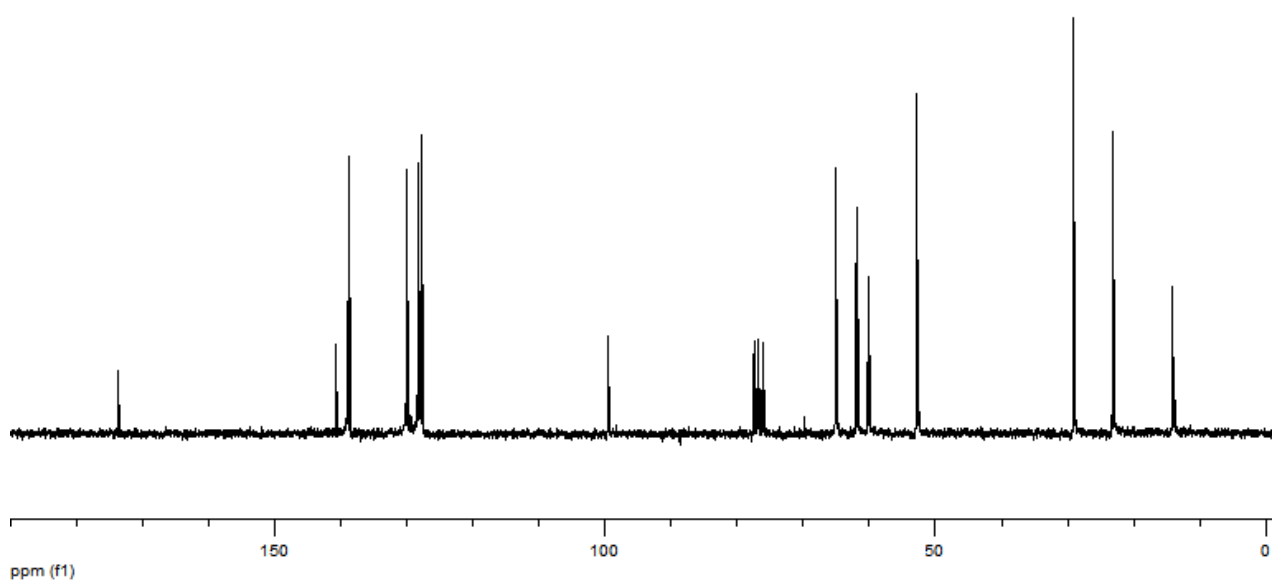
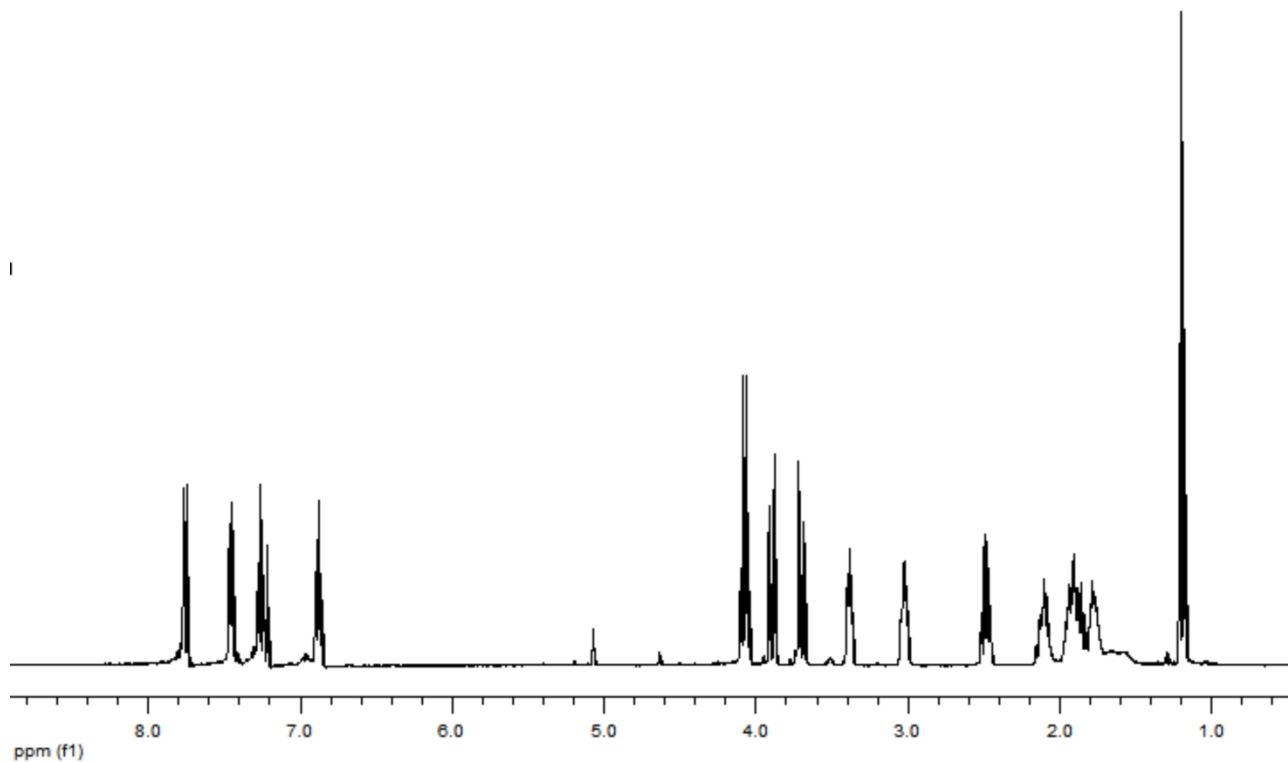
<sup>1</sup>H and <sup>13</sup>C NMR spectra

S2-S19

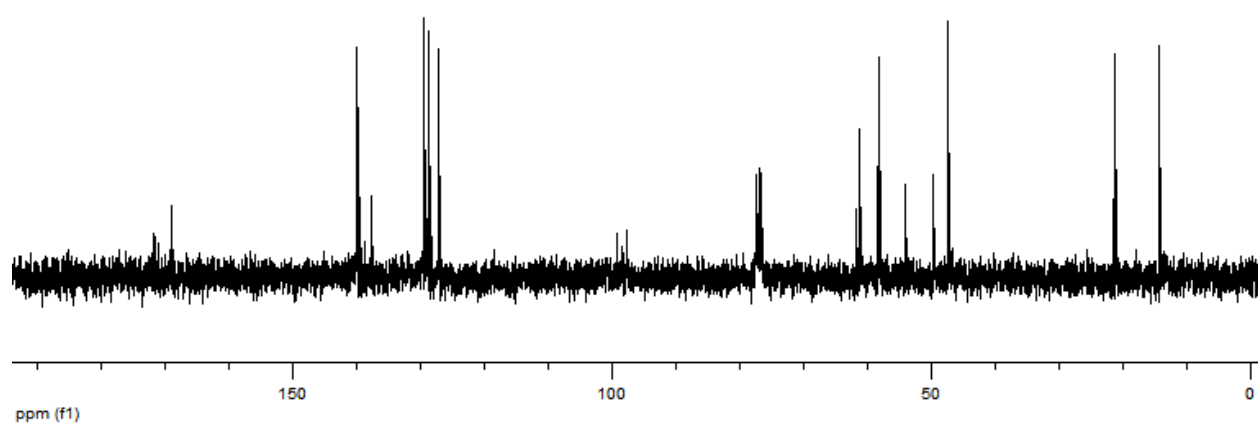
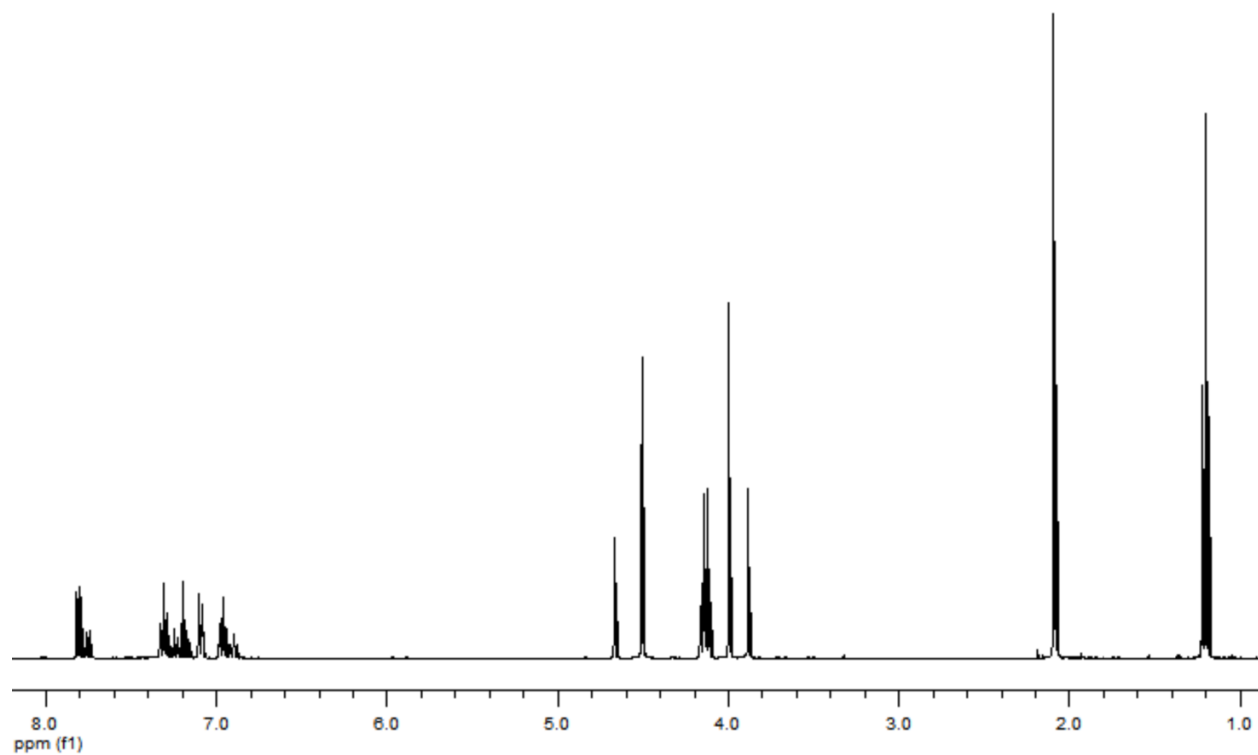
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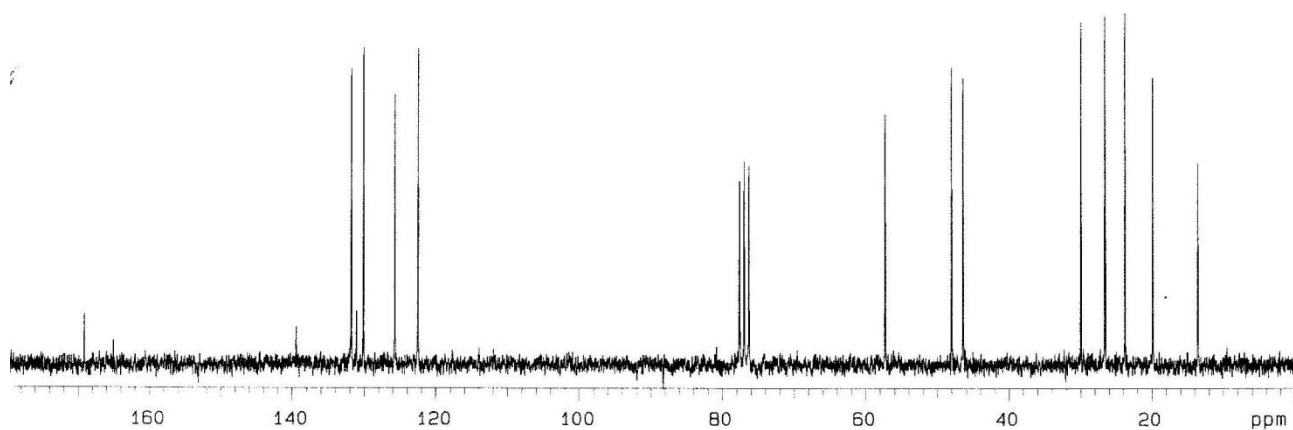
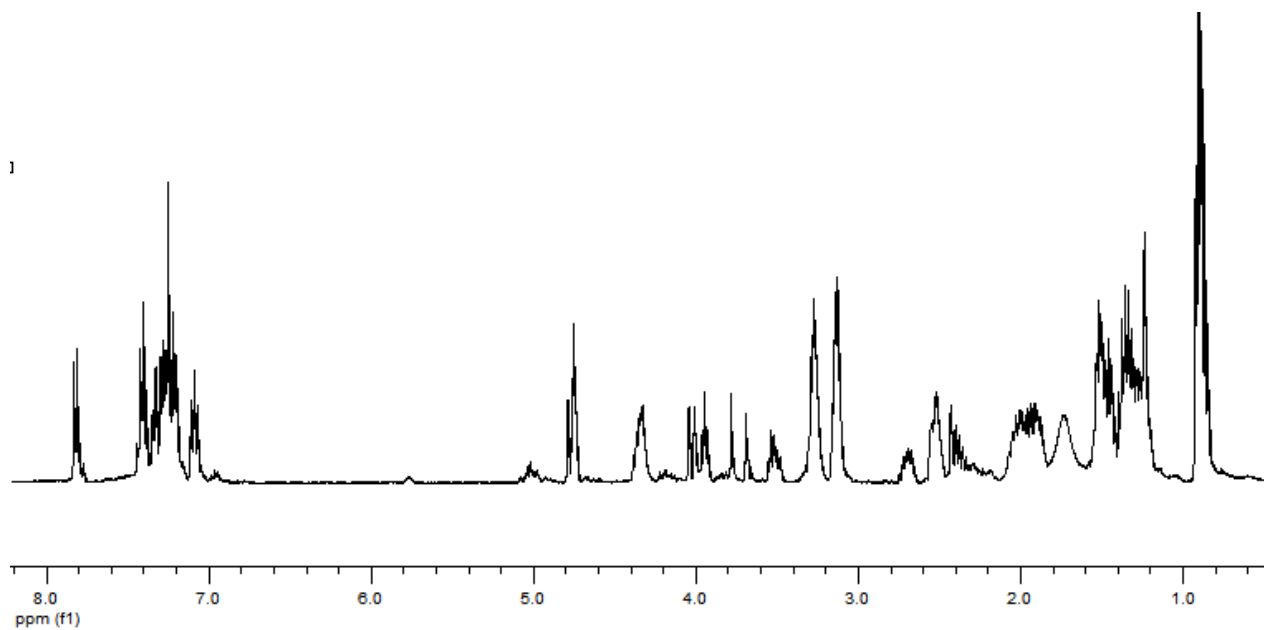
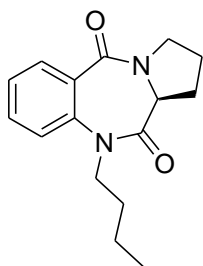
**(S)-ethyl 1-(2-iodobenzyl)pyrrolidine-2-carboxylate (18)**



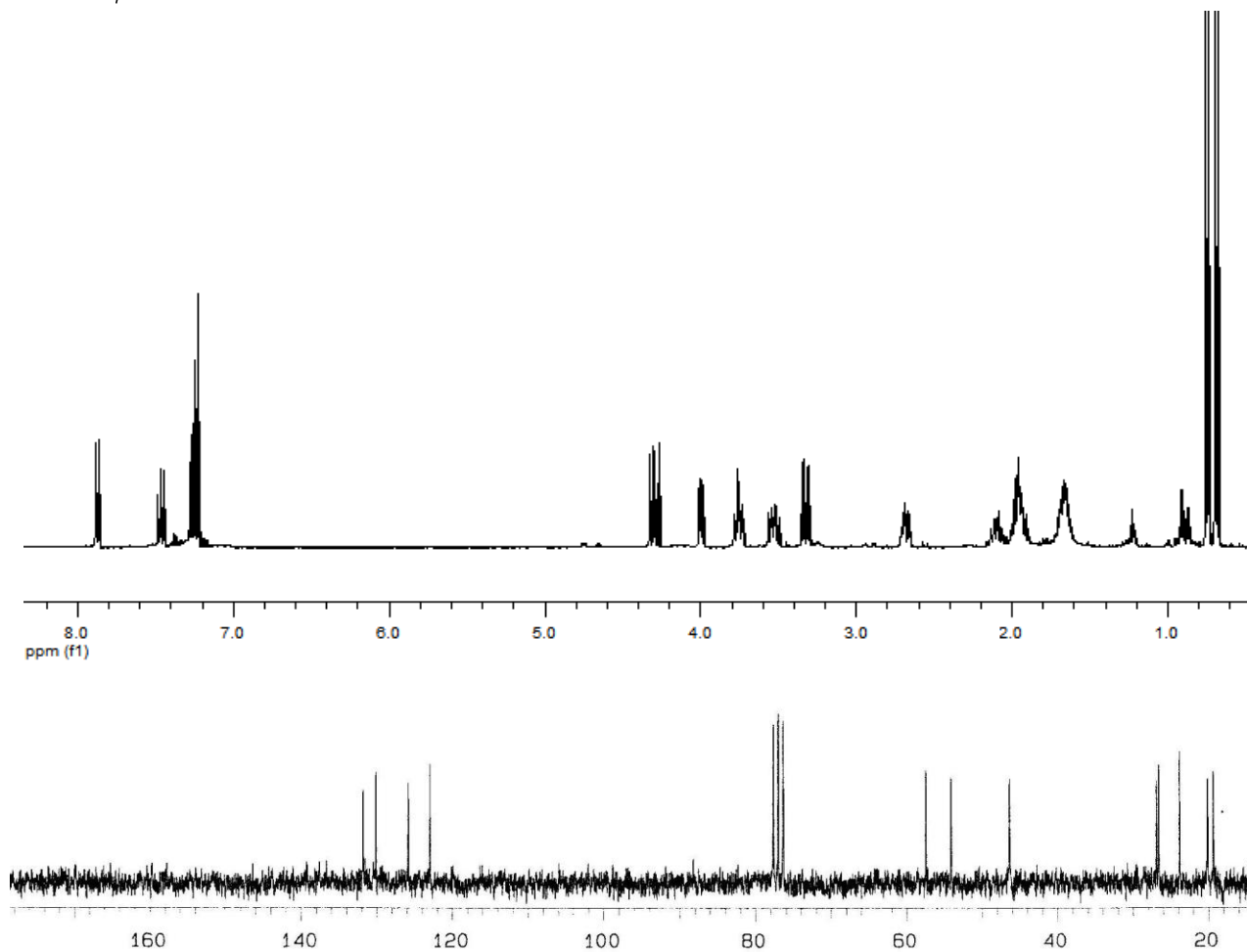
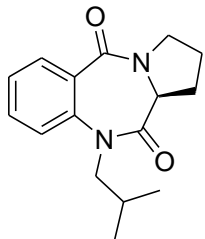
**Ethyl 2-(N-(2-iodobenzyl)acetamido)acetate (19)**



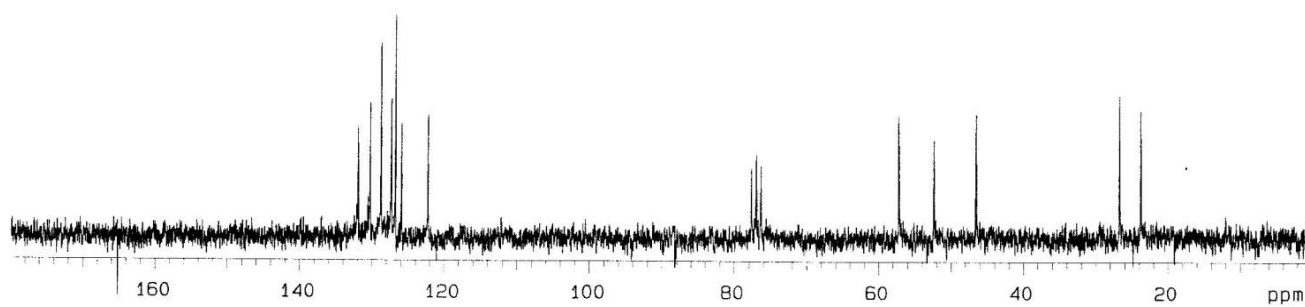
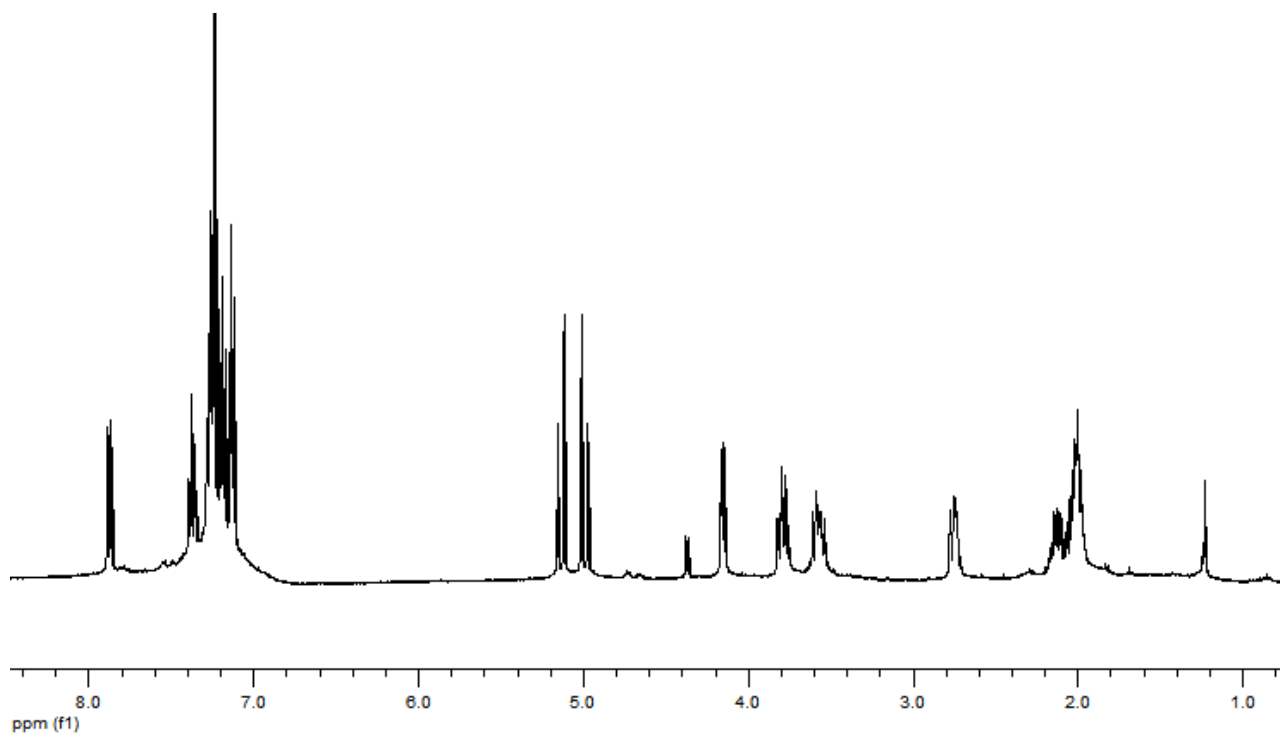
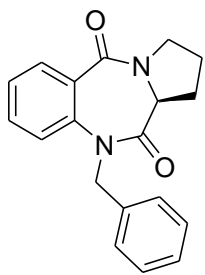
**(S)-10-Butyl-1,2,3,11a-tetrahydro-10H-benzo[e]pyrrolo[1,2-a][1,4]diazepine-5,11-dione (3)**



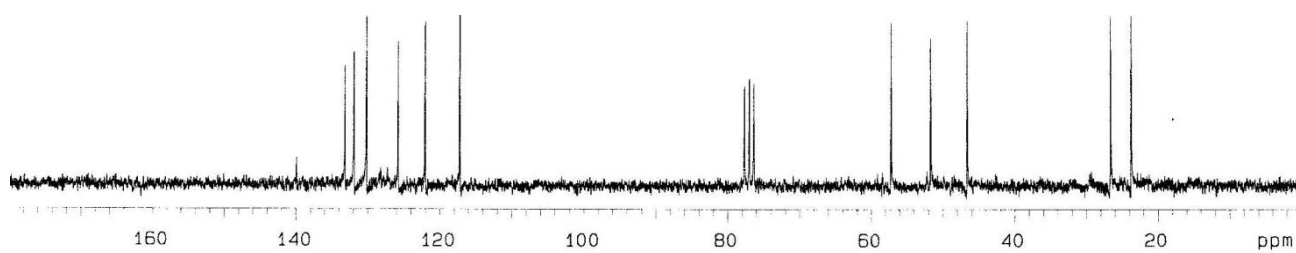
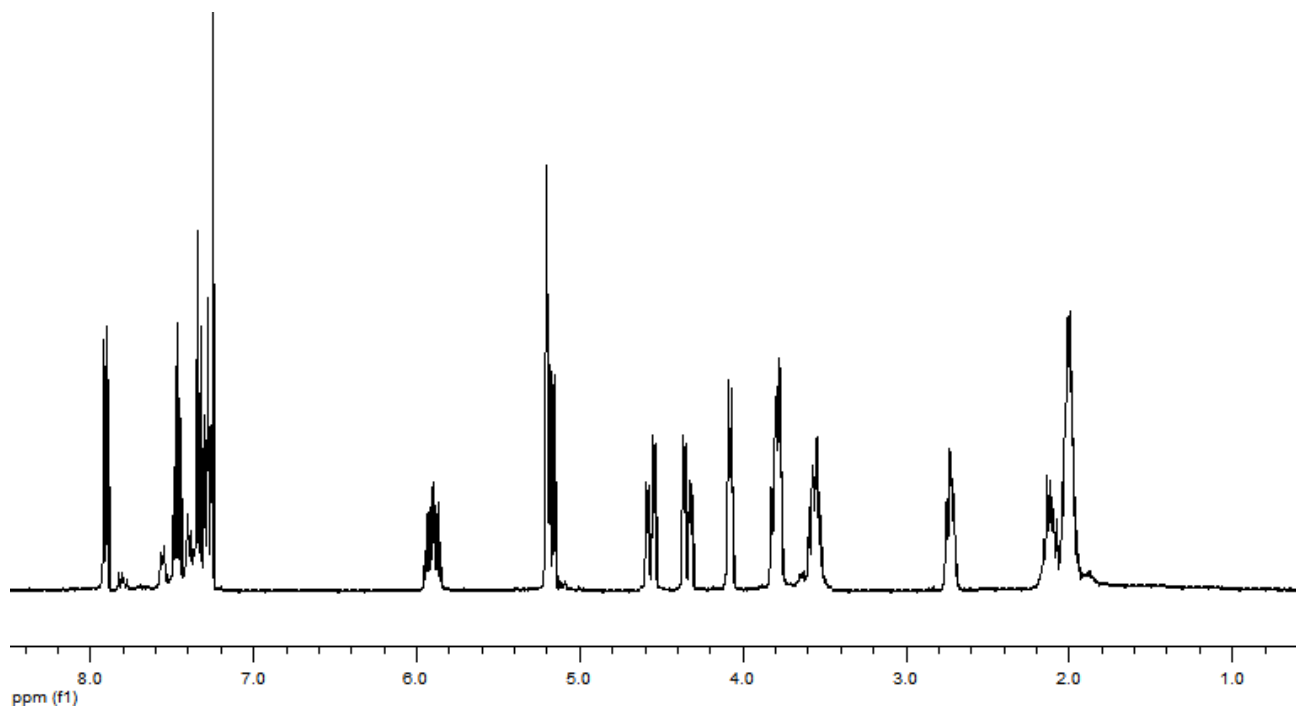
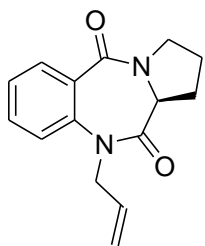
**(S)-10-Isobutyl-1,2,3,11a-tetrahydro-10H-benzo[e]pyrrolo[1,2-a][1,4]diazepine-5,11-dione (4)**



**(S)-10-Benzyl-1,2,3,11a-tetrahydro-10H-benzo[e]pyrrolo[1,2-a][1,4]diazepine-5,11-dione (5)**

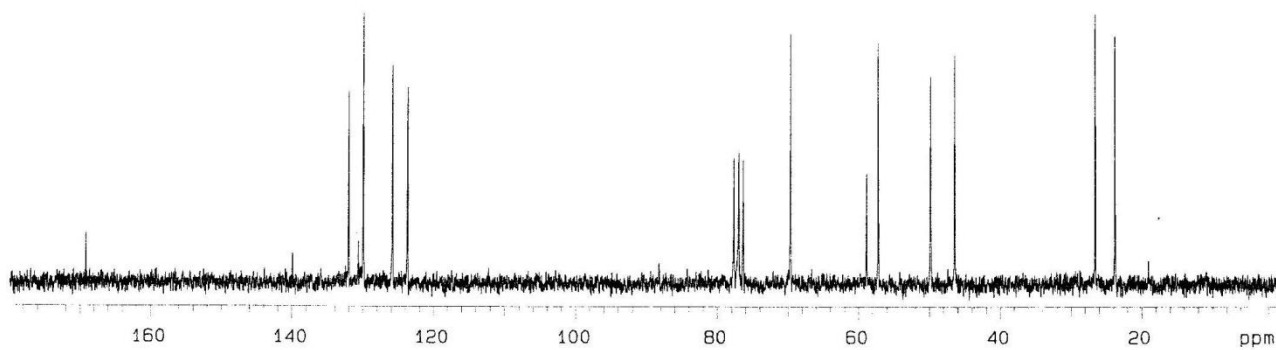
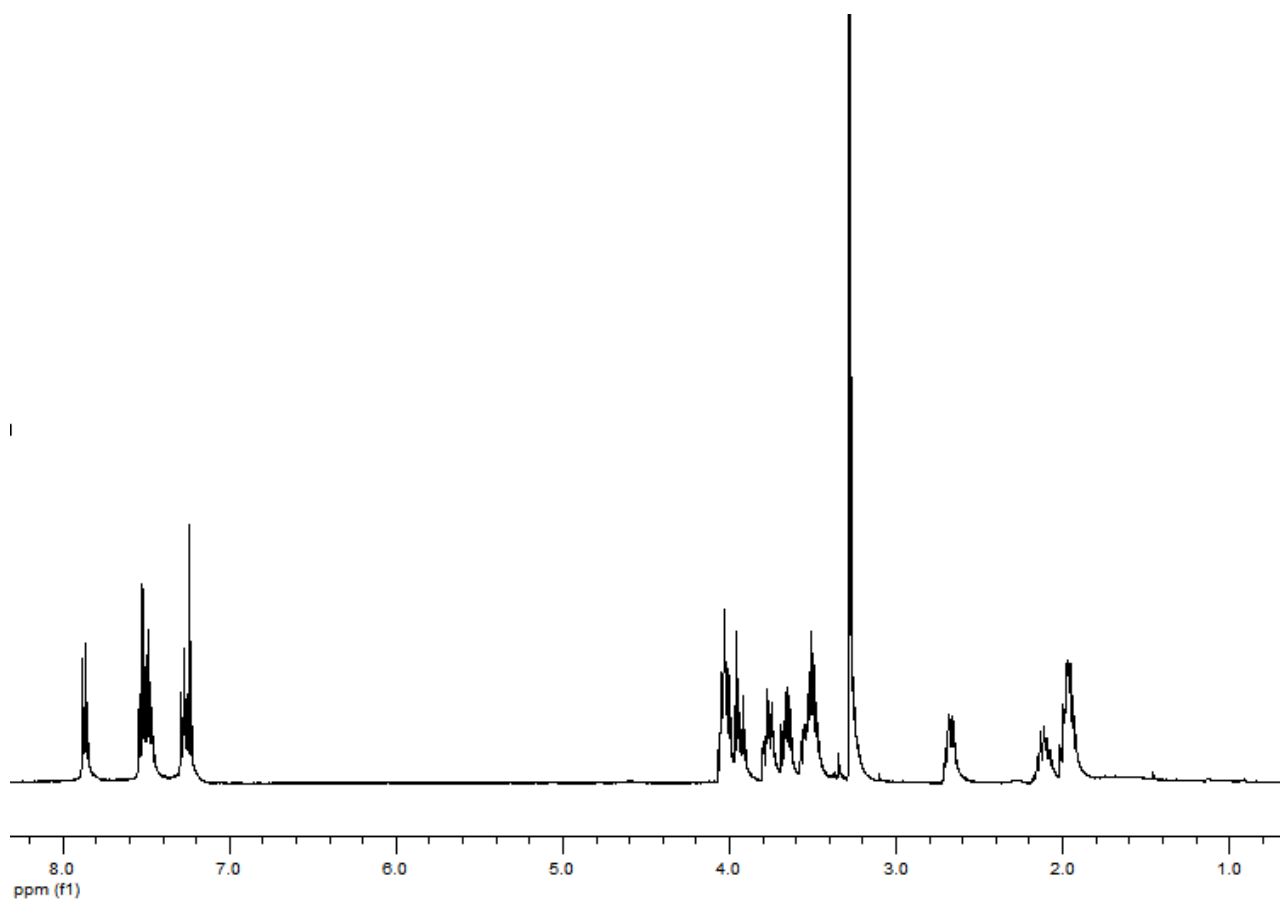
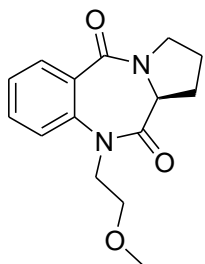


**(S)-10-Allyl-1,2,3,11a-tetrahydro-10H-benzo[e]pyrrolo[1,2-a][1,4]diazepine-5,11-dione (6)**

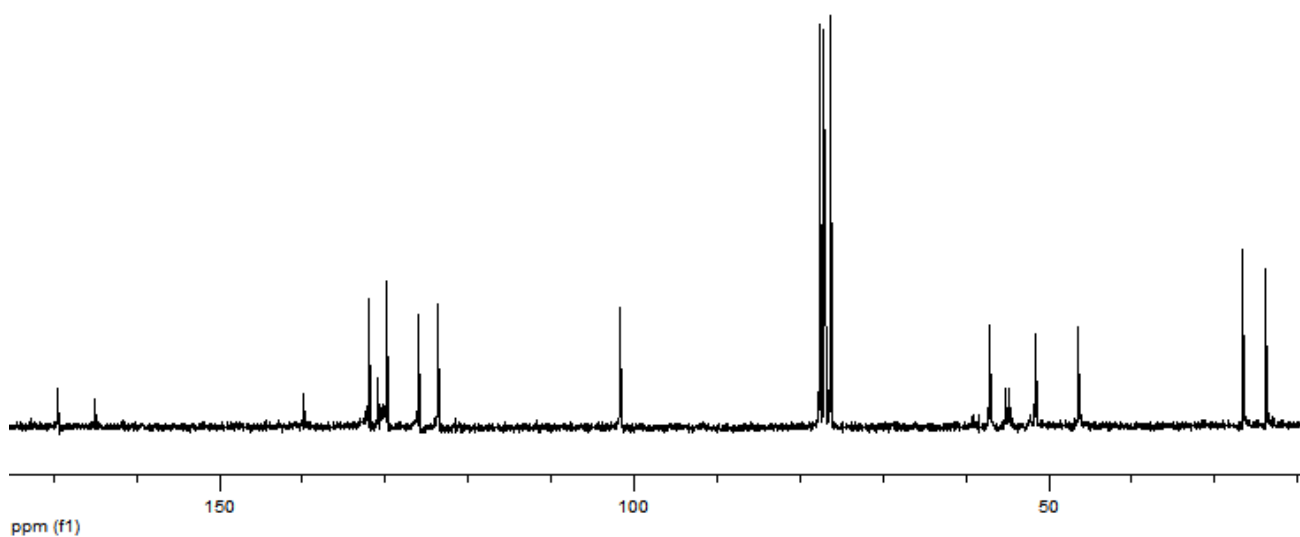
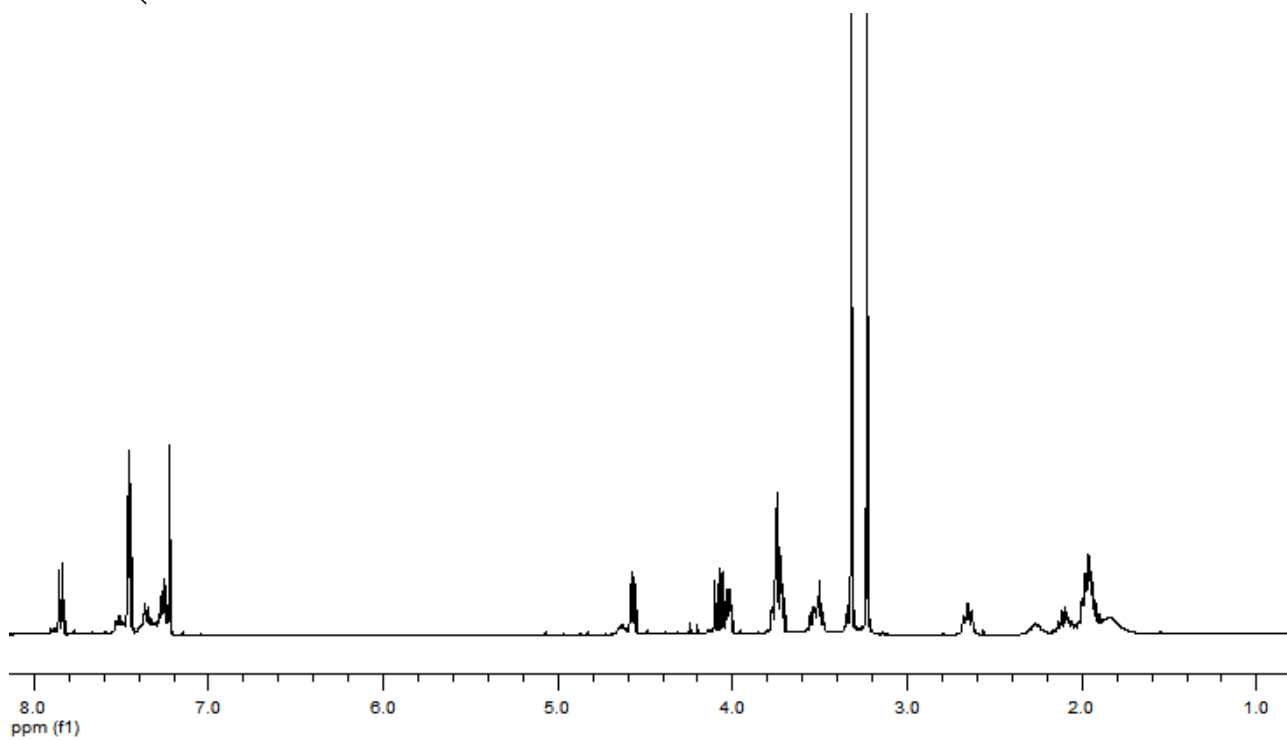
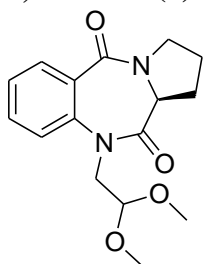




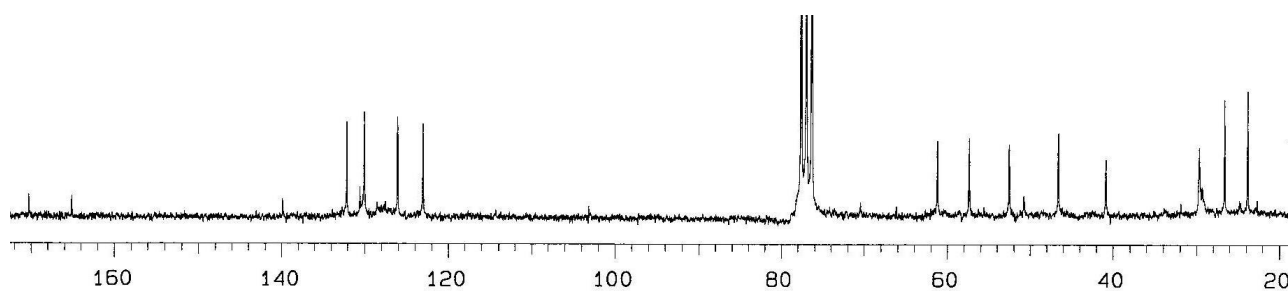
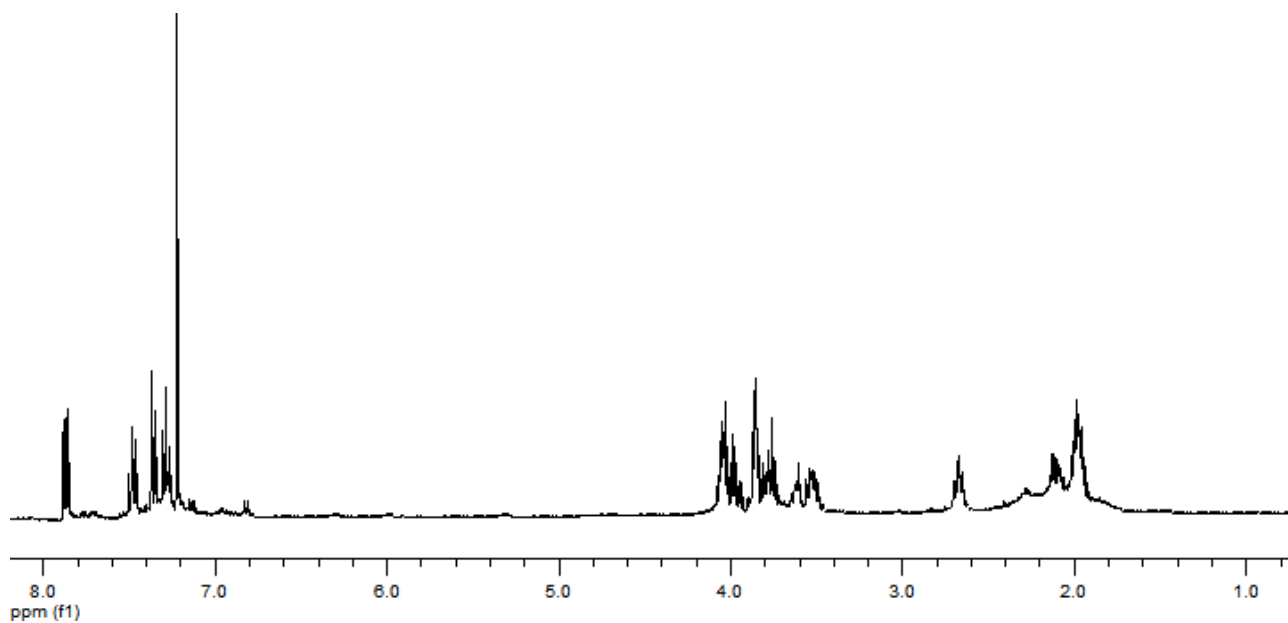
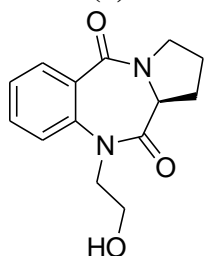
**(S)-10-(2-Methoxy-ethyl)-1,2,3,11a-tetrahydro-10H-benzo[e]pyrrolo[1,2-a][1,4]diazepine-5,11-dione (7)**



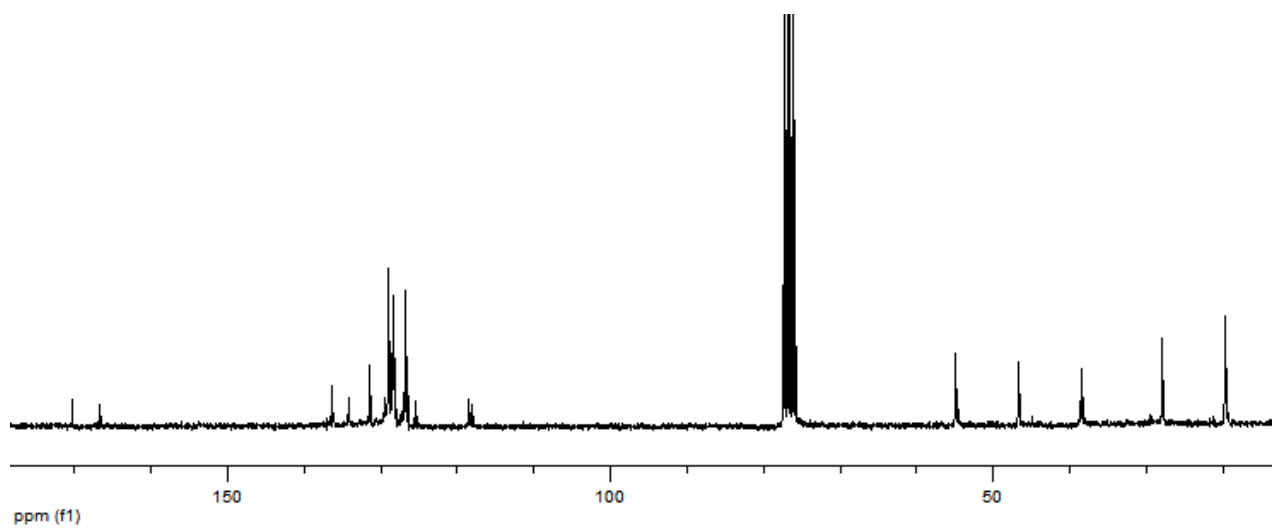
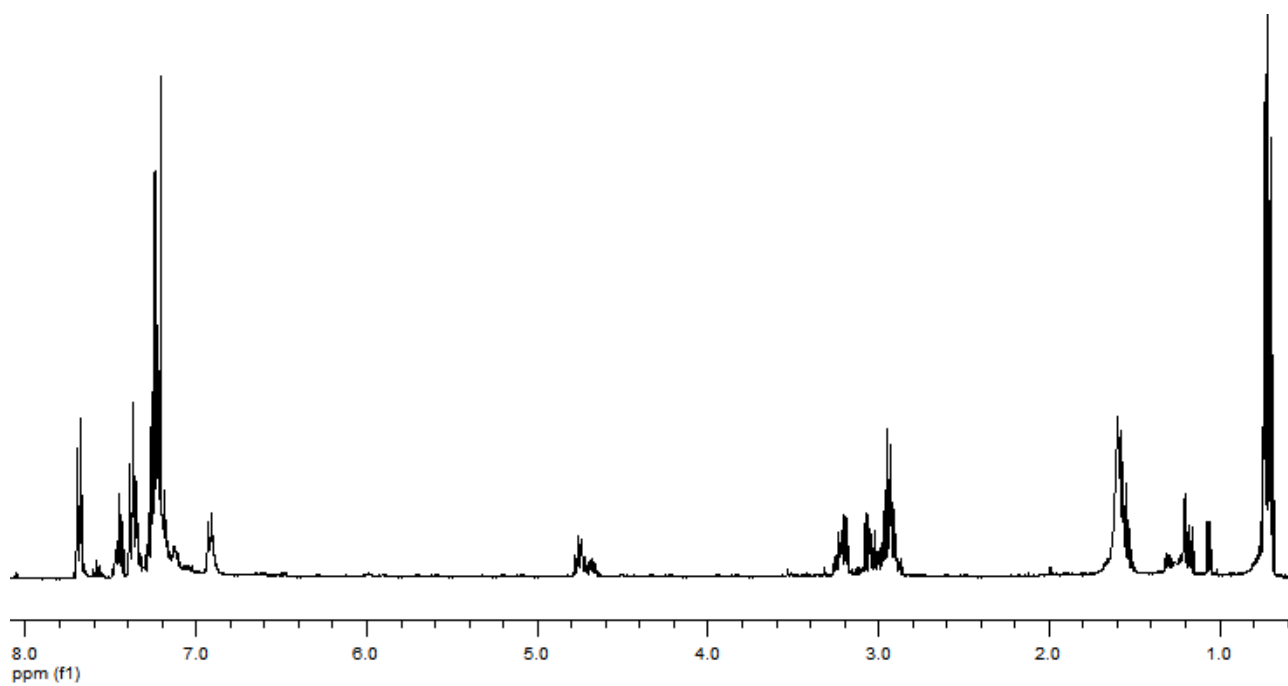
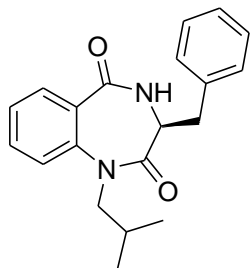
**(S)-10-(2,2-Dimethoxy-ethyl)-1,2,3,11a-tetrahydro-10H-benzo[e]pyrrolo[1,2-a][1,4]diazepine-5,11-dione (8)**



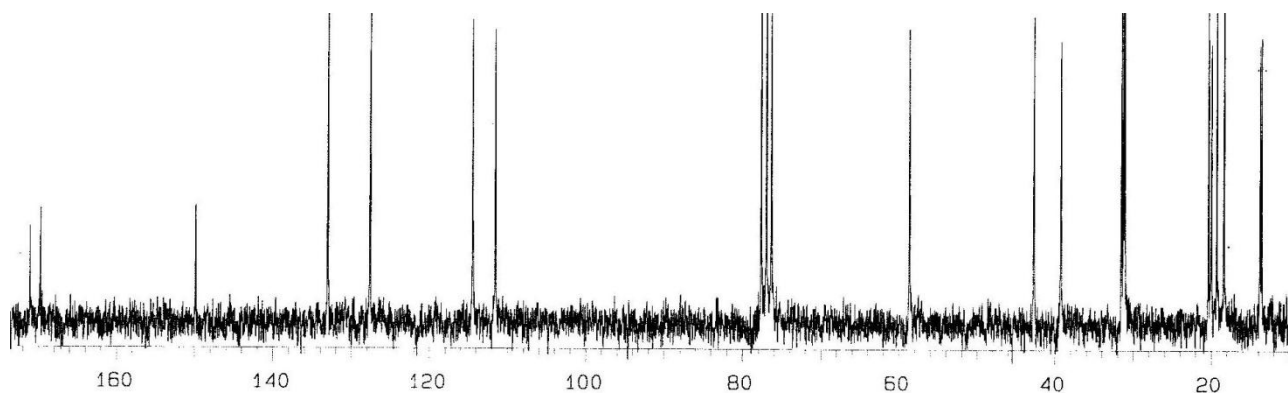
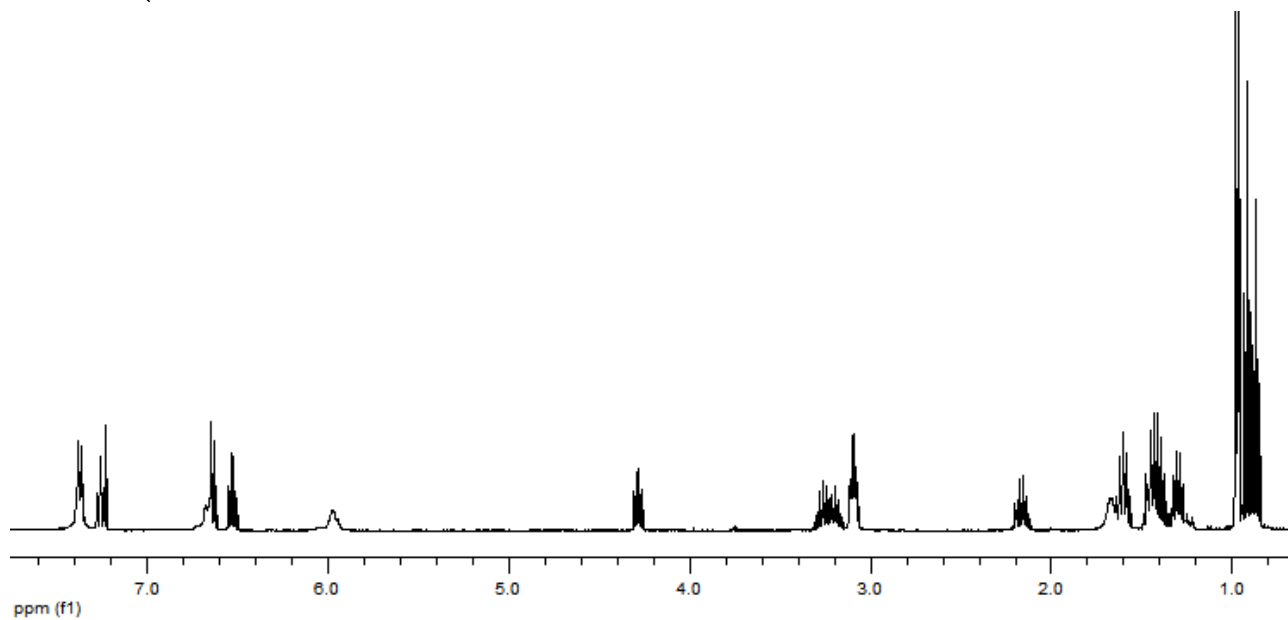
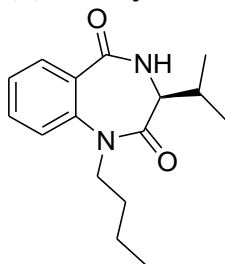
**(S)-10-(2-Hydroxy-ethyl)-1,2,3,11a-tetrahydro-10H-benzo[e]pyrrolo[1,2-a][1,4]diazepine-5,11-dione (9)**



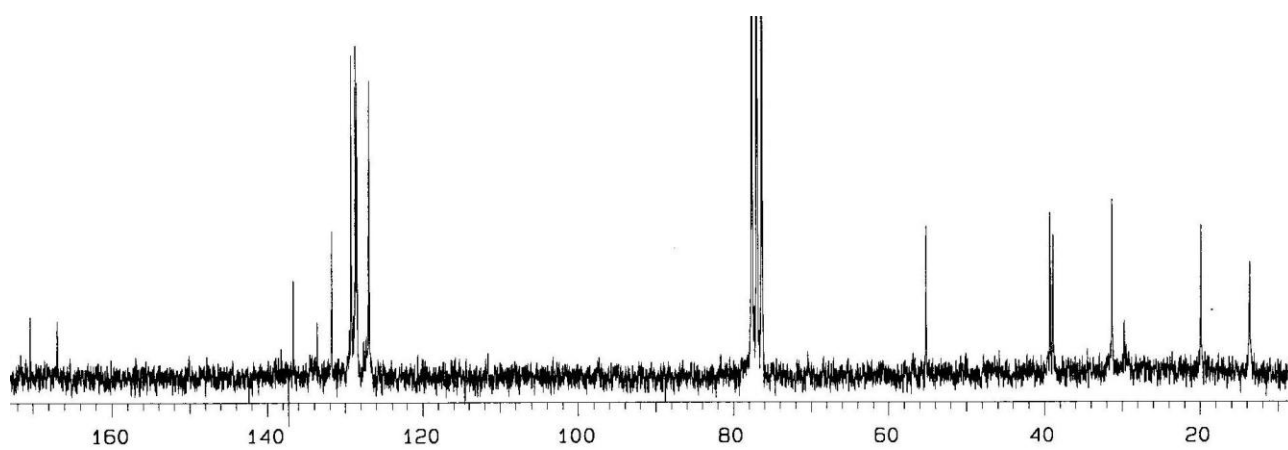
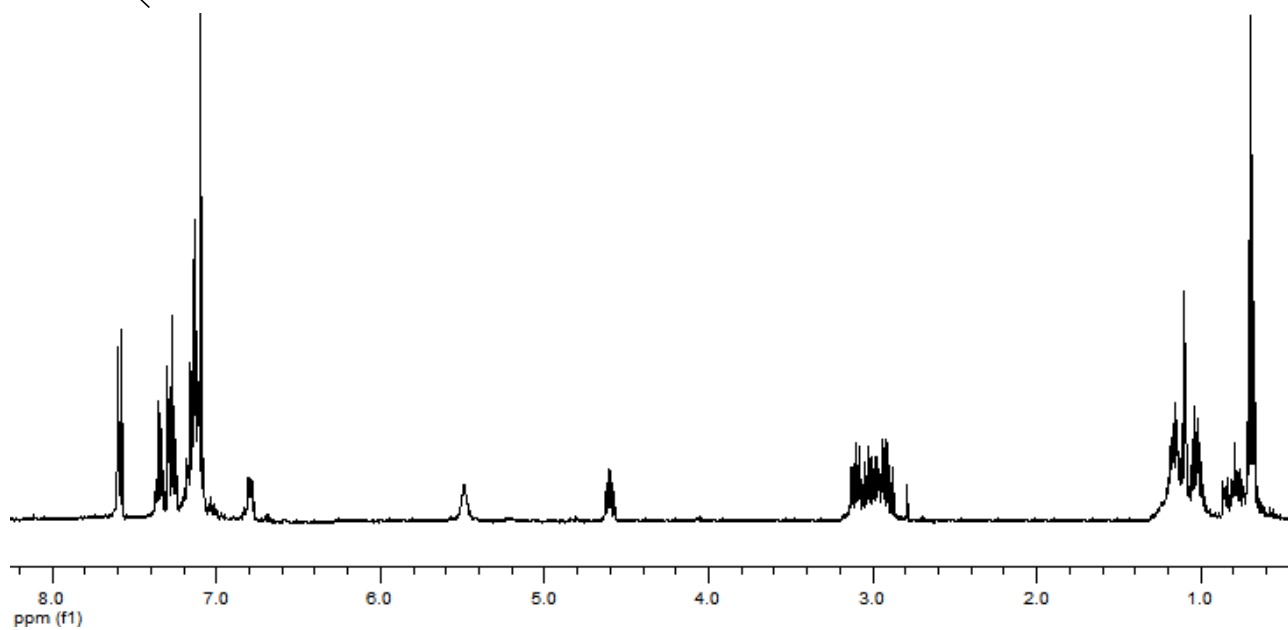
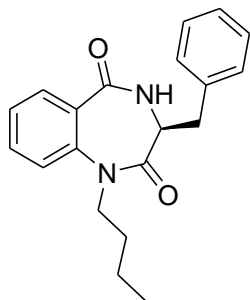
**(S)-3-Benzyl-1-isobutyl-3,4-dihydro-1H-benzo[e][1,4]diazepine-2,5-dione (10)**



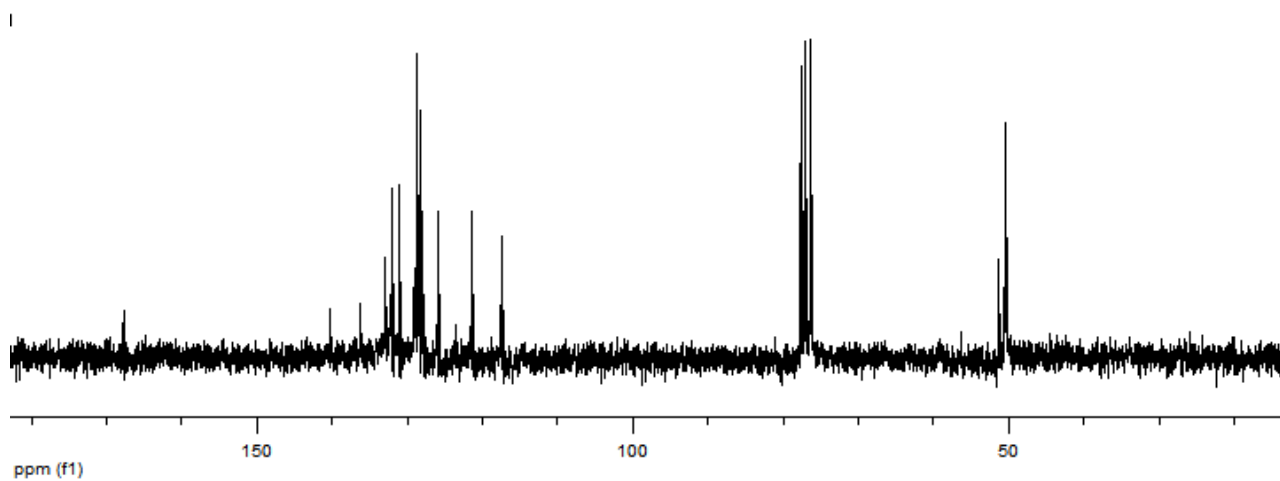
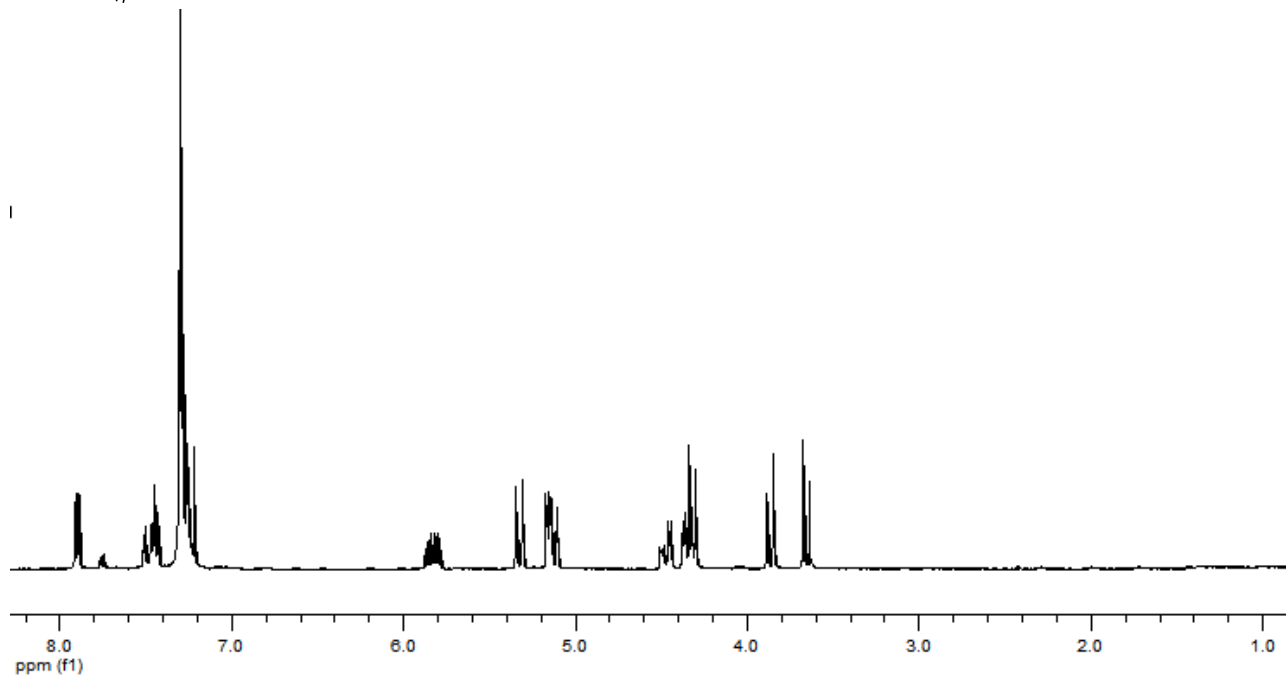
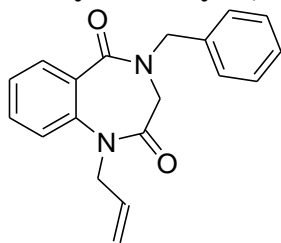
**(S)-1-Butyl-3-isopropyl-3,4-dihydro-1H-benzo[e][1,4]diazepine-2,5-dione (11)**



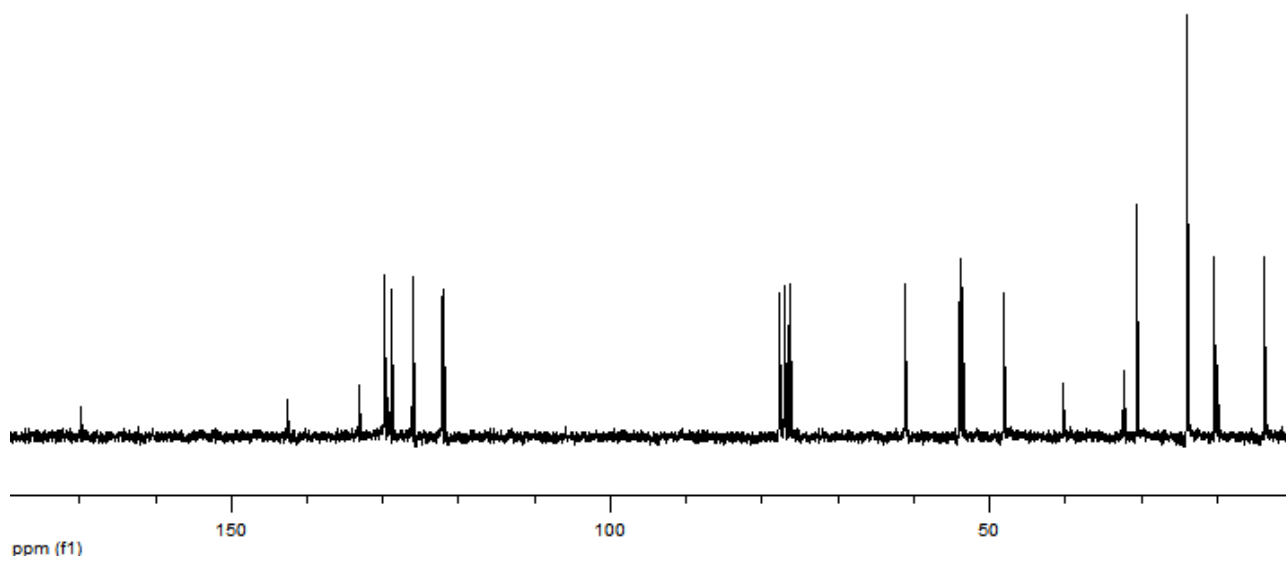
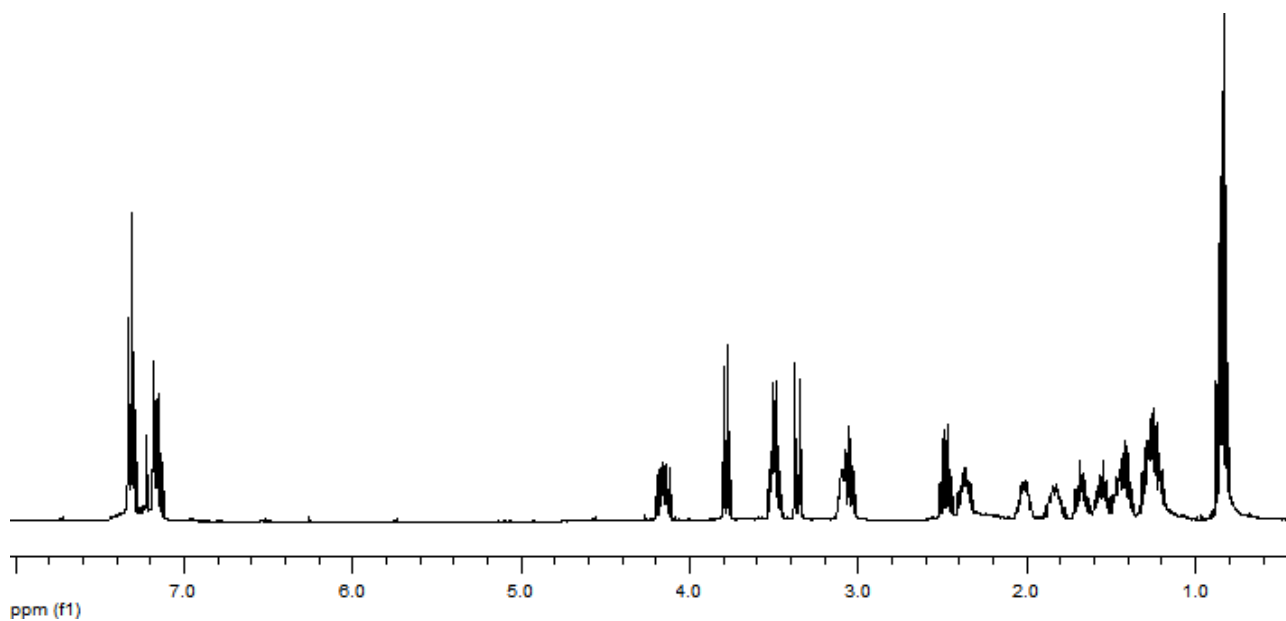
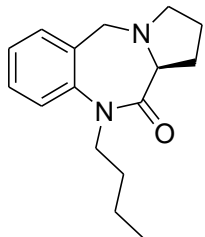
**(S)-3-Benzyl-1-butyl-3,4-dihydro-1H-benzo[e][1,4]diazepine-2,5-dione (12)**



**1-Allyl-4-benzyl-3,4-dihydro-1H-benzo[e][1,4]diazepine-2,5-dione (13)**

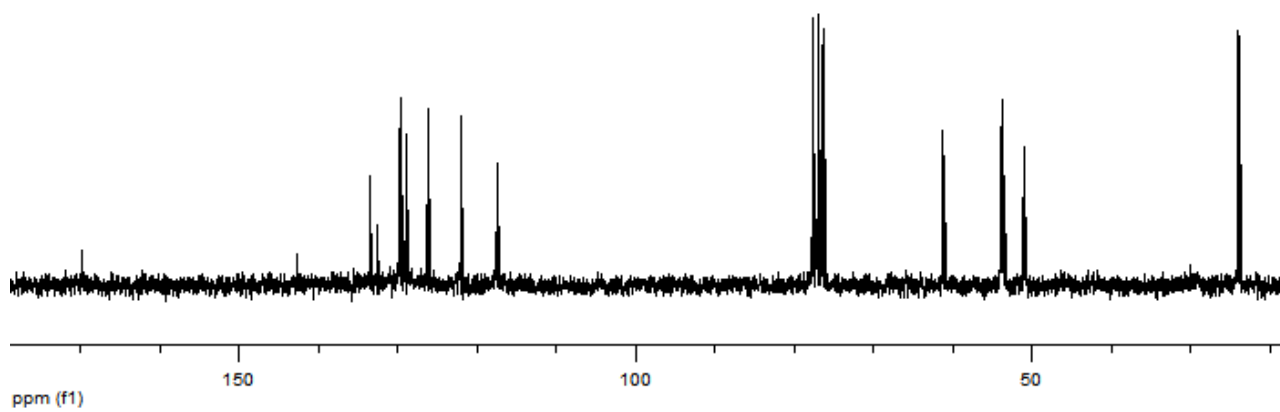
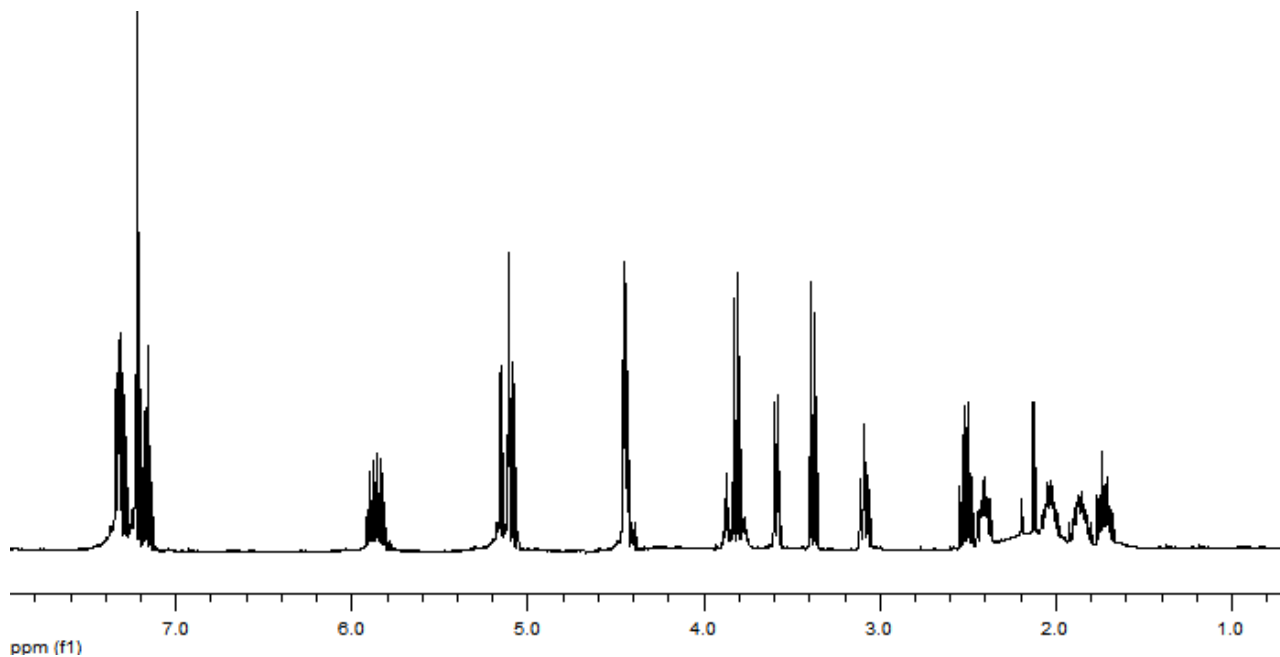
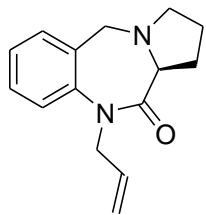


**(S)-10-Butyl-1,2,3,5,10,11a-hexahydro-benzo[e]pyrrolo[1,2-a][1,4]diazepin-11-one (14)**

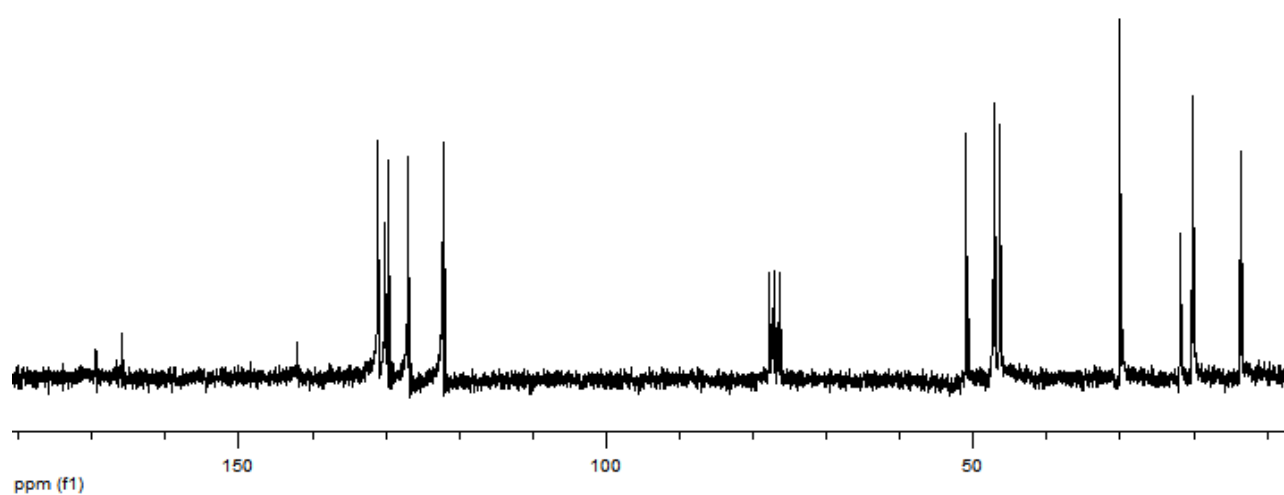
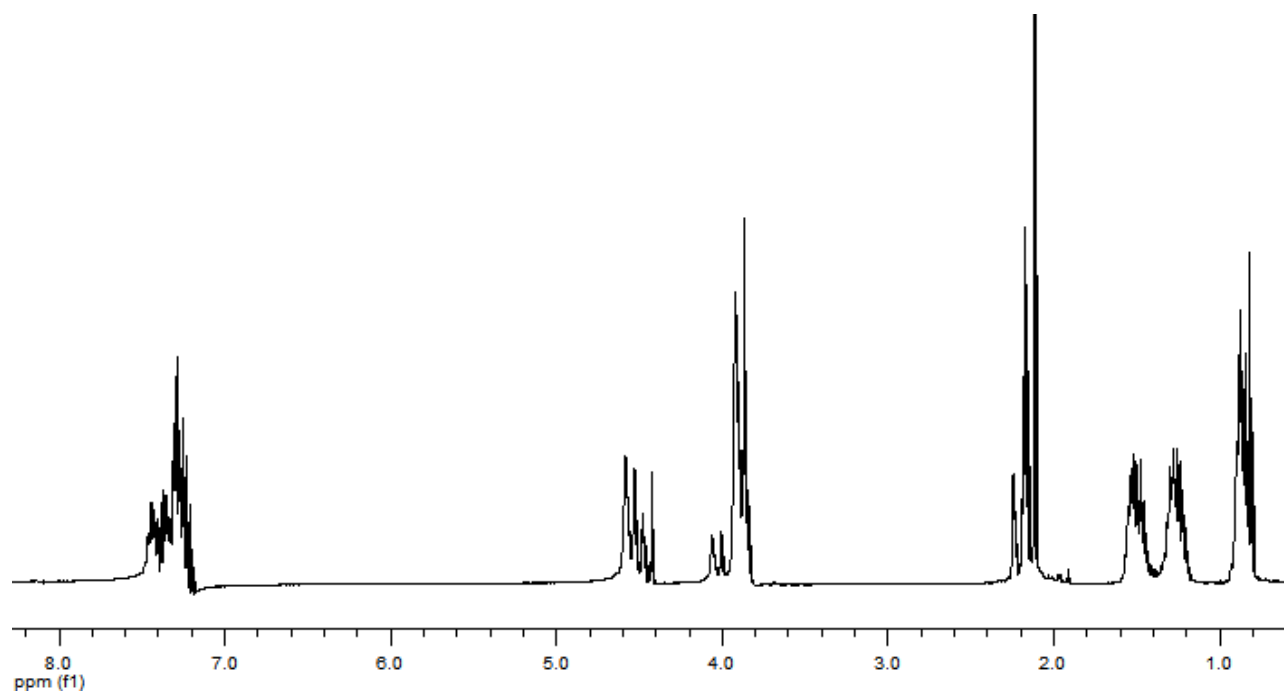
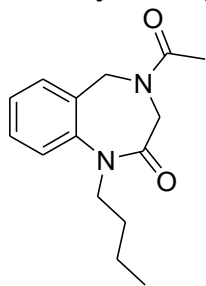




**(S)-10-Allyl-1,2,3,5,10,11a-hexahydro-benzo[e]pyrrolo[1,2-a][1,4]diazepin-11-one (15)**



**4-Acetyl-1-butyl-1,3,4,5-tetrahydro-benzo[e][1,4]diazepin-2-one (16)**



**4-Acetyl-1-allyl-1,3,4,5-tetrahydro-benzo[e][1,4]diazepin-2-one (17)**

