Preparation of Novel Acyl Pyrazoles and Triazoles by Means of Oxidative Functionalization Reactions

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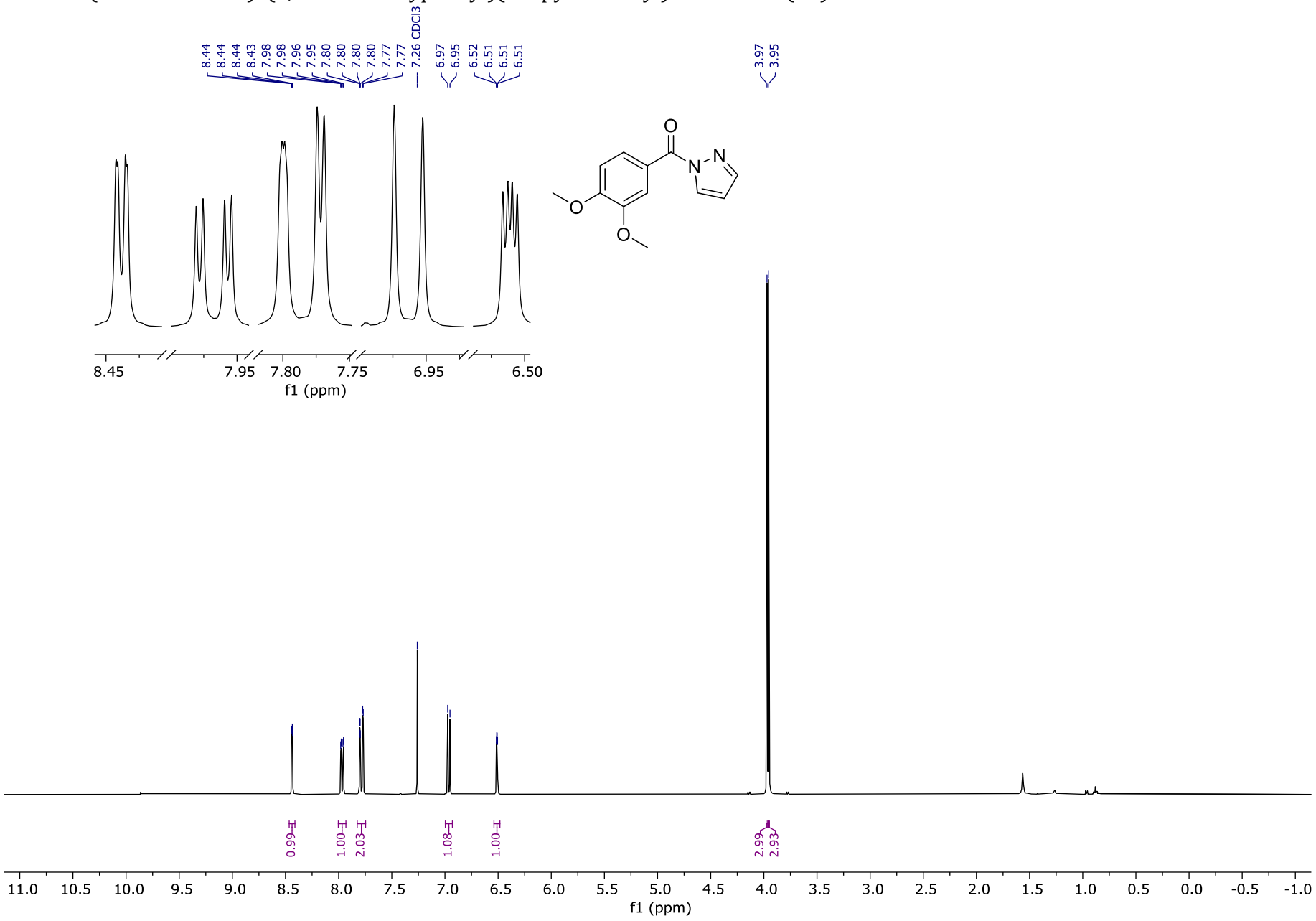
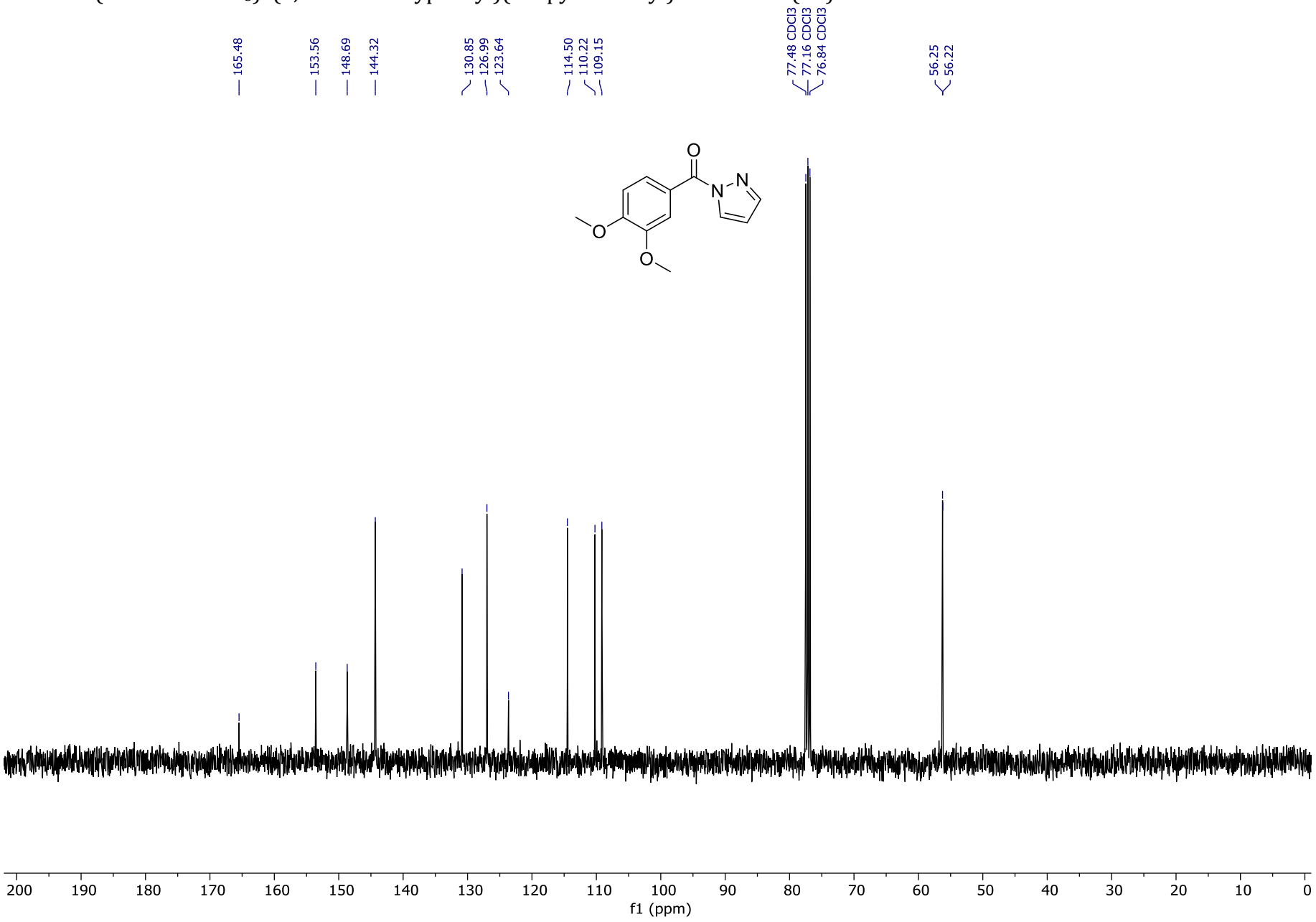
SUPPORTING INFORMATION

^{1}H-, ^{13}C-, and ^{19}F-NMR spectra of synthesized compounds

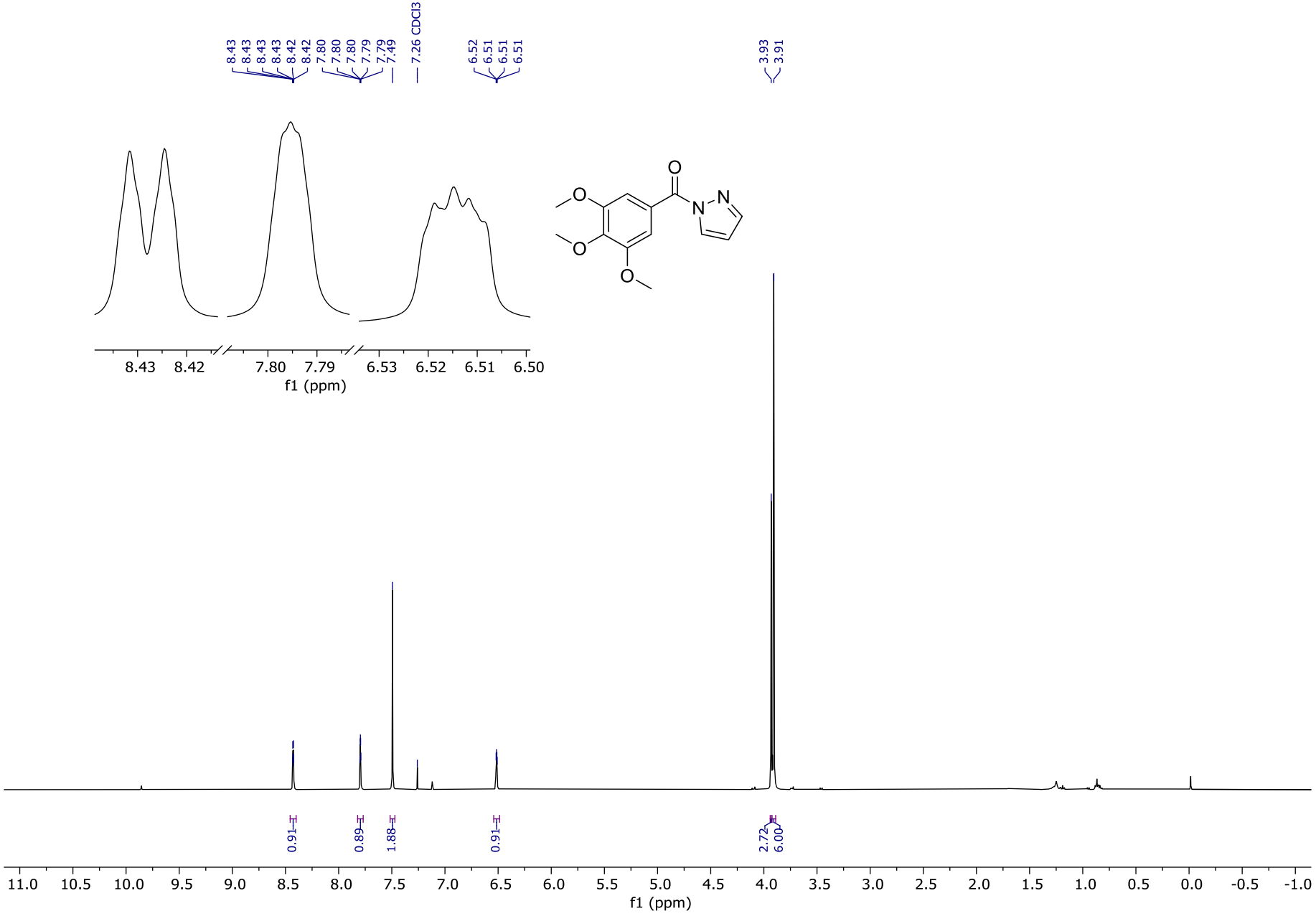
^{1}H-NMR (400 MHz $CDCl_3$): (3,4-Dimethoxyphenyl)(1*H*-pyrazol-1-yl)methanone (**6a**)



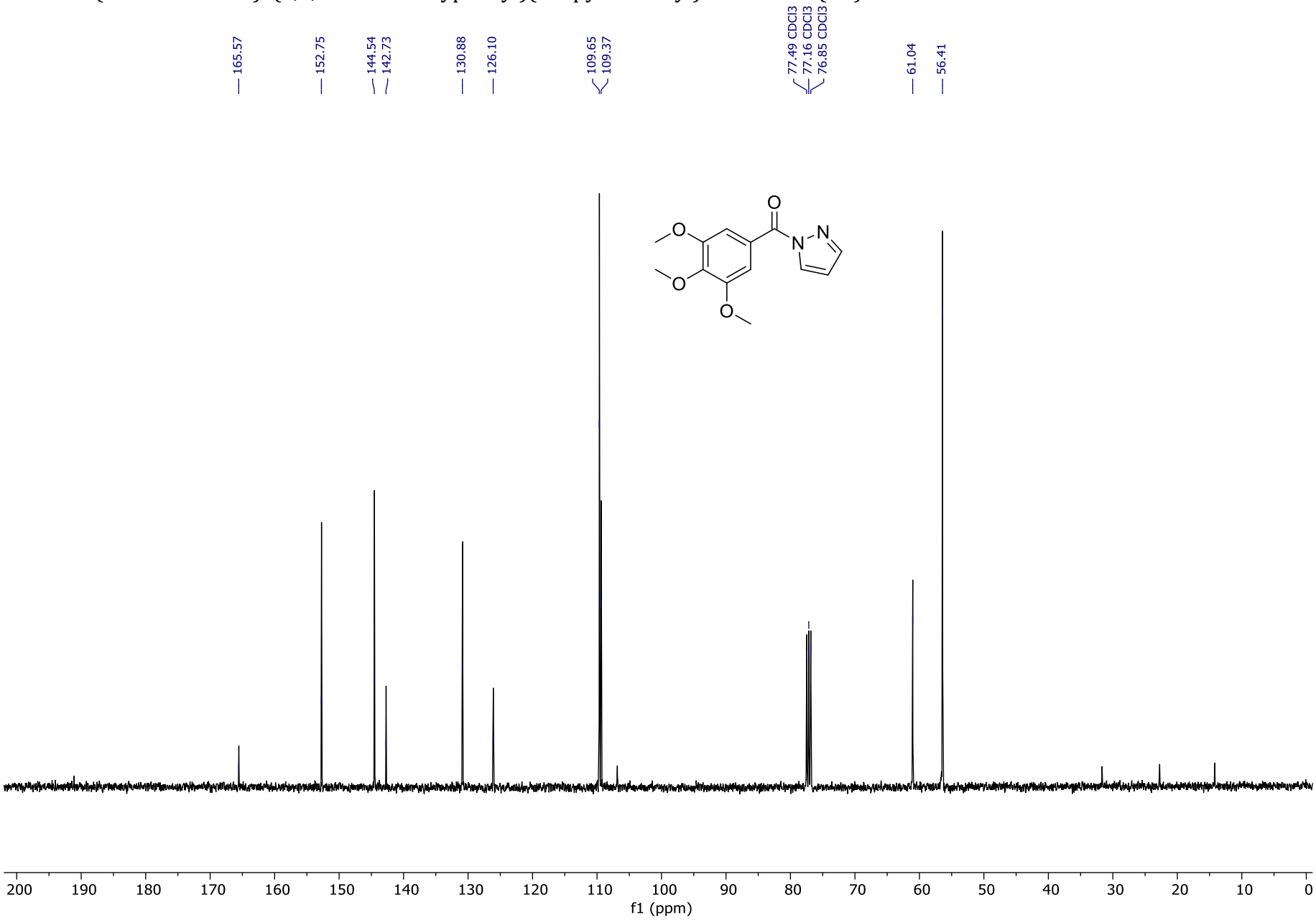
^{13}C-NMR (101 MHz $CDCl_3$): (3,4-Dimethoxyphenyl)(1*H*-pyrazol-1-yl)methanone (**6a**)



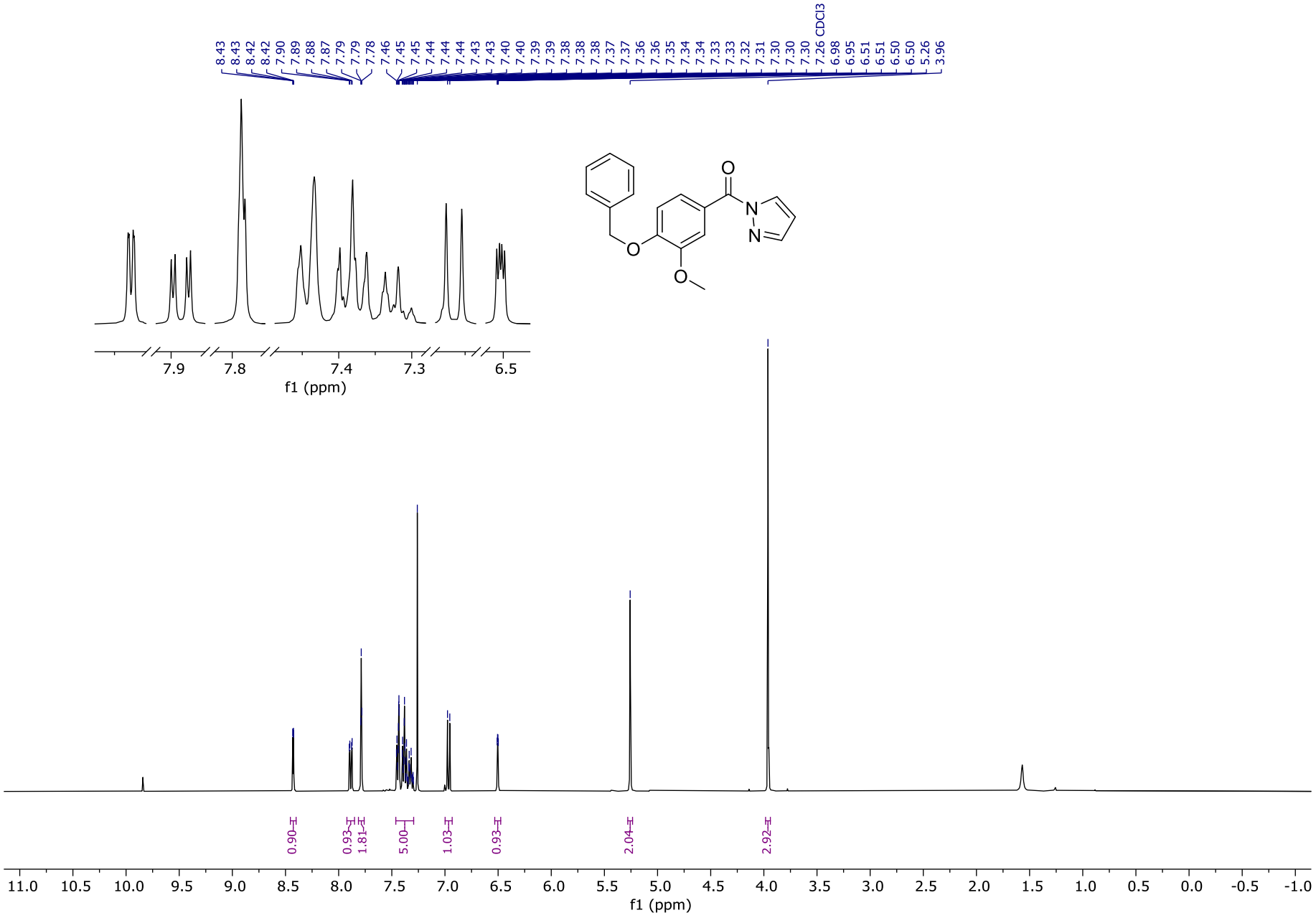
^{1}H-NMR (400 MHz $CDCl_3$): (3,4,5-Trimethoxyphenyl)(1*H*-pyrazol-1-yl)methanone (**6b**)



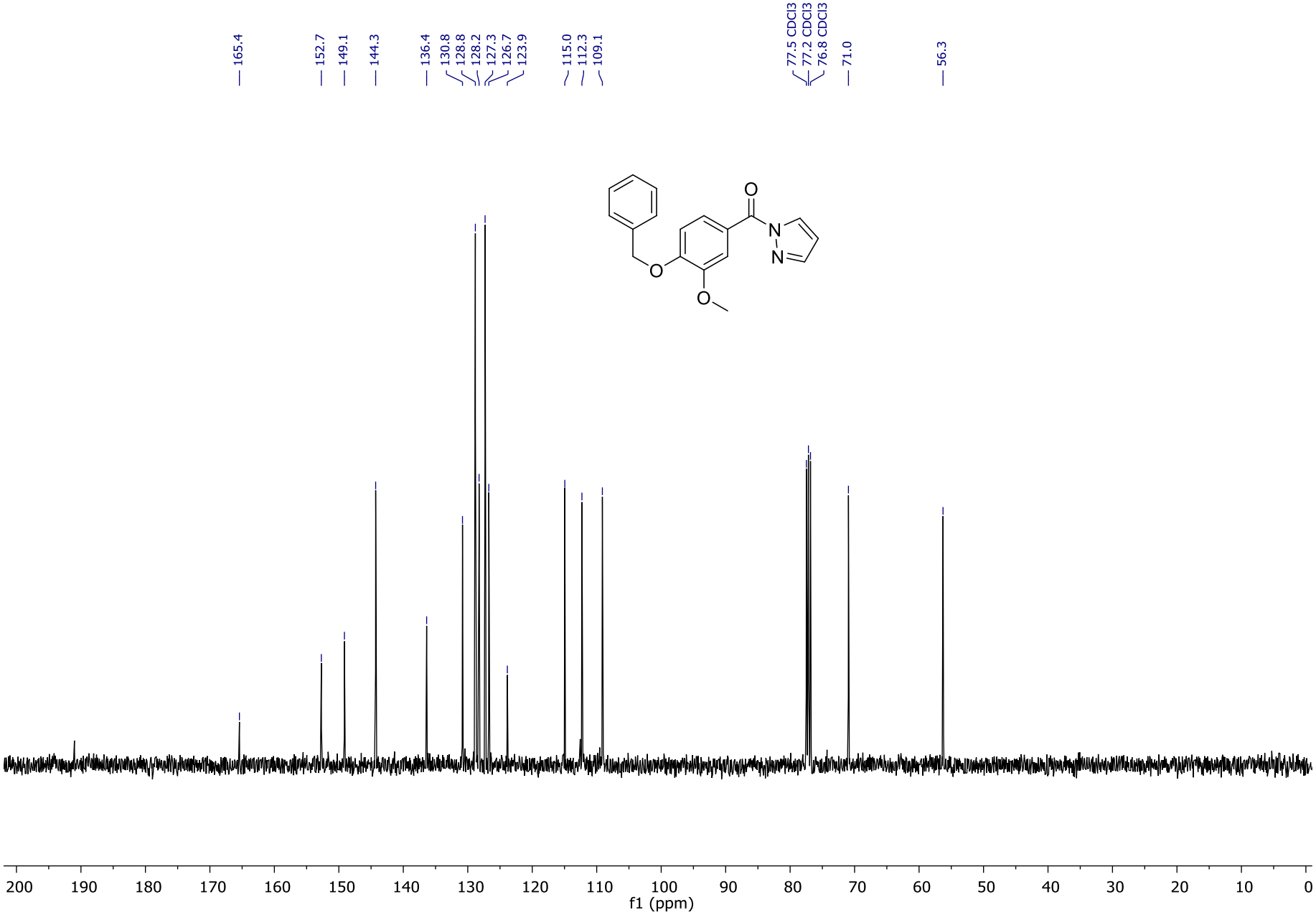
^{13}C-NMR (101 MHz $CDCl_3$): (3,4,5-Trimethoxyphenyl)(1*H*-pyrazol-1-yl)methanone (**6b**)



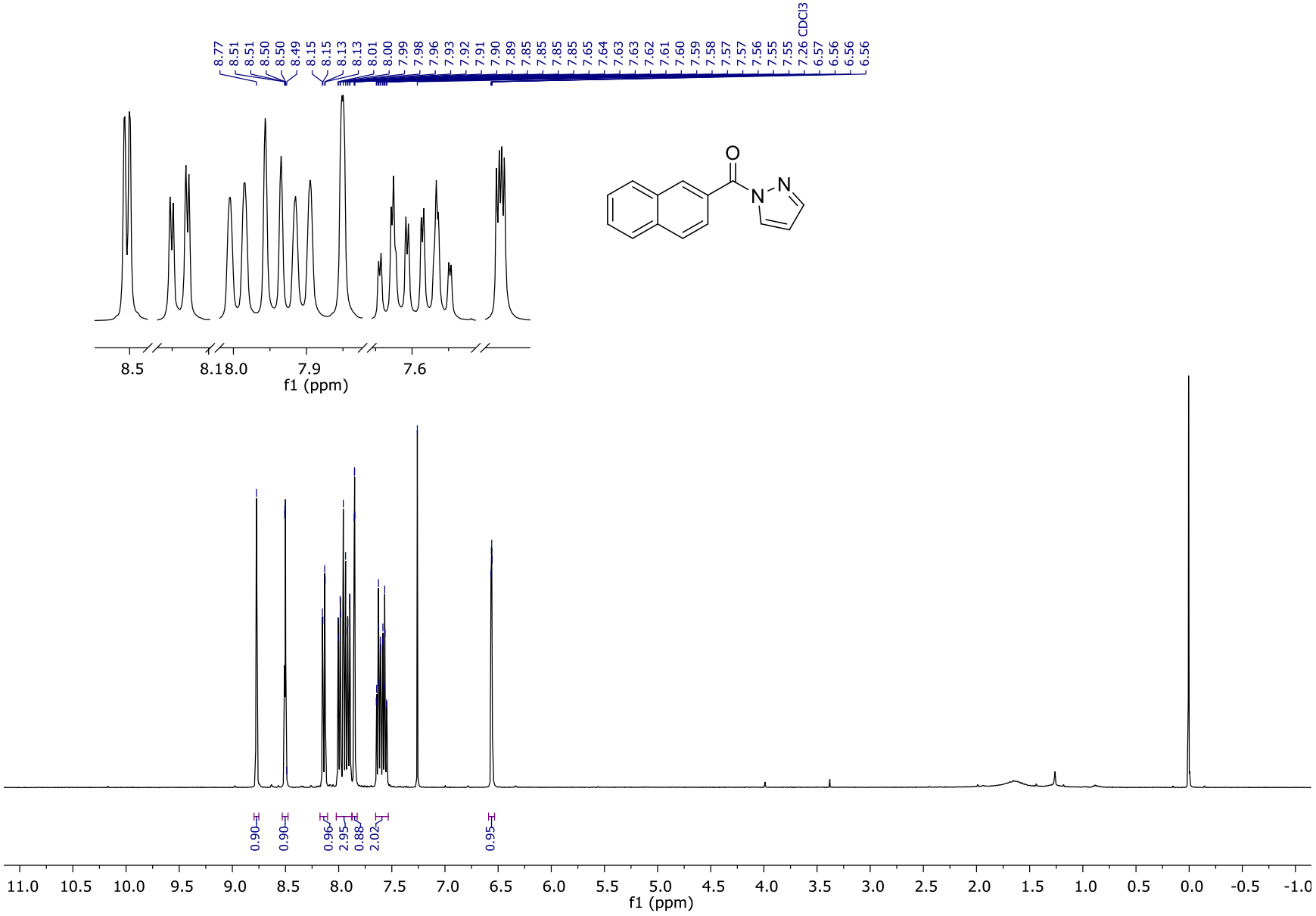
^{1}H-NMR (400 MHz $CDCl_3$): (4-(Benzyloxy)-3-methoxyphenyl)(1*H*-pyrazol-1-yl)methanone (**6c**)



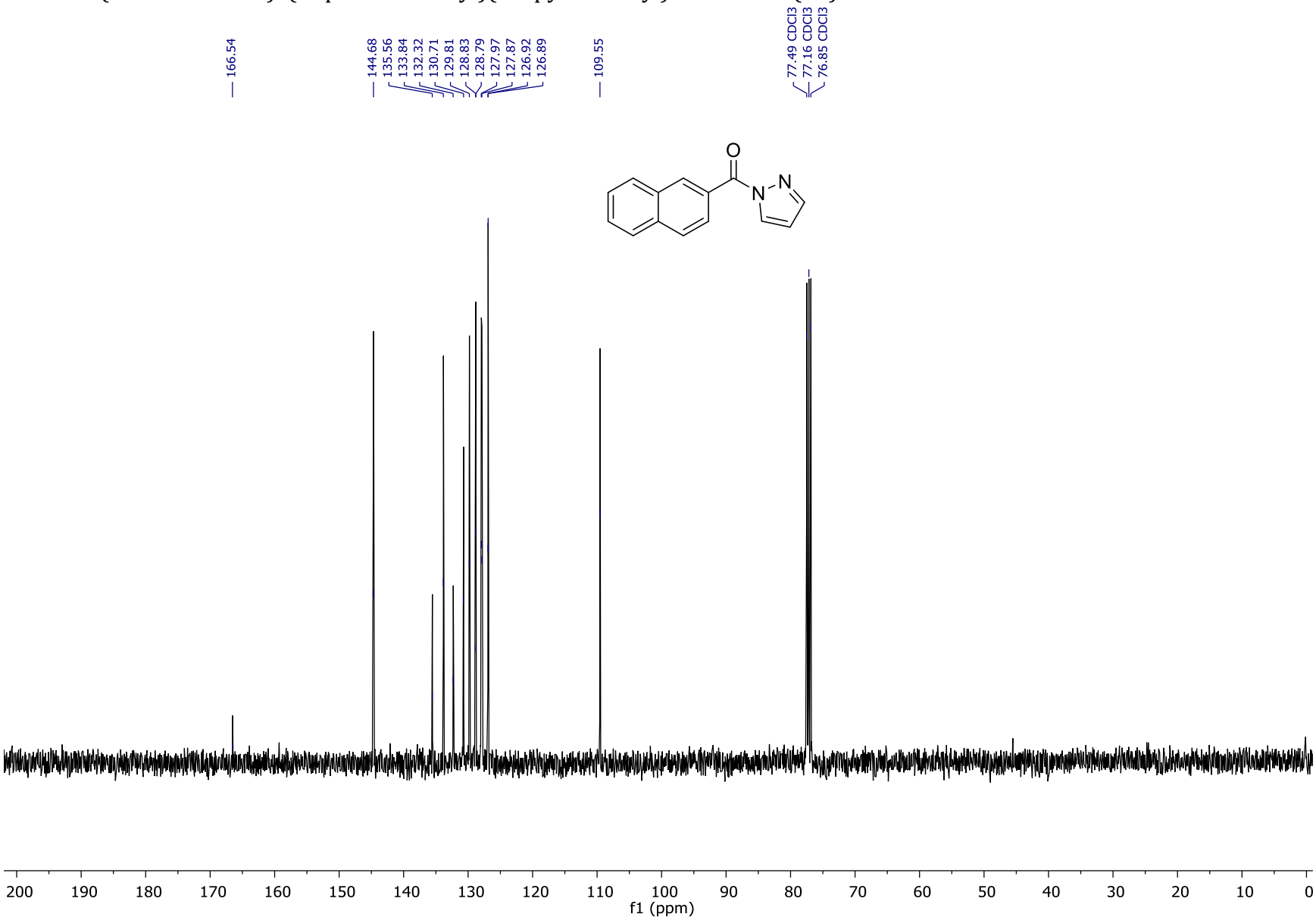
^{13}C-NMR (101 MHz $CDCl_3$): (4-(Benzyloxy)-3-methoxyphenyl)(1*H*-pyrazol-1-yl)methanone (**6c**)



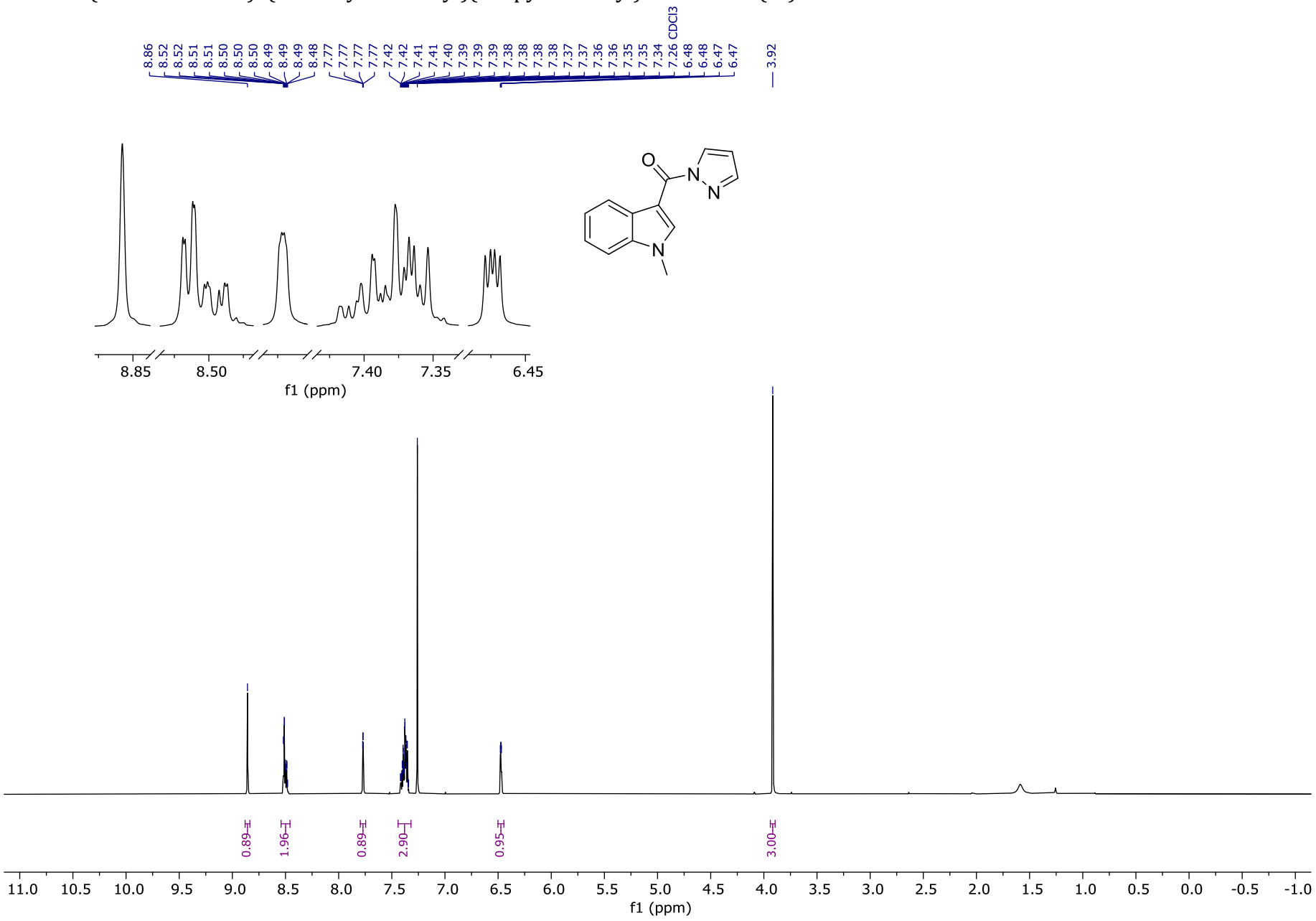
^{1}H-NMR (400 MHz $CDCl_3$): (Naphthalene-2-yl)(1*H*-pyrazol-1-yl)methanone (**6e**)



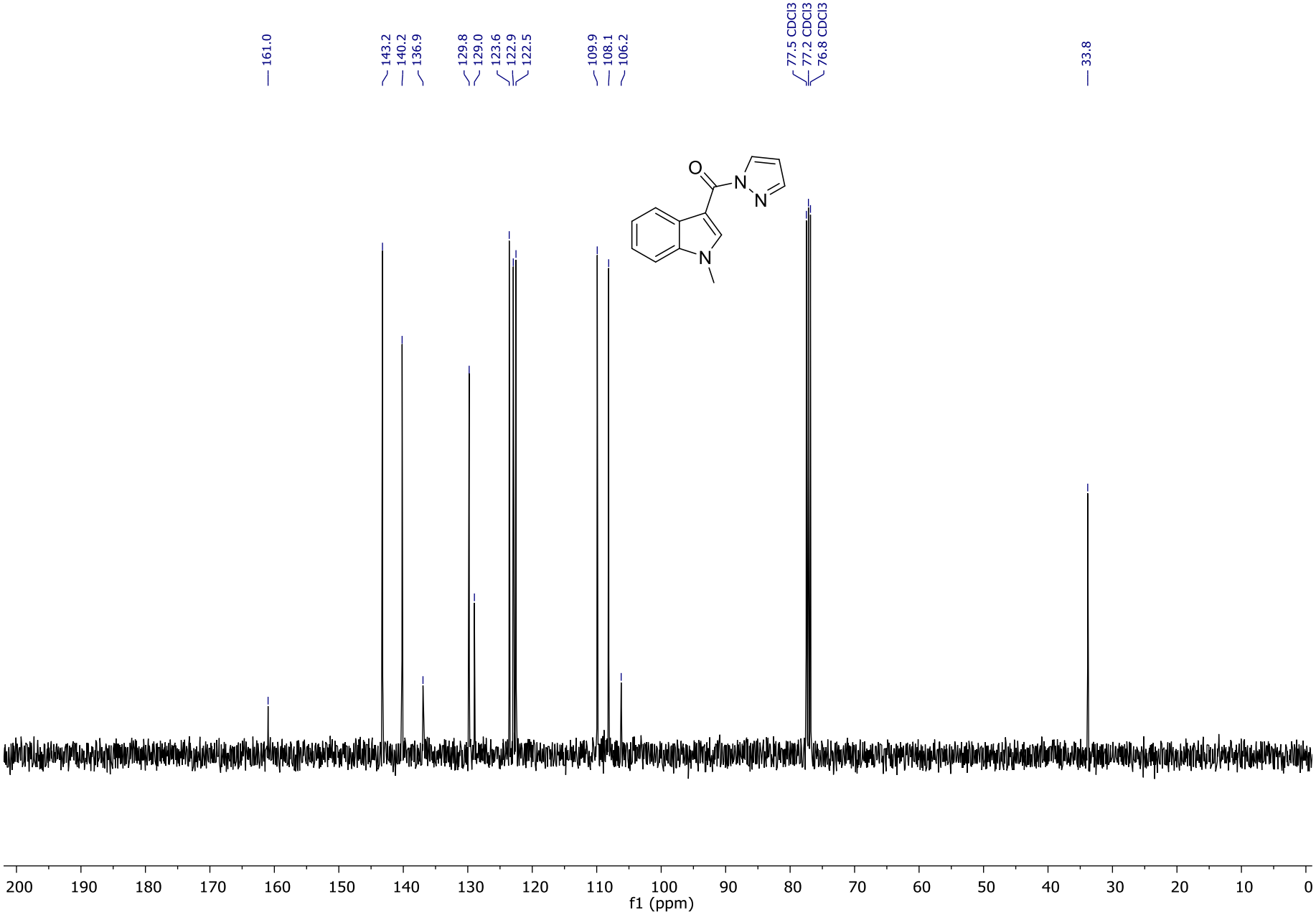
^{13}C-NMR (101 MHz $CDCl_3$): (Naphthalene-2-yl)(1*H*-pyrazol-1-yl)methanone (**6e**)



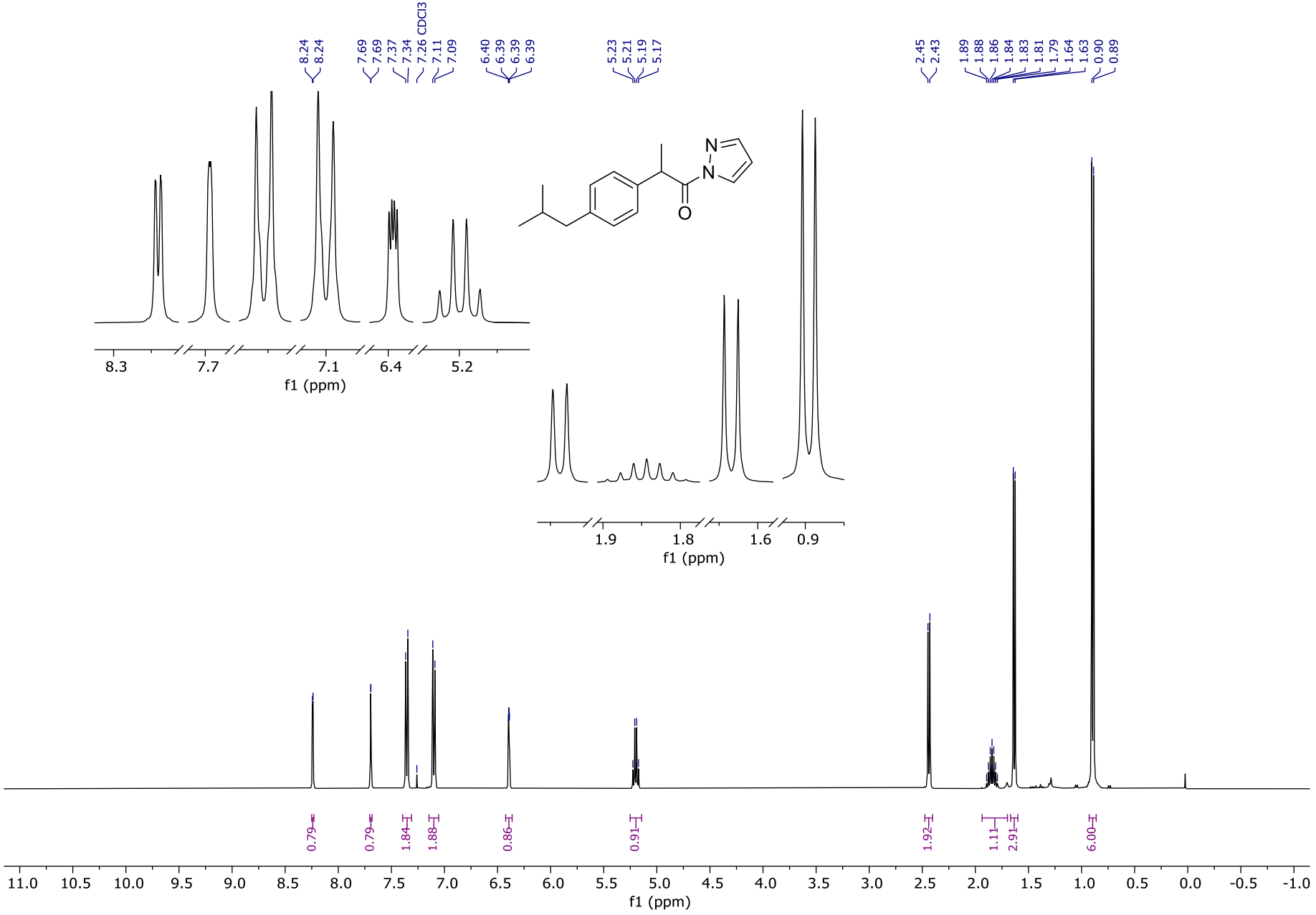
^{1}H-NMR (400 MHz $CDCl_3$): (1-Methylindol-3-yl)(1*H*-pyrazol-1-yl)methanone (**6f**)



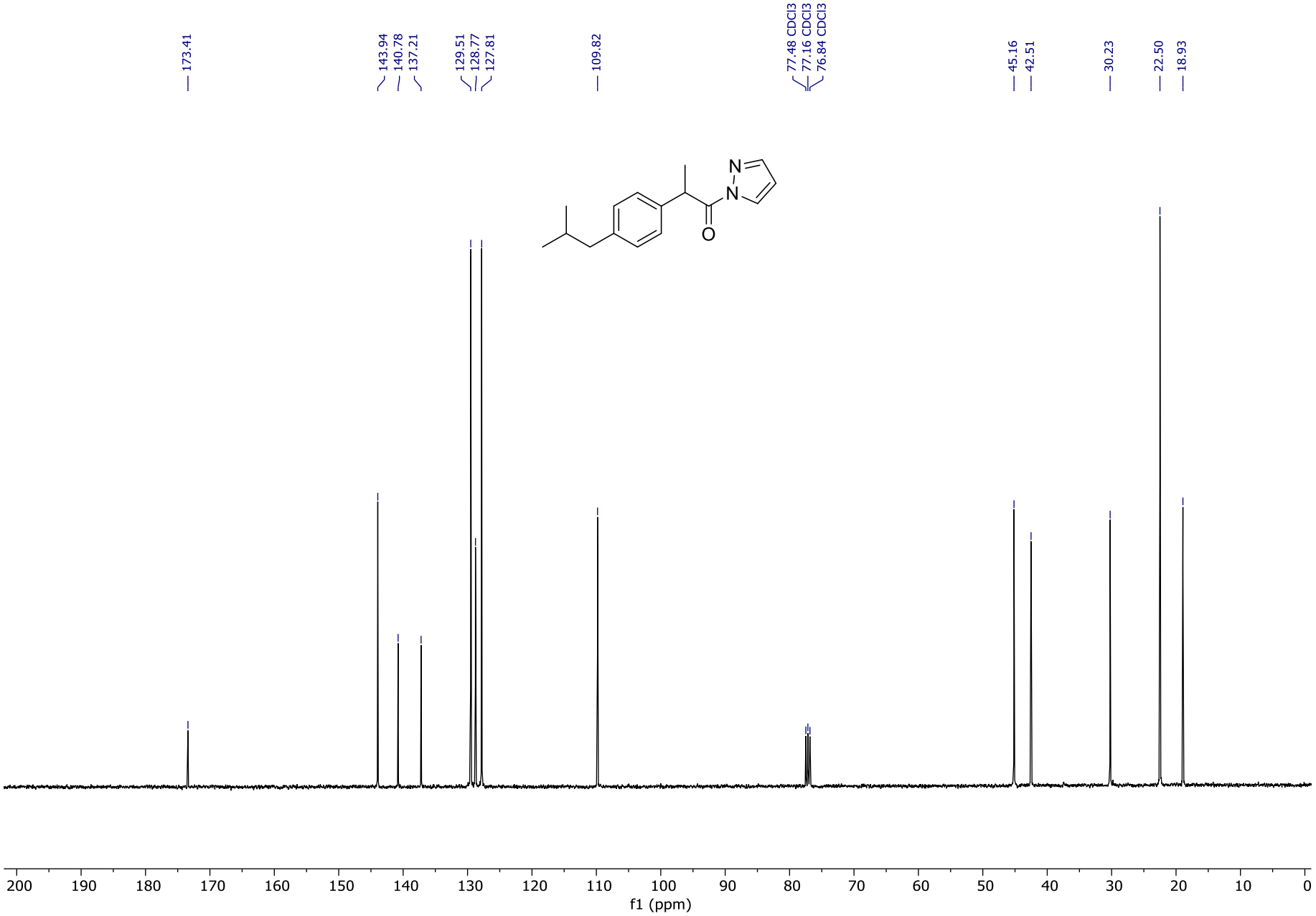
^{13}C-NMR (101 MHz $CDCl_3$): (1-Methylindol-3-yl)(1*H*-pyrazol-1-yl)methanone (**6f**)



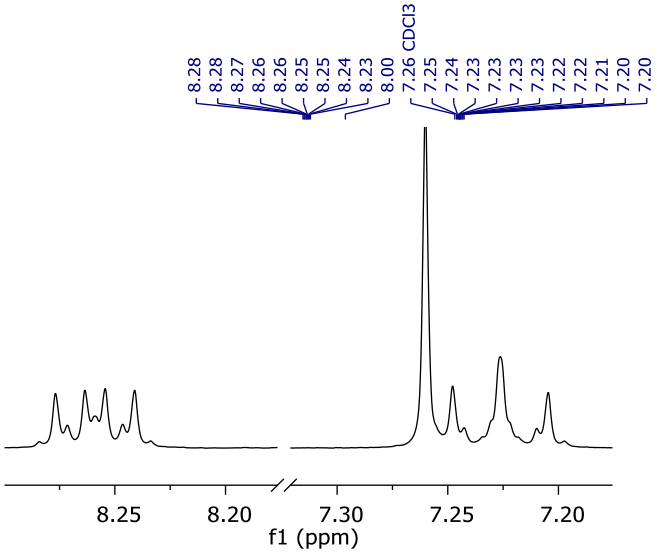
^{1}H-NMR (400 MHz $CDCl_3$): 2-(4-Isobutylphenyl)-1-(1*H*-pyrazol-1-yl)propan-1-one (**6h**)

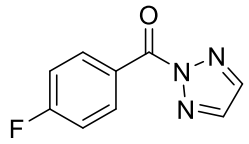


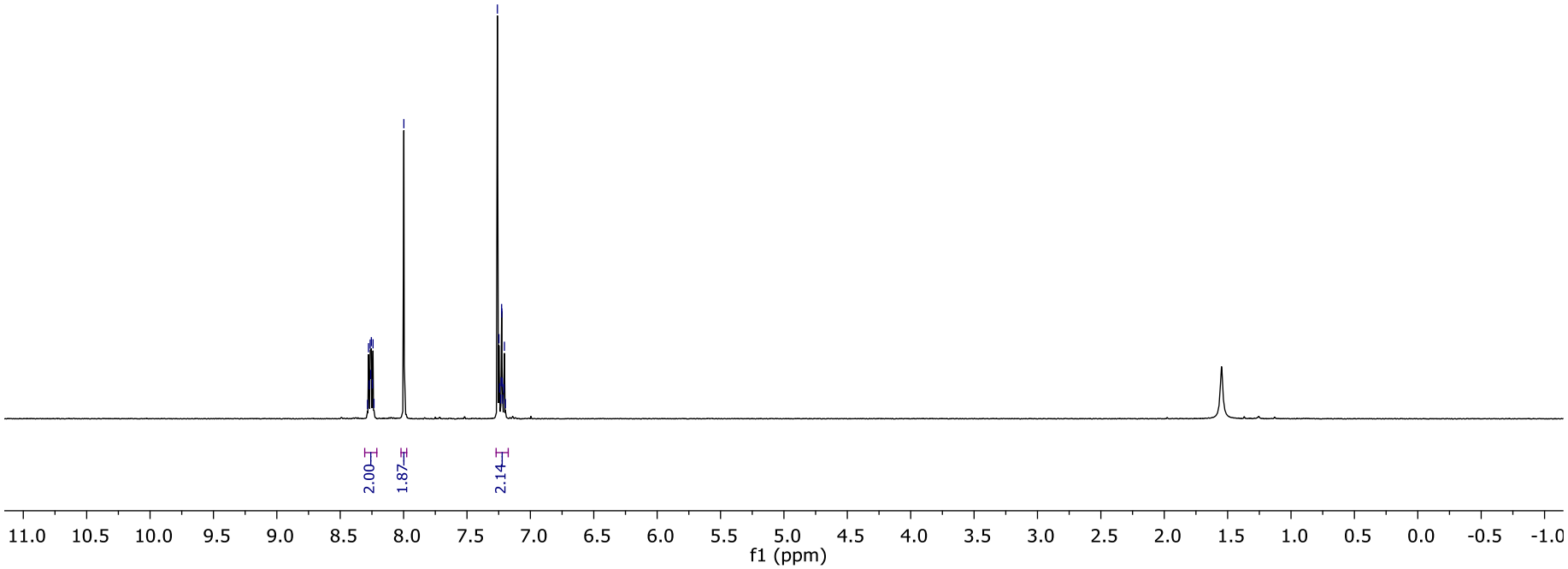
^{13}C-NMR (101 MHz $CDCl_3$): 2-(4-Isobutylphenyl)-1-(1*H*-pyrazol-1-yl)propan-1-one (**6h**)



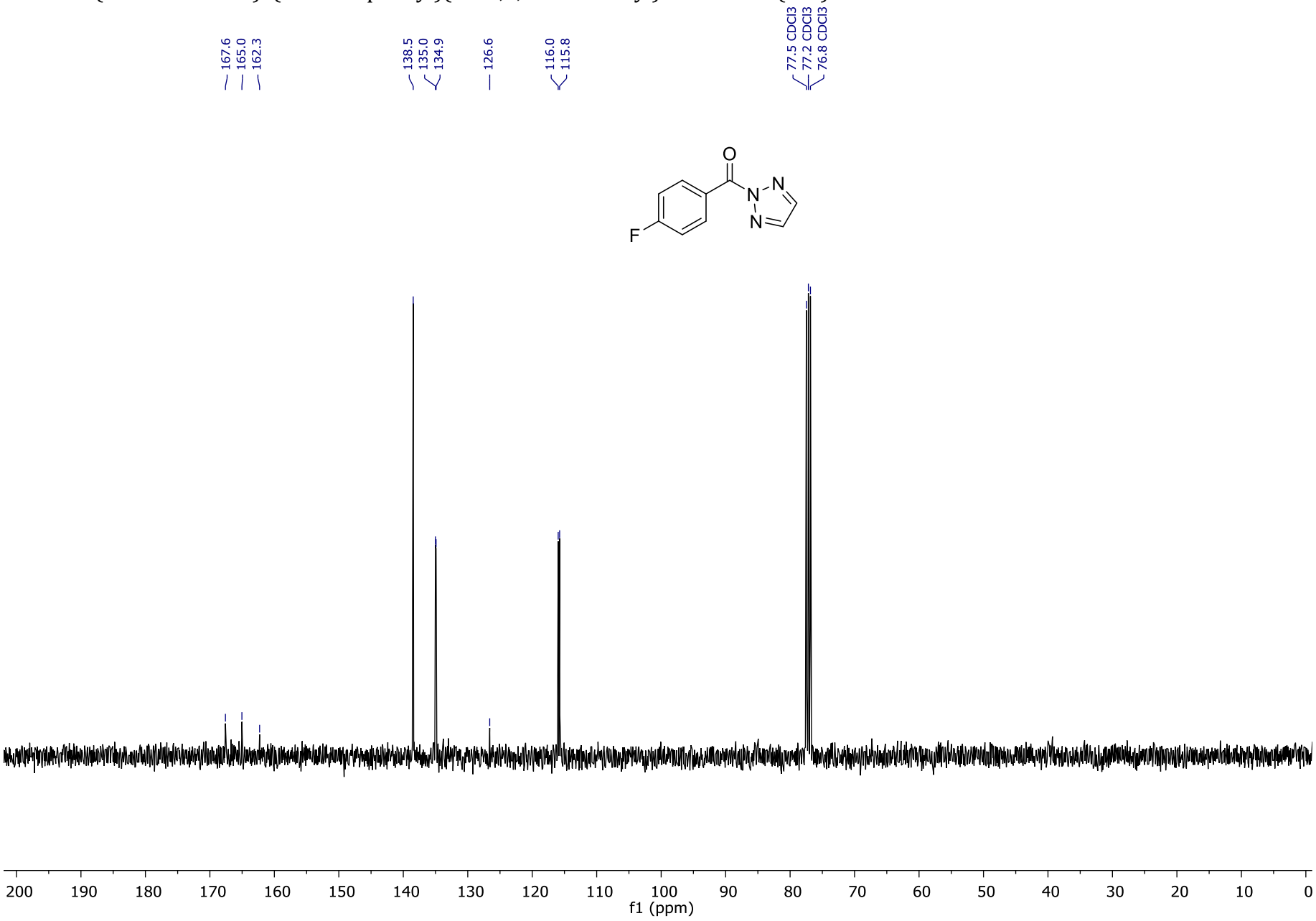
^{1}H-NMR (400 MHz $CDCl_3$): (4-Fluorophenyl)(2*H*-1,2,3-triazol-2-yl)methanone (**7a”**)



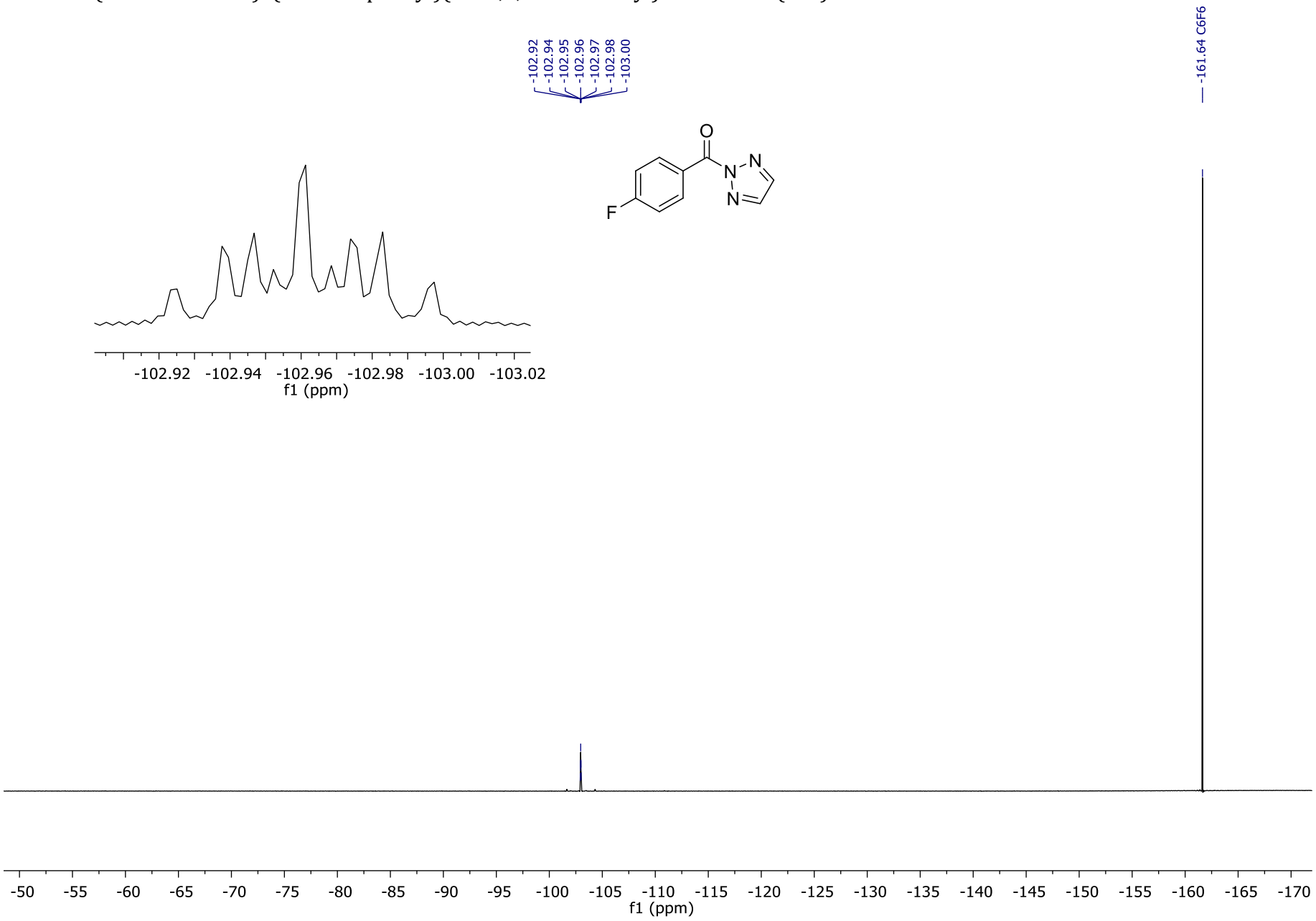




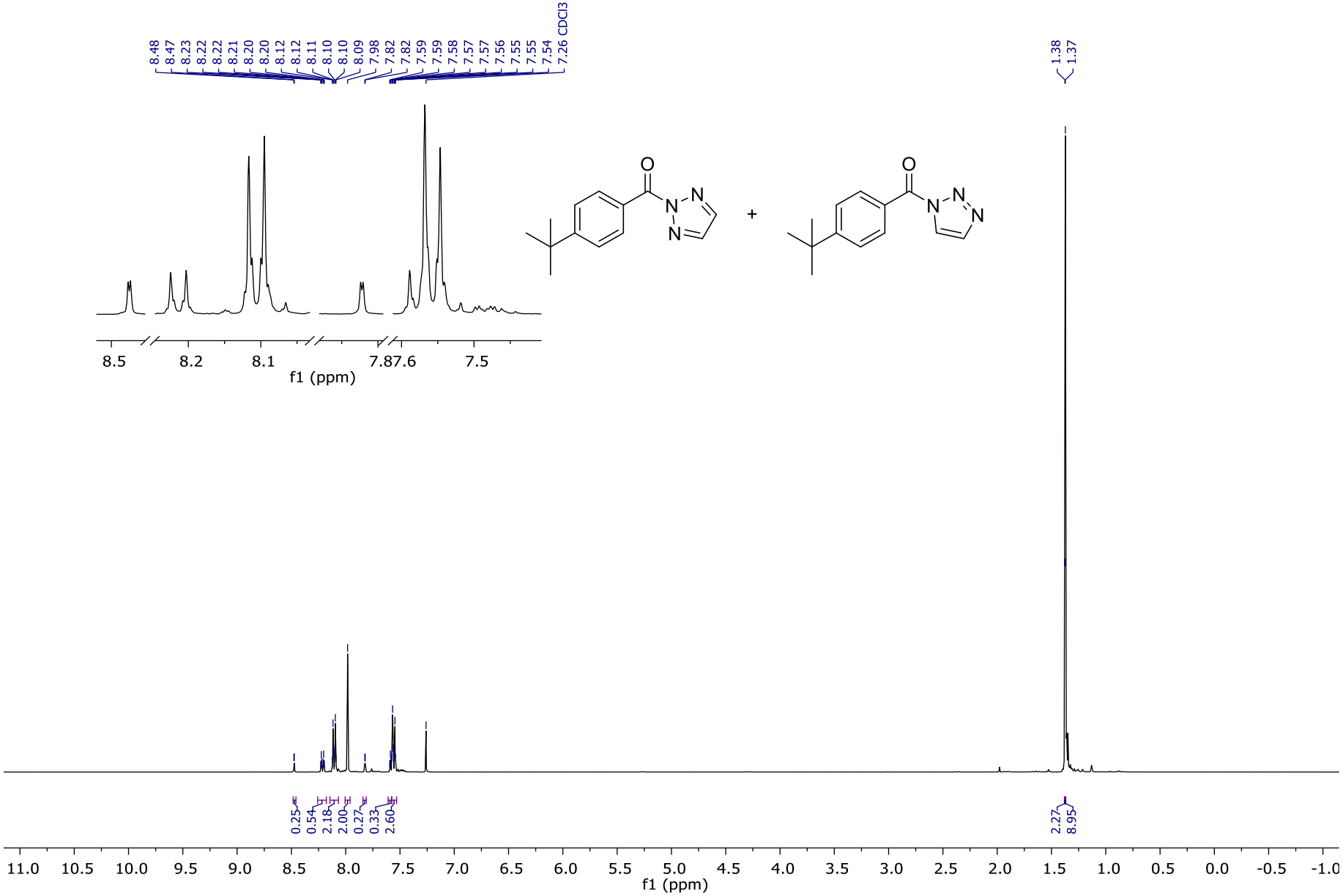
^{13}C-NMR (101 MHz $CDCl_3$): (4-Fluorophenyl)(2*H*-1,2,3-triazol-2-yl)methanone (**7a”**)



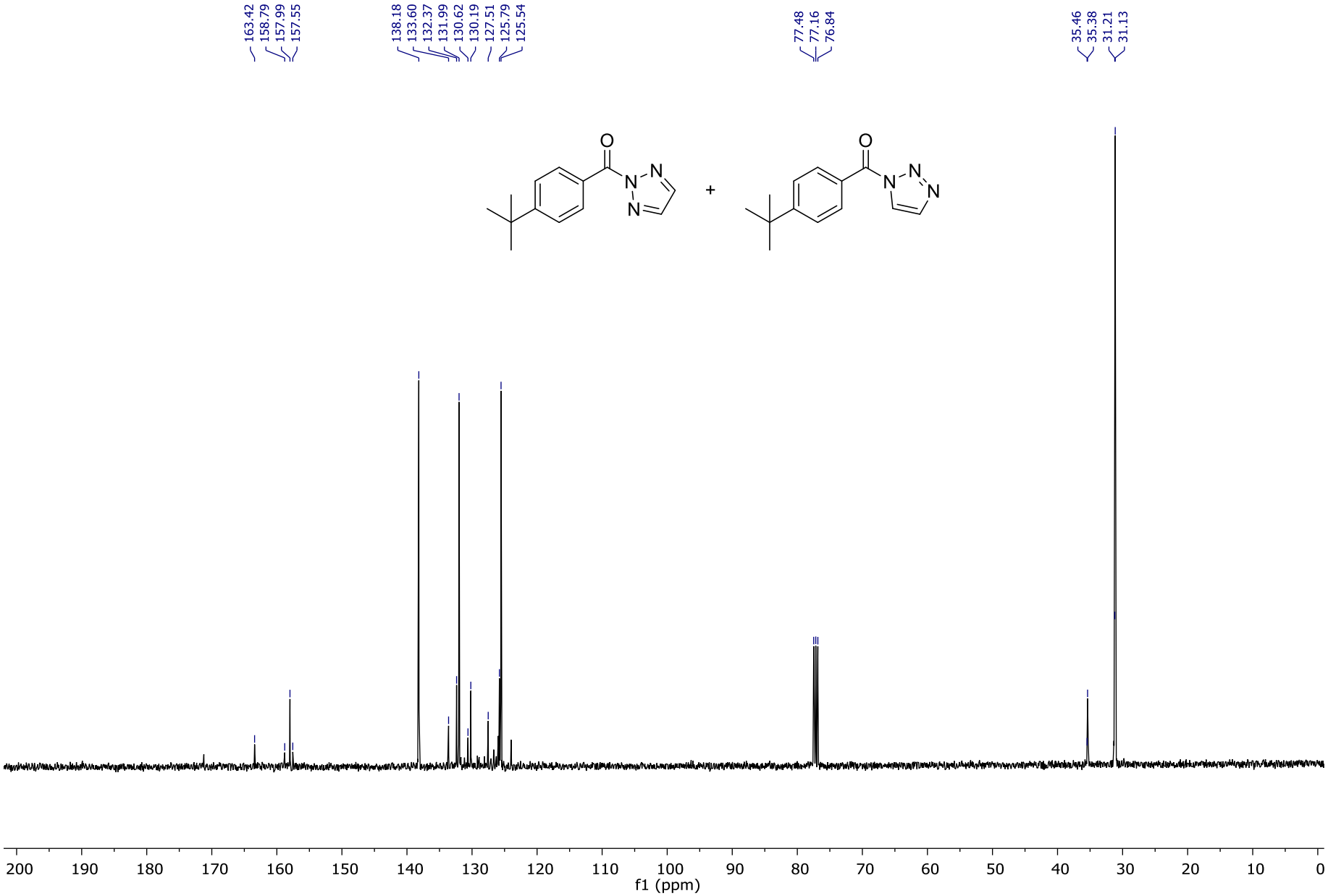
^{19}F-NMR (376 MHz $CDCl_3$): (4-Fluorophenyl)(2*H*-1,2,3-triazol-2-yl)methanone (**7a”**)



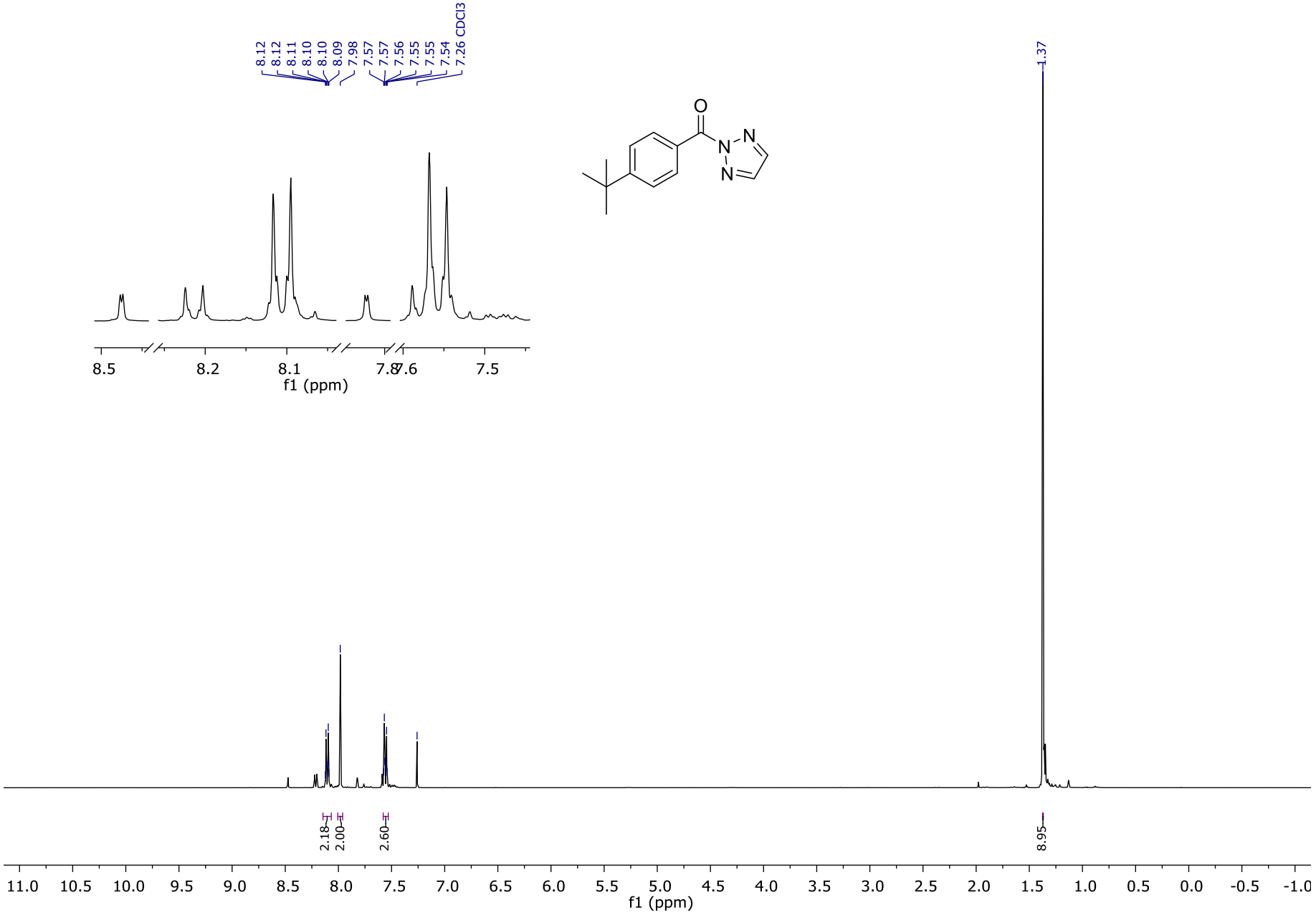
^{1}H-NMR (400 MHz $CDCl_3$): (4-(Tert-butyl)phenyl)(1*H*-1,2,3-triazol-2-yl)methanone (**7b'**) and (4-(tert-butyl)phenyl)(2*H*-1,2,3-triazol-2-yl)methanone (**7b"**)



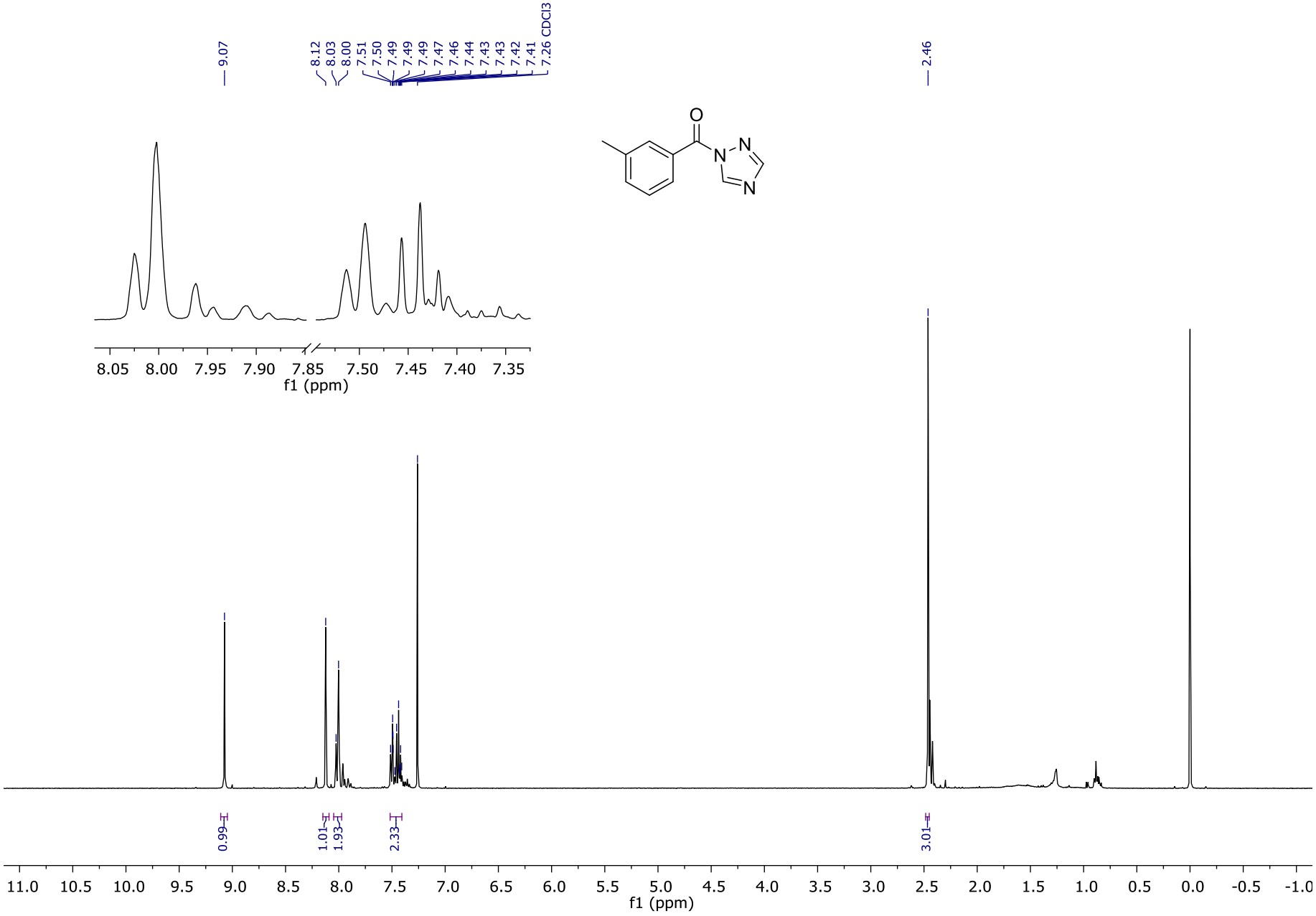
^{13}C-NMR (101 MHz $CDCl_3$): (4-(Tert-butyl)phenyl)(1*H*-1,2,3-triazol-2-yl)methanone (**7b'**) and (4-(tert-butyl)phenyl)(2*H*-1,2,3-triazol-2-yl)methanone (**7b"**)



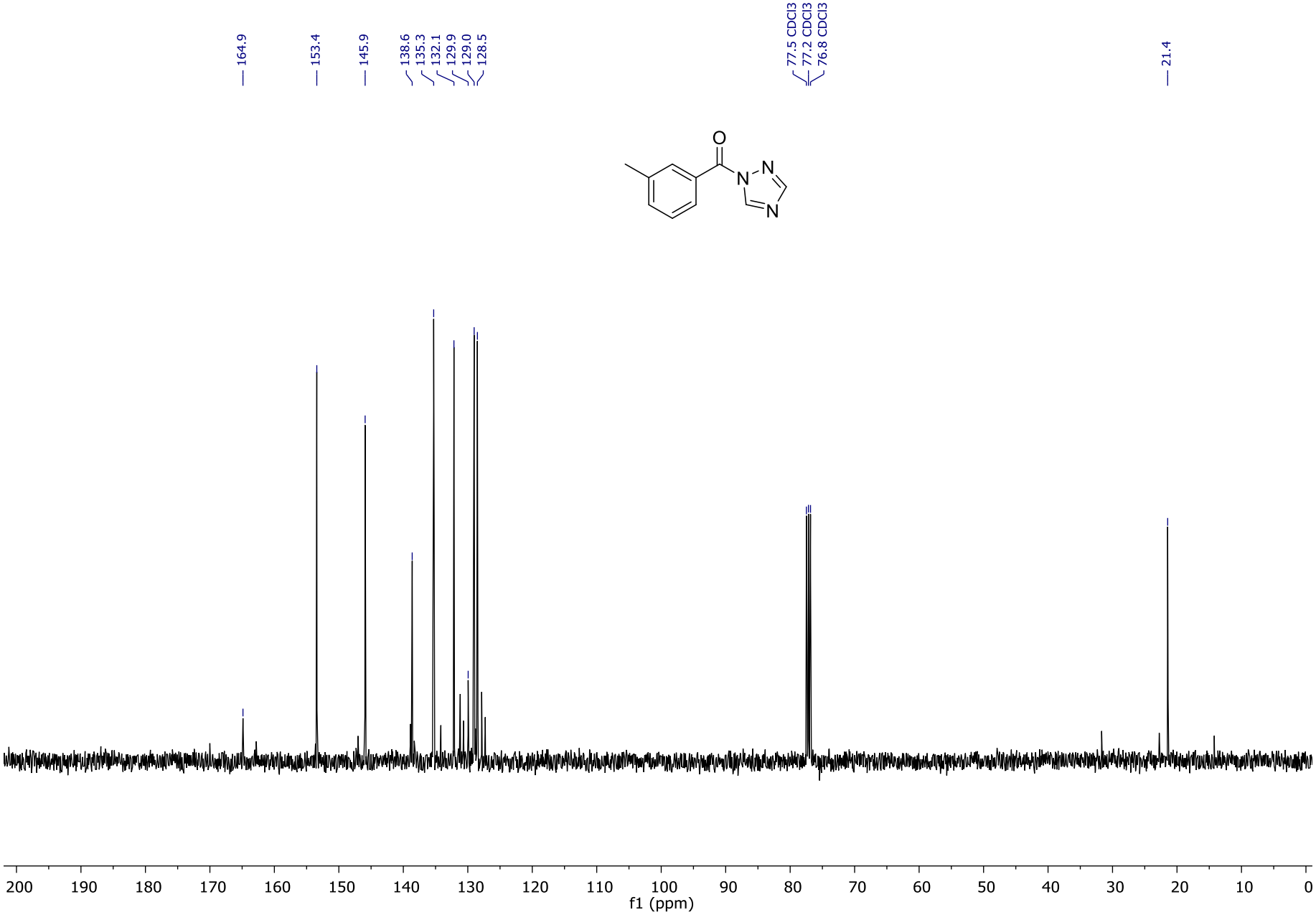
^{1}H-NMR (400 MHz $CDCl_3$): (4-(Tert-butyl)phenyl)(2*H*-1,2,3-triazol-2-yl)methanone (**7b”**)



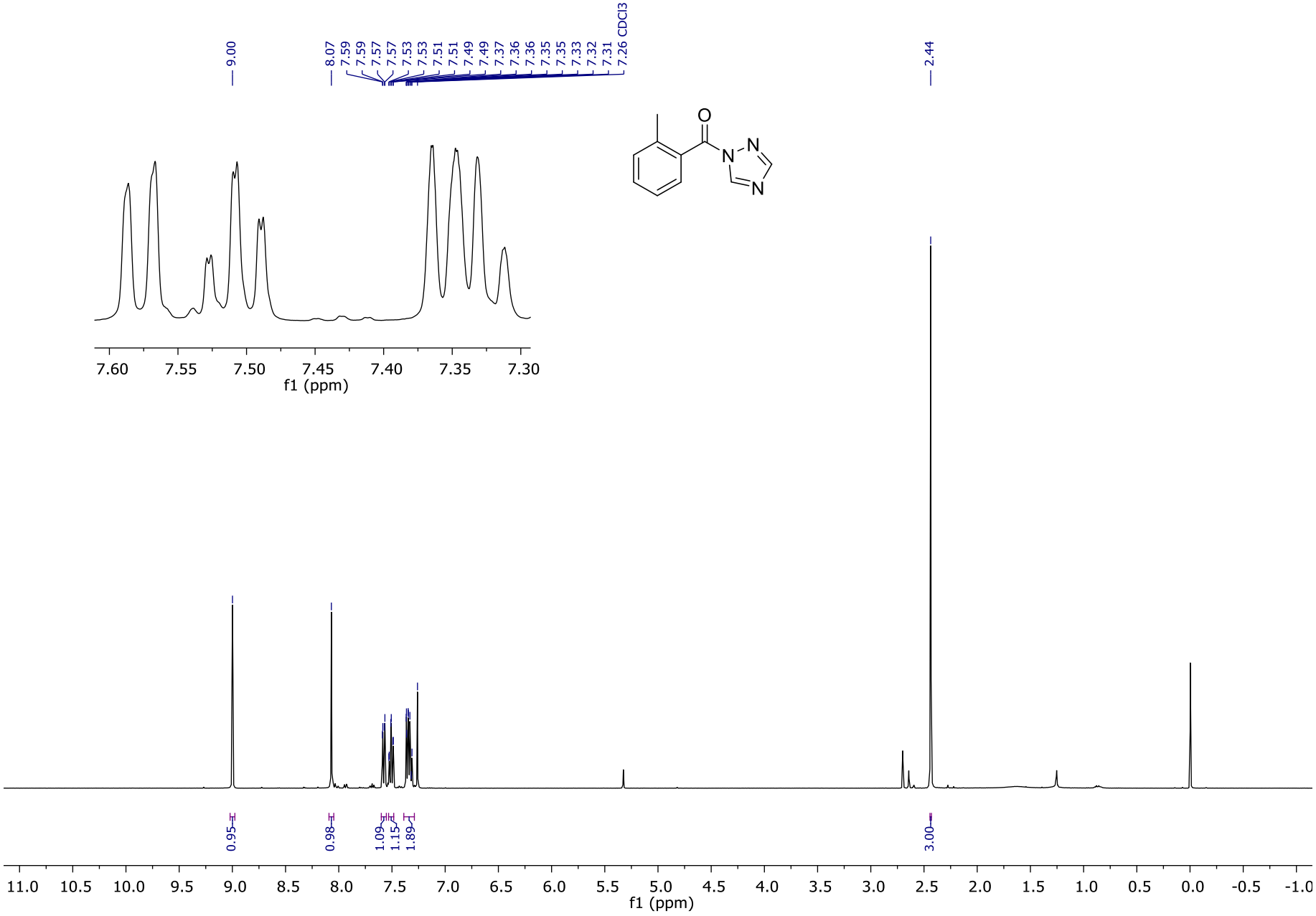
^{1}H-NMR (400 MHz $CDCl_3$): *m*-Tolyl(1*H*-1,2,4-triazol-1-yl)methanone (**7e'**)



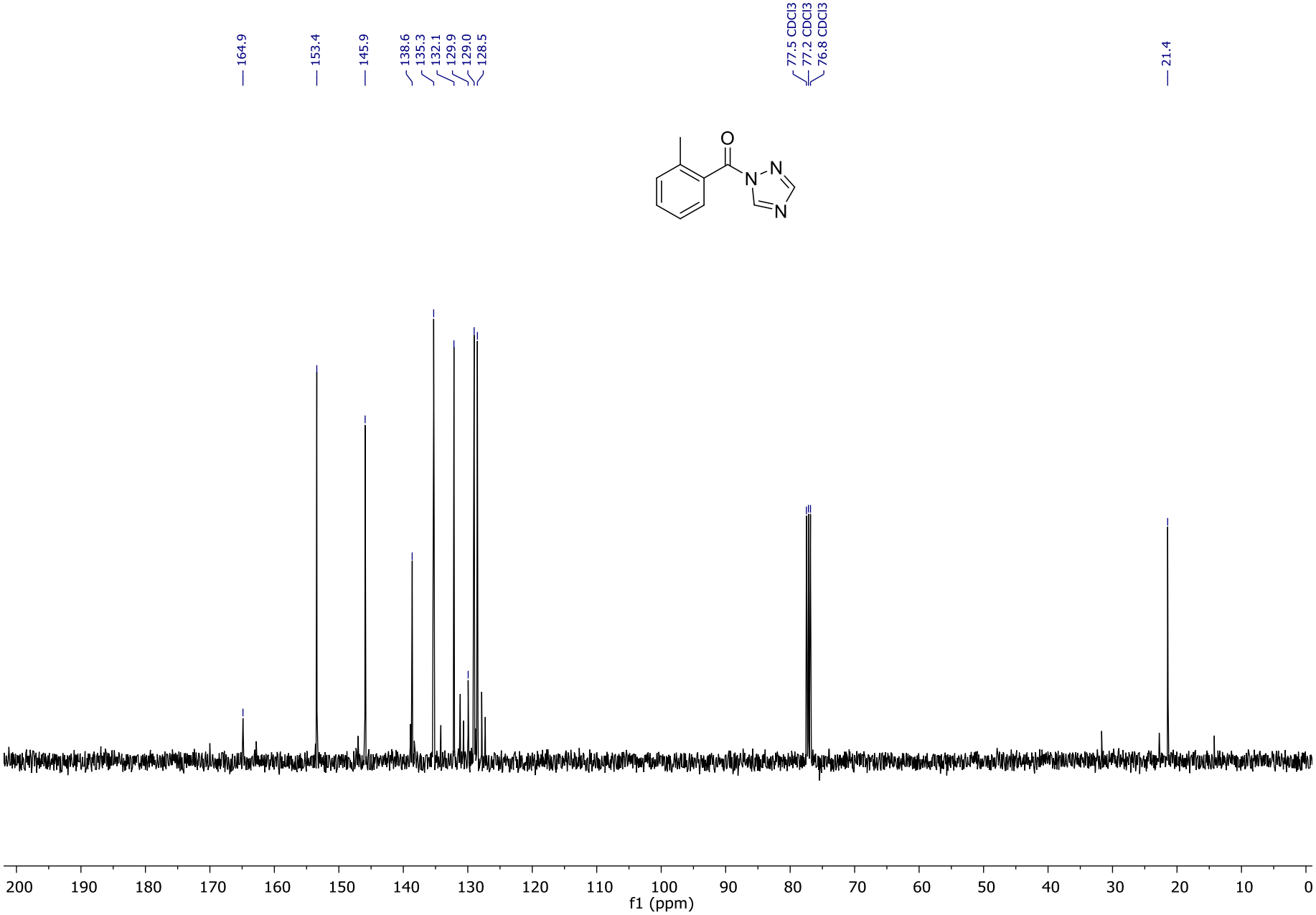
^{13}C-NMR (101 MHz $CDCl_3$): *m*-Tolyl(1*H*-1,2,4-triazol-1-yl)methanone (**7e'**)



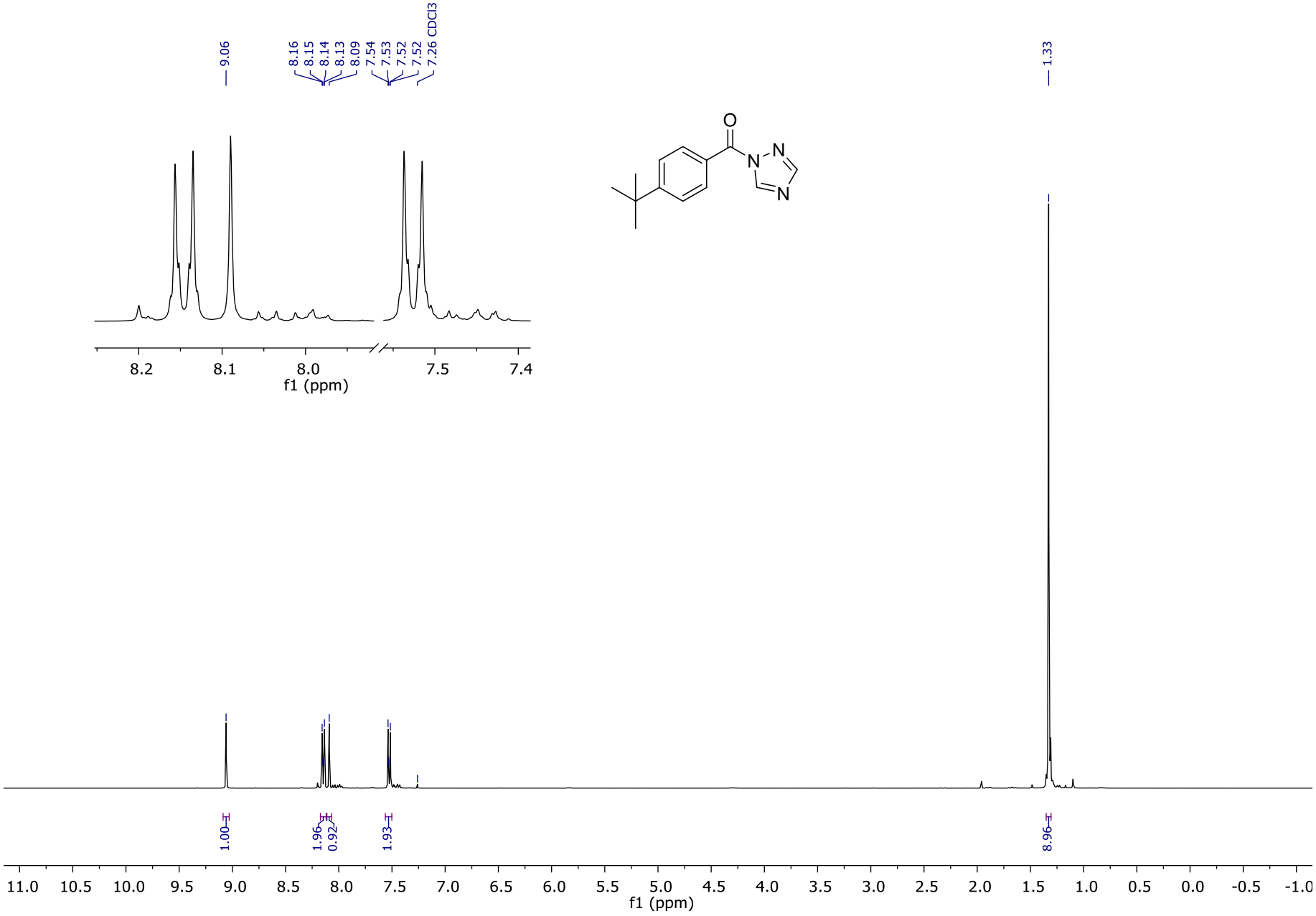
^{1}H-NMR (400 MHz $CDCl_3$): *o*-Tolyl(1*H*-1,2,4-triazol-1-yl)methanone (**7f'**)



^{13}C-NMR (101 MHz $CDCl_3$): *o*-Tolyl(1*H*-1,2,4-triazol-1-yl)methanone (**7f'**)



^{1}H-NMR (400 MHz $CDCl_3$): (4-(Tert-butyl)phenyl)(1*H*-1,2,4-triazol-2-yl)methanone (**7g'**)



^{13}C-NMR (101 MHz $CDCl_3$): (4-(Tert-butyl)phenyl)(1*H*-1,2,4-triazol-2-yl)methanone (**7g'**)