Electronic Supplementary Material (ESI) for RSC Advances.

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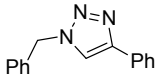
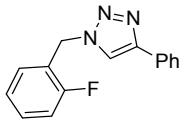
1. Analytical data

1-Benzyl-4-phenyl-1H-1,2,3-triazole, ***1****:*



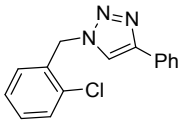
White solid; mp: 125–128 °C (lit.[S1] mp: 123–125 °C); NMR data is in agreement with the literature reference.[S1] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 5.61 (s, 2H, CH_2), 7.30–7.38 (m, 3H, Ar-H), 7.39–7.48 (m, 5H, Ar-H), 7.70 (s, 1H, Ar-H), 7.80–7.87 (d, 2H, Ar-H, *J*=7.85 Hz).

1-(2-Fluorobenzyl)-4-phenyl-1H-1,2,3-triazole, ***2****:*



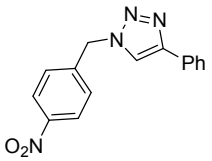
White solid; mp: 88–92 °C; NMR data is in agreement with the literature reference.[S2] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 5.67 (s, 2H, CH_2), 7.10–7.25 (m, 2H, Ar-H), 7.31–7.50 (m, 5H, Ar-H), 7.80 (s, 1H, Ar-H), 7.81–7.89 (d, 2H, Ar-H, *J*=7.65 Hz).

1-(2-Chlorobenzyl)-4-phenyl-1H-1,2,3-triazole, ***3****:*



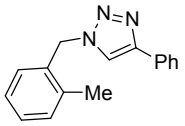
White solid; mp: 75–79 °C (lit. [S3] mp: 79–81 °C); NMR data is in agreement with the literature reference.[S3] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 5.75 (s, 2H, CH_2), 7.25–7.39 (m, 4H, Ar-H), 7.40–7.51 (m, 3H, Ar-H), 7.81 (s, 1H, Ar-H), 7.82–7.89 (d, 2H, Ar-H, *J*=7.79 Hz).

1-(4-Nitrobenzyl)-4-phenyl-1H-1,2,3-triazole, ***4****:*



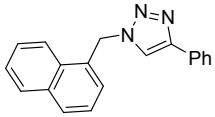
Yellowish solid; mp: 157–160 °C (lit. [S1] mp: 158–159 °C; NMR data is in agreement with the literature reference.[S1] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 5.73 (s, 2H, CH_2), 7.34–7.41 (t, 1H, Ar-H, *J*=7.98 Hz), 7.41–7.52 (m, 4H, Ar-H), 7.79 (s, 1H, Ar-H), 7.81–7.89 (d, 2H, Ar-H, *J*=7.59 Hz), 8.20–8.32 (d, 2H, Ar-H, *J*=8.35 Hz).

1-(2-Methylbenzyl)-4-phenyl-1H-1,2,3-triazole, ***5****:*



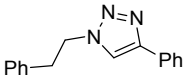
White solid; mp: 93–97 °C (lit. [S1] mp: 93–95 °C); NMR data is in agreement with the literature reference.[S1] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 2.36 (s, 3H, CH_3), 5.62 (s, 2H, CH_2), 7.24–7.31 (m, 3H, Ar-H), 7.31–7.38 (m, 2H, Ar-H), 7.39–7.46 (t, 2H, Ar-H, *J*=7.29 Hz), 7.57 (s, 1H, Ar-H), 7.79–7.86 (d, 2H, Ar-H, *J*=7.29 Hz).

1-(Naphthalen-1-ylmethyl)-4-phenyl-1H-1,2,3-triazole, ***6****:*



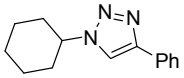
White solid; mp: 142–144 °C (lit. [S4] mp: 141–142 °C); NMR data is in agreement with the literature reference.[S4] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 5.77 (s, 2H, CH_2), 7.31–7.38 (m, 1H, Ar-H), 7.38–7.46 (m, 3H, Ar-H), 7.51–7.60 (m, 2H, Ar-H), 7.72 (s, 1H, Ar-H), 7.77–7.94 (m, 6H, Ar-H).

1-Phenethyl-4-phenyl-1H-1,2,3-triazole, ***7****:*



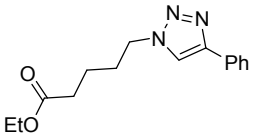
White solid; mp: 141–146 °C (lit. [S1] mp: 141–142 °C); NMR data is in agreement with the literature reference.[S1] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 3.23–3.33 (t, 2H, CH_2, *J*=7.11 Hz), 4.60–4.70 (t, 2H, CH_2, *J*=7.11 Hz), 7.12–7.20 (d, 2H, Ar-H, *J*=7.52 Hz), 7.28–7.38 (m, 4H, Ar-H), 7.39–7.48 (m, 2H, Ar-H), 7.51 (s, 1H, Ar-H), 7.76–7.85 (d, 2H, Ar-H, *J*=7.73 Hz).

1-Cyclohexyl-4-phenyl-1H-1,2,3-triazole, ***8****:*



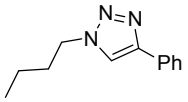
White solid; mp: 105–109 °C (lit. [S1] mp: 108–109 °C); NMR data is in agreement with the literature reference.[S1] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 1.25–1.43 (m, 1H, CH_2), 1.43–1.60 (m, 2H, CH_2), 1.75–1.91 (m, 3H, 2 CH_2), 1.92–2.05 (m, 2H, CH_2), 2.22–2.38 (m, 2H, CH_2), 4.46–4.61 (m, 1H, CH), 7.32–7.40 (m, 1H, Ar-H), 7.40–7.50 (m, 2H, Ar-H), 7.79 (s, 1H, Ar-H), 7.82–7.91 (d, 2H, Ar-H, *J*=7.15 Hz).

Ethyl 5-(4-phenyl-1H-1,2,3-triazol-1-yl)pentanoate, ***9****:*



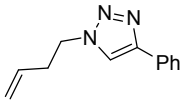
White solid; mp: 53–55 °C (lit. [S5] mp: 50–53 °C); NMR data is in agreement with the literature reference.[S5] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 1.16–1.26 (t, 3H, CH_3, J=7.18 Hz), 1.57–1.74 (m, 2H, CH_2), 1.88–2.04 (m, 2H, CH_2), 2.26–2.37 (t, 2H, CH_2, J=7.43 Hz), 4.05–4.14 (q, 2H, CH_2, J=7.08 Hz), 4.32–4.41 (t, 2H, CH_2, J=7.32 Hz), 7.28–7.34 (m, 1H, Ar-H), 7.35–7.43 (m, 2H, Ar-H), 7.74–7.85 (m, 3H, Ar-H).

1-Butyl-4-phenyl-1H-1,2,3-triazole, ***10****:*



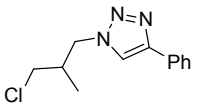
White solid; mp: 47–50 °C (lit. [S6] mp: 46–47 °C); NMR data is in agreement with the literature reference.[S6] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 0.93–1.55 (t, 3H, CH_3, J=7.36 Hz), 1.36–1.49 (m, 2H, CH_2), 1.90–2.02 (m, 2H, CH_2), 4.38–4.45 (t, 2H, CH_2, J=7.33 Hz), 7.31–7.39 (m, 1H, Ar-H), 7.41–7.49 (m, 2H, Ar-H), 7.78 (s, 1H, Ar-H), 7.82–7.90 (d, 2H, Ar-H, J=7.51 Hz).

1-(But-3-en-1-yl)-4-phenyl-1H-1,2,3-triazole, ***11****:*



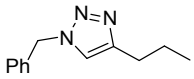
Brownish solid, mp: 42–44 °C; NMR data is in agreement with the literature reference.[S7] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 2.67–2.78 (m, 2H, CH_2), 4.45–4.54 (t, 2H, CH_2, J=7.19 Hz), 5.08–5.20 (d, 2H, CH_2, J=13.10 Hz), 5.75–5.90 (m, 1H, CH), 7.32–7.40 (m, 1H, Ar-H), 7.41–7.49 (m, 2H, Ar-H), 7.78 (s, 1H, Ar-H), 7.81–7.89 (d, 2H, Ar-H, J=7.42 Hz).

1-(3-Chloro-2-methylpropyl)-4-phenyl-1H-1,2,3-triazole, ***12****:*



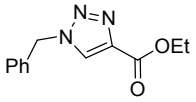
White solid; mp: 50–53 °C (lit. [S5] mp: 50–51 °C); NMR data is in agreement with the literature reference.[S5] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 1.08–1.15 (d, 3H, CH_3, J=6.96 Hz), 2.51–2.65 (m, 1H, CH),), 3.41–3.52 (d, 2H, CH_2, J=5.43 Hz), 4.30–4.53 (m, 2H, CH_2), 7.31–7.39 (m, 1H, Ar-H), 7.39–7.48 (m, 2H, Ar-H), 7.79–7.90 (m, 3H, Ar-H).

1-Benzyl-4-propyl-1H-1,2,3-triazole, ***13****:*



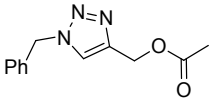
Brownish oil; NMR data is in agreement with the literature reference.[S8] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 0.94–1.02 (t, 3H, CH_3, J=7.29 Hz), 1.63–1.77 (m, 2H, CH_2), 2.64–2.75 (t, 2H, CH_2, J=7.48 Hz), 5.54 (s, 2H, CH_2), 7.24–7.31 (m, 2H, Ar-H), 7.33–7.45 (m, 4H, Ar-H).

Ethyl 1-benzyl-1H-1,2,3-triazole-4-carboxylate, ***14****:*



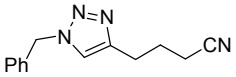
Yellowish solid; mp: 83–85 °C (lit. [S1] mp: 82–83 °C); NMR data is in agreement with the literature reference.[S1] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 1.32–1.45 (t, 3H, CH_3, J=7.22 Hz), 4.33–4.47 (q, 2H, CH_2, J=7.09 Hz), 5.59 (s, 2H, CH_2), 7.23–7.34 (m, 2H, Ar-H), 7.34–7.47 (m, 3H, Ar-H), 8.01 (s, 1H, Ar-H).

(1-Benzyl-1H-1,2,3-triazol-4-yl)methyl acetate, ***15****:*



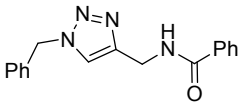
Yellowish solid; mp: 53–55 °C (lit. [S5] mp: 55–56 °C); NMR data is in agreement with the literature reference.[S5]] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 2.06 (s, 3H, CH_3), 5.19 (s, 2H, CH_2), 5.52 (s, 2H, CH_2), 7.25–7.32 (m, 2H, Ar-H), 7.34–7.42 (m, 3H, Ar-H), 7.56 (s, 1H, Ar-H).

4-(1-Benzyl-1H-1,2,3-triazol-4-yl)butanenitrile, ***16****:*



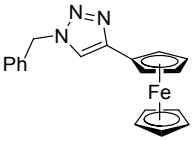
White solid; mp: 65–69 °C (lit. [S5] mp: 64–66 °C); NMR data is in agreement with the literature reference.[S5] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 2.03–2.15 (m, 2H, CH_2), 2.40–2.48 (t, 2H, CH_2, J=7.06 Hz), 2.82–2.92 (t, 2H, CH_2, J=7.30 Hz), 5.56 (s, 2H, CH_2), 7.25–7.34 (m, 3H, Ar-H), 7.36–7.44 (m, 3H, Ar-H).

N-((1-benzyl-1H-1,2,3-triazol-4-yl)methyl)benzamide, ***17****:*



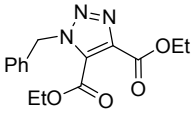
White solid; mp: 126–128 °C; NMR data is in agreement with the literature reference.[S9] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 4.67–4.76 (d, 2H, CH_2, J=5.60 Hz), 5.54 (s, 2H, CH_2), 6.88 (m, 1H, NH), 7.29–7.34 (m, 2H, Ar-H), 7.36–7.48 (m, 5H, Ar-H), 7.49–7.57 (m, 2H, Ar-H), 7.76–7.83 (m, 2H, Ar-H).

1-Benzyl-4-ferrocenyl-1H-1,2,3-triazole, ***18****:*



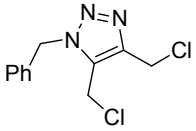
Golden yellow solid; mp: 145–149 °C (lit. [S10] mp: 145–147 °C); NMR data is in agreement with the literature reference.[S10] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 4.09 (s, 5H, Ar-H), 4.29–4.33 (m, 2H, Ar-H), 4.70–4.75 (m, 2H, Ar-H), 5.59 (s, 2H, CH_2), 7.30–7.34 (m, 2H, Ar-H), 7.37–7.46 (m, 4H, Ar-H).

Diethyl 1-benzyl-1H-1,2,3-triazole-4,5-dicarboxylate, ***19****:*



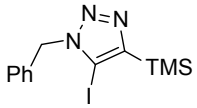
Colorless oil; NMR data is in agreement with the literature reference.[S11] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 1.28–1.34 (t, 3H, CH_3, J=7.13 Hz), 1.40–1.46 (t, 3H, CH_3, J=7.13 Hz), 4.32–4.39 (q, 2H, CH_2, J=7.19 Hz), 4.42–4.49 (q, 2H, CH_2, J=7.19 Hz), 5.83 (s, 2H, CH_2), 7.28–7.32 (m, 3H, Ar-H), 7.34–7.39 (m, 2H, Ar-H).

1-Benzyl-4,5-bis(chloromethyl)-1H-1,2,3-triazole, ***20****:*



Yellowish oil; ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 4.53 (s, 2H, CH_2), 4.75 (s, 2H, CH_2), 5.67 (s, 2H, CH_2), 7.25–7.32 (m, 2H, Ar-H), 7.35–7.45 (m, 3H, Ar-H); ^{13}C NMR (100.6 MHz, $CDCl_3$) δ_C: 31.5, 35.7, 53.3, 127.9, 129.3, 129.7, 131.6, 134.2, 143.8; elemental analysis calcd (%) for $C_{11}H_{11}Cl_2N_3$: C 51.58, H 4.33, N 16.41; found: C 51.67; H 4.31, N 16.34.

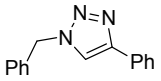
1-Benzyl-5-iodo-4-(trimethylsilyl)-1H-1,2,3-triazole, ***21****:*

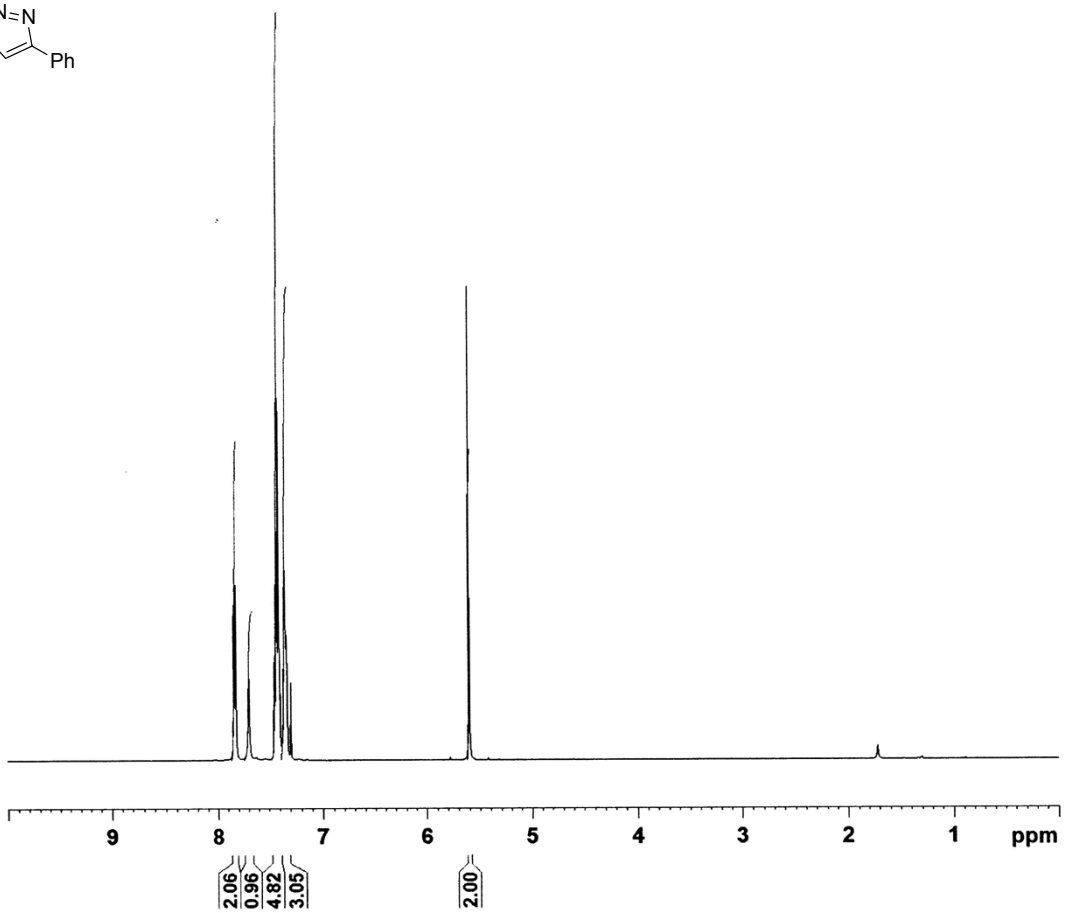


White solid; mp: 90–93 °C (lit. [S12] mp: 94–96 °C); NMR data is in agreement with the literature reference.[S12] ^{1}H NMR (400.1 MHz, $CDCl_3$) δ_H: 0.46 (s, 9H, TMS), 5.66 (s, 2H, CH_2), 7.30–7.41 (m, 5H, Ar-H).

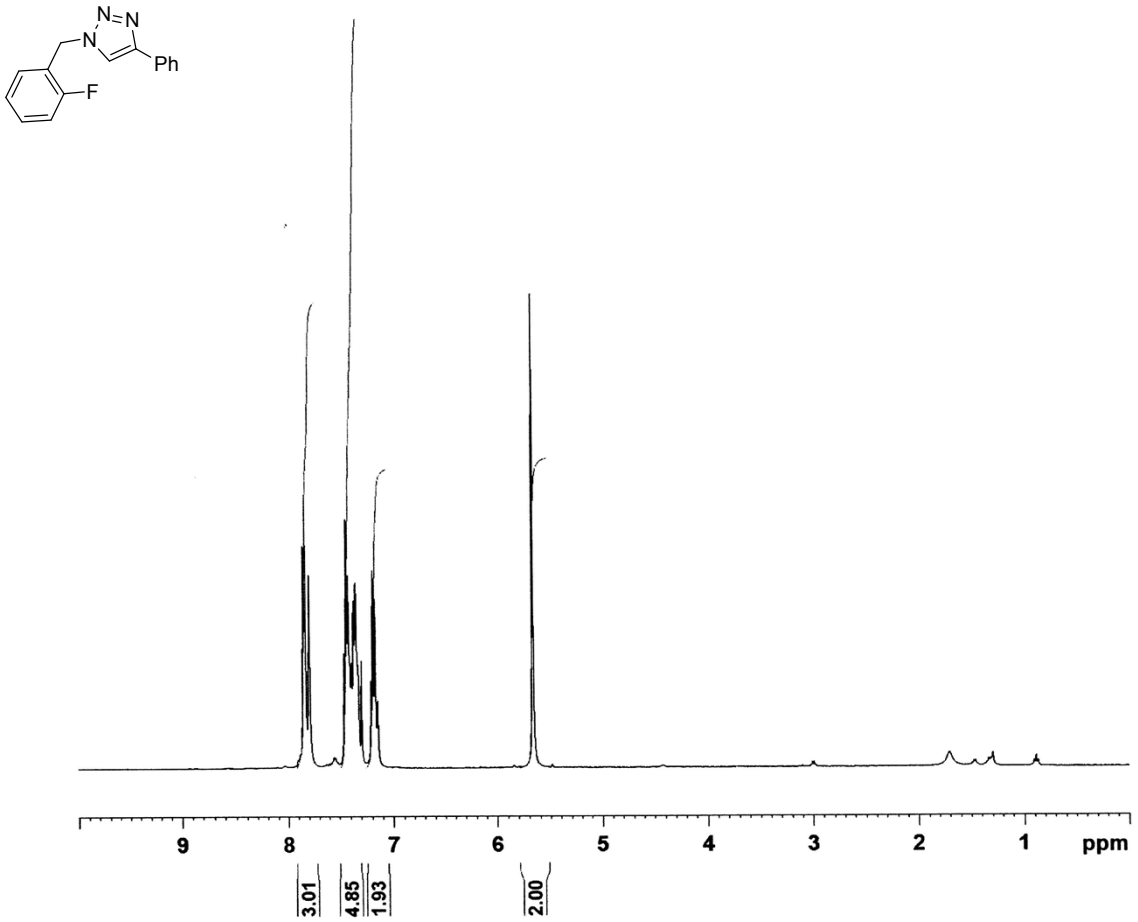
2. Collection of NMR spectra

1-Benzyl-4-phenyl-1H-1,2,3-triazole, ***1****, ^{1}H NMR in $CDCl_3$:*

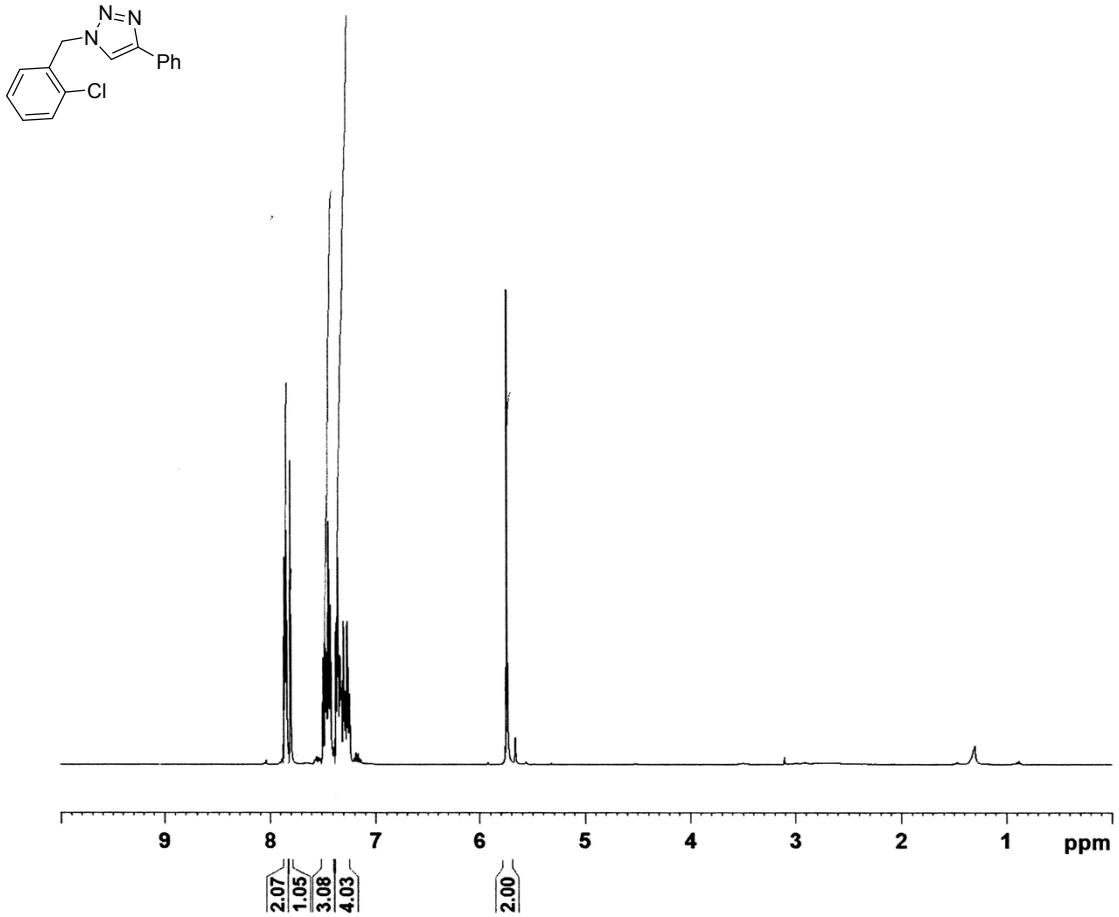




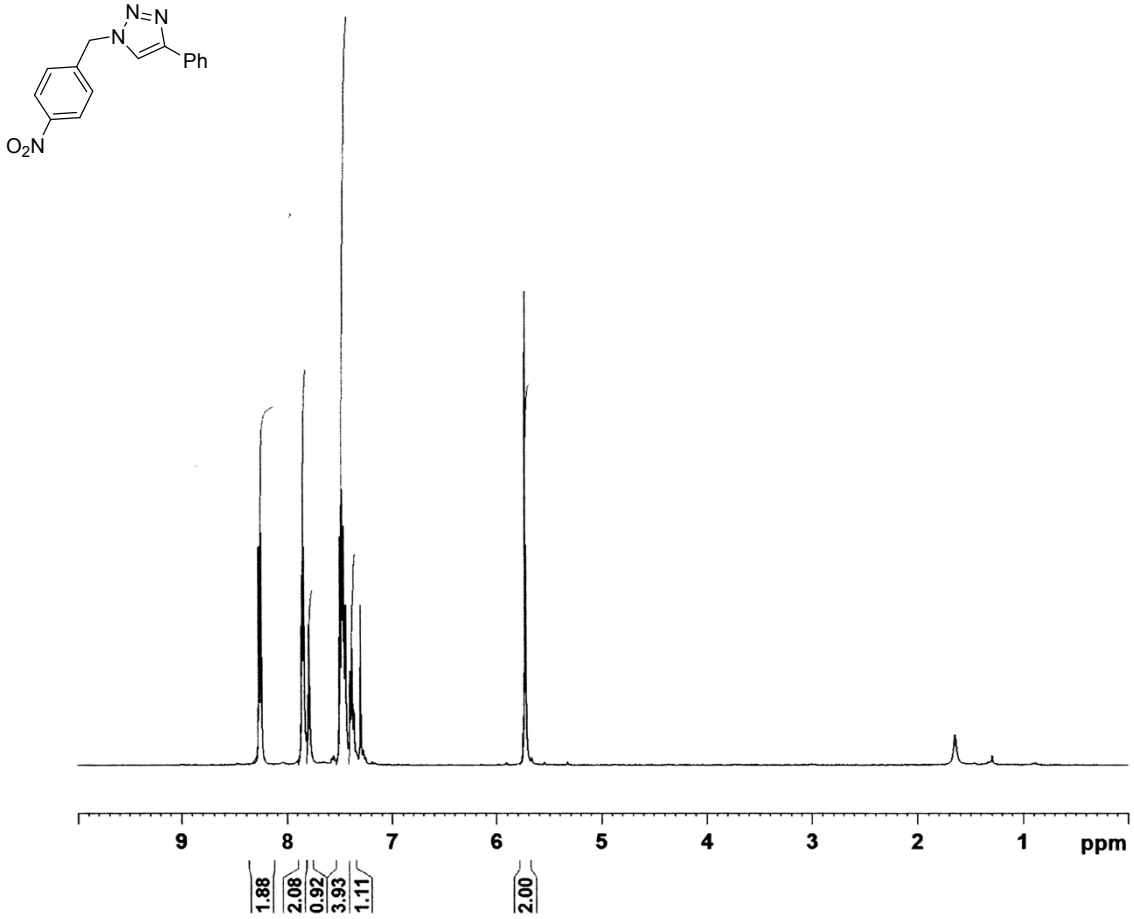
1-(2-Fluorobenzyl)-4-phenyl-1H-1,2,3-triazole, ***2****, [1]H* NMR in $CDCl_3$:



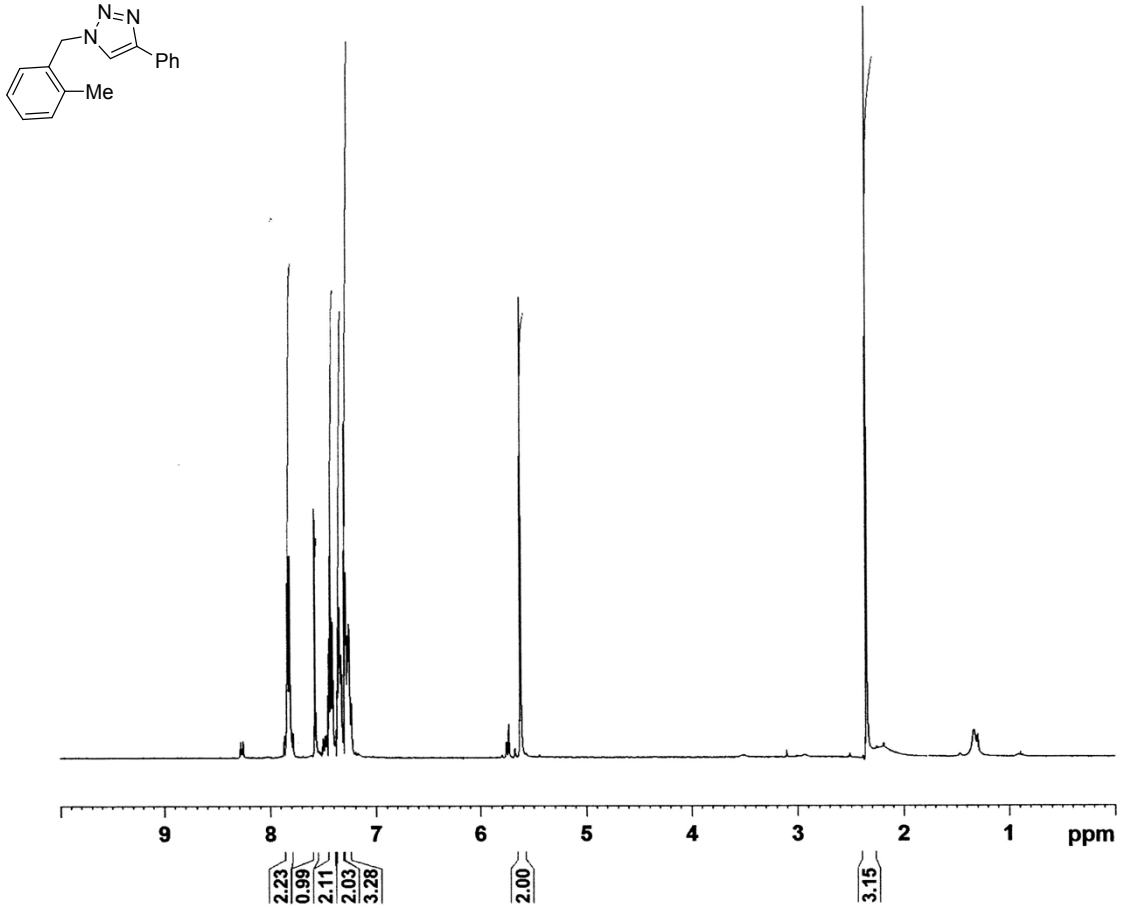
1-(2-Chlorobenzyl)-4-phenyl-1H-1,2,3-triazole, ***3***, ^{1}H NMR in $CDCl_3$:



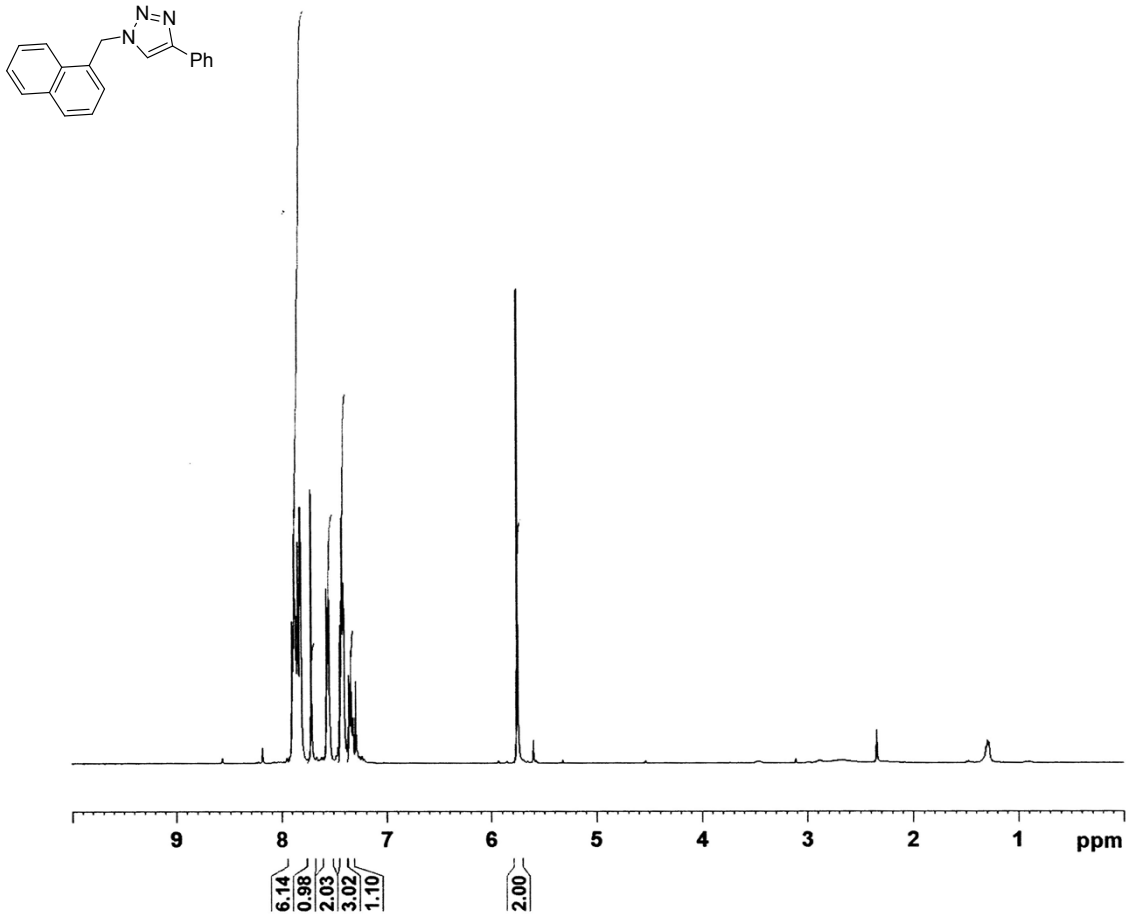
1-(4-Nitrobenzyl)-4-phenyl-1H-1,2,3-triazole, ***4****, ^{1}H NMR in $CDCl_3$:*



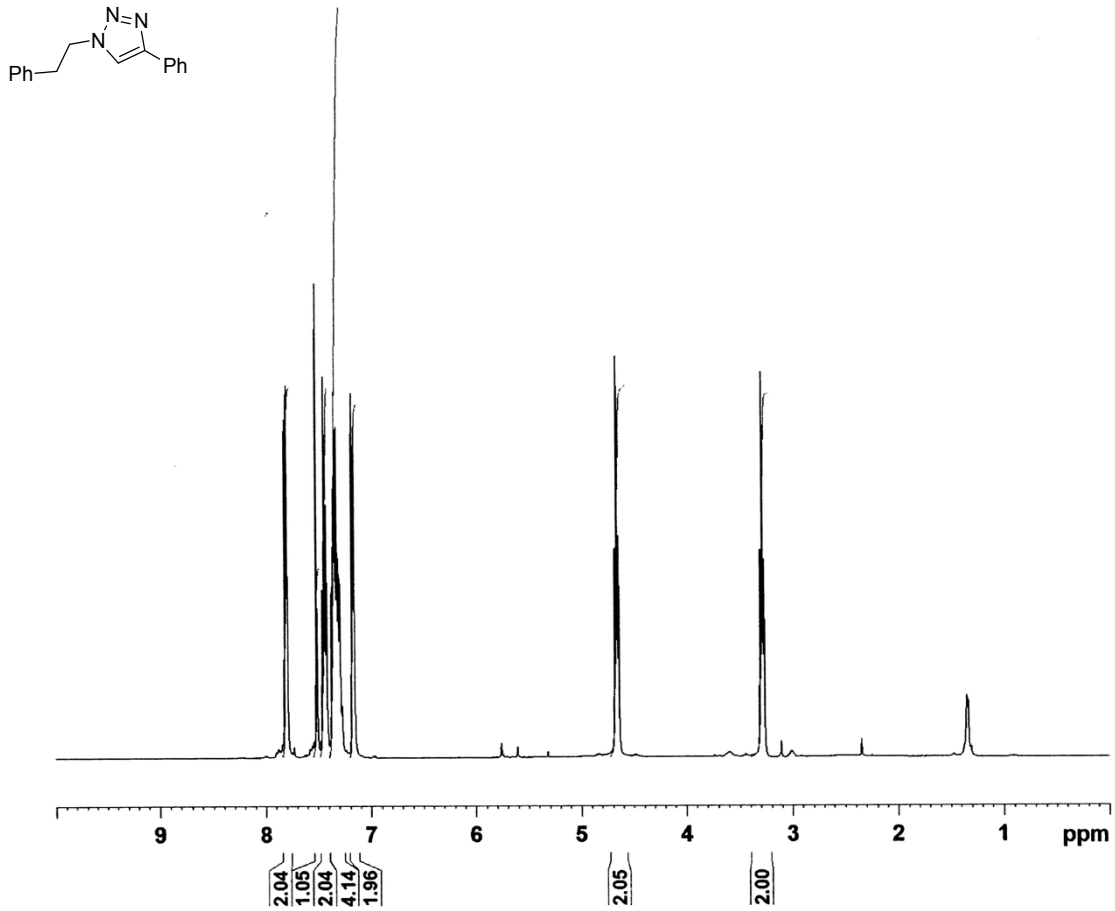
1-(2-Methylbenzyl)-4-phenyl-1H-1,2,3-triazole, ***5****, ^{1}H NMR in $CDCl_3$:*



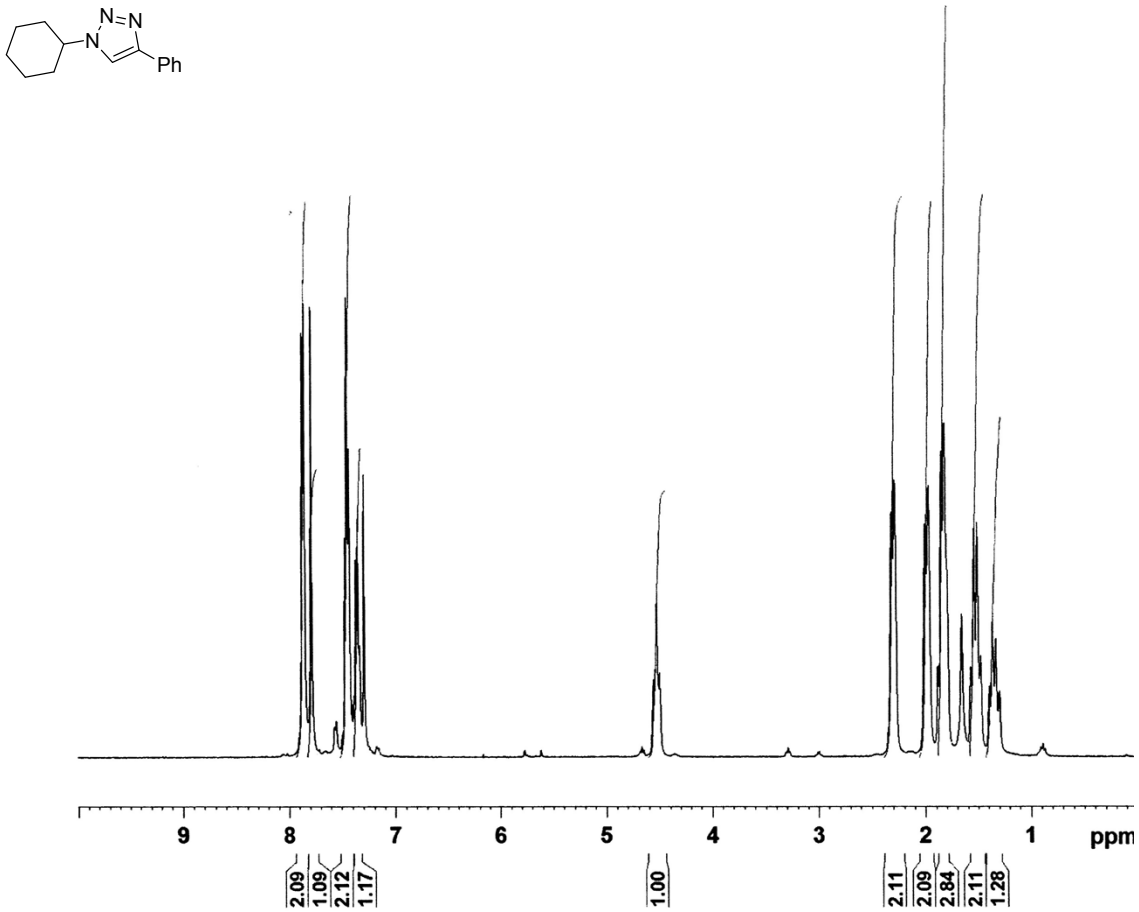
1-(Naphthalen-1-ylmethyl)-4-phenyl-1H-1,2,3-triazole, ***6****, ^{1}H NMR in $CDCl_3$:*



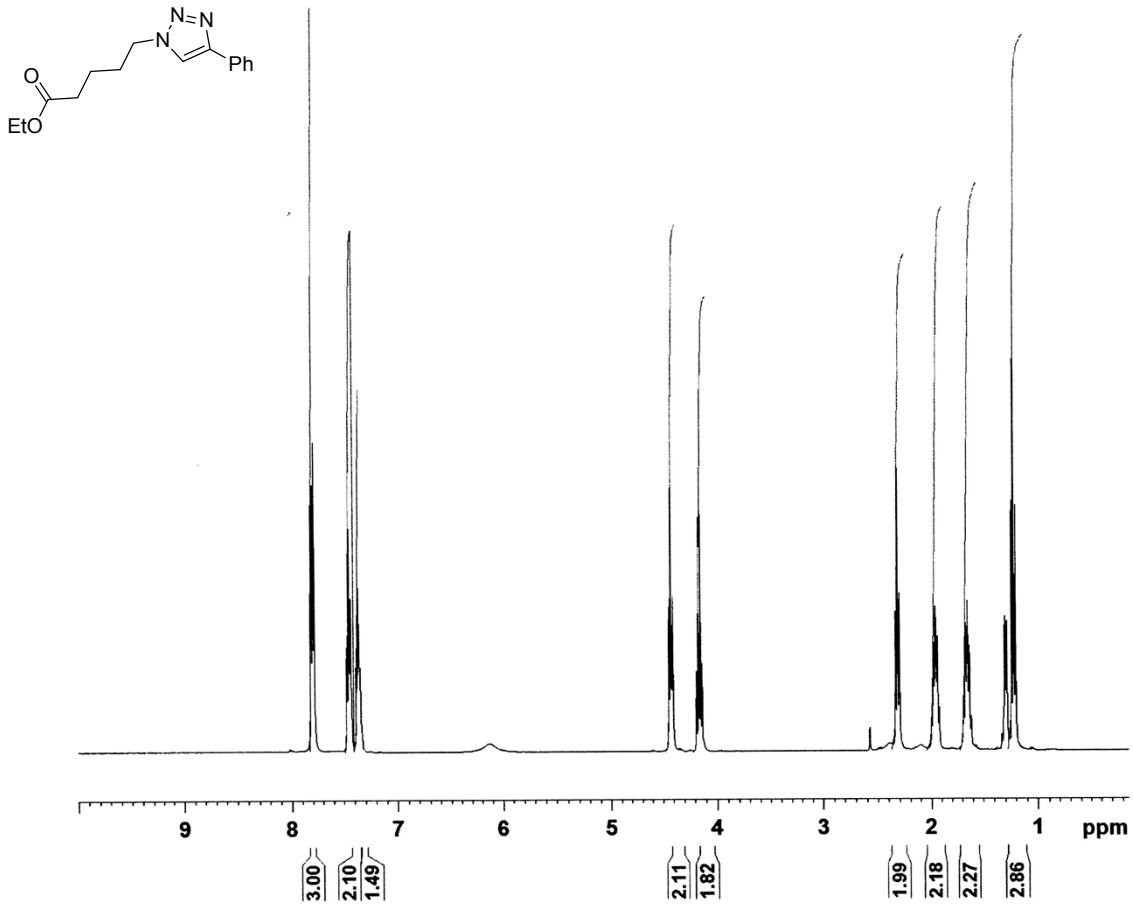
1-Phenethyl-4-phenyl-1H-1,2,3-triazole, ***7****, ^{1}H NMR in $CDCl_3$:*



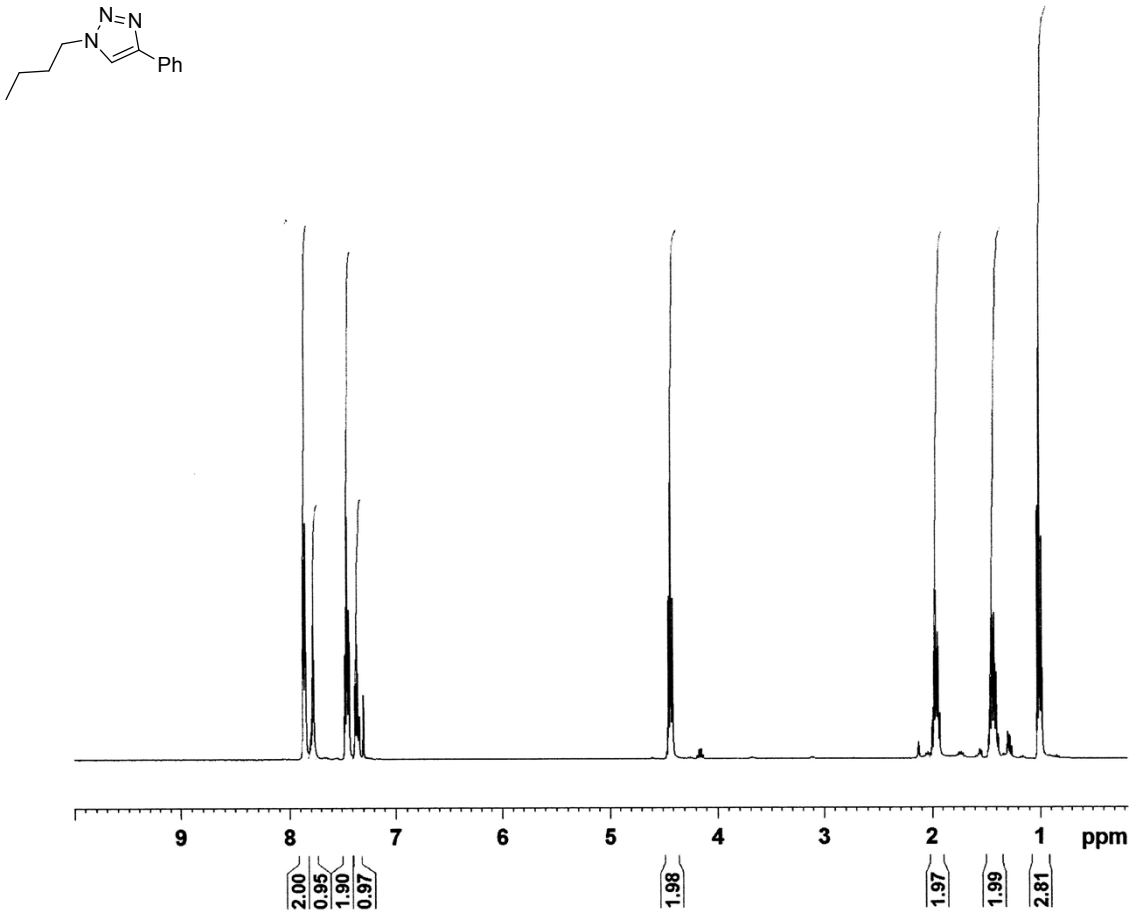
1-Cyclohexyl-4-phenyl-1H-1,2,3-triazole, ***8****, ^{1}H NMR in $CDCl_3$:*



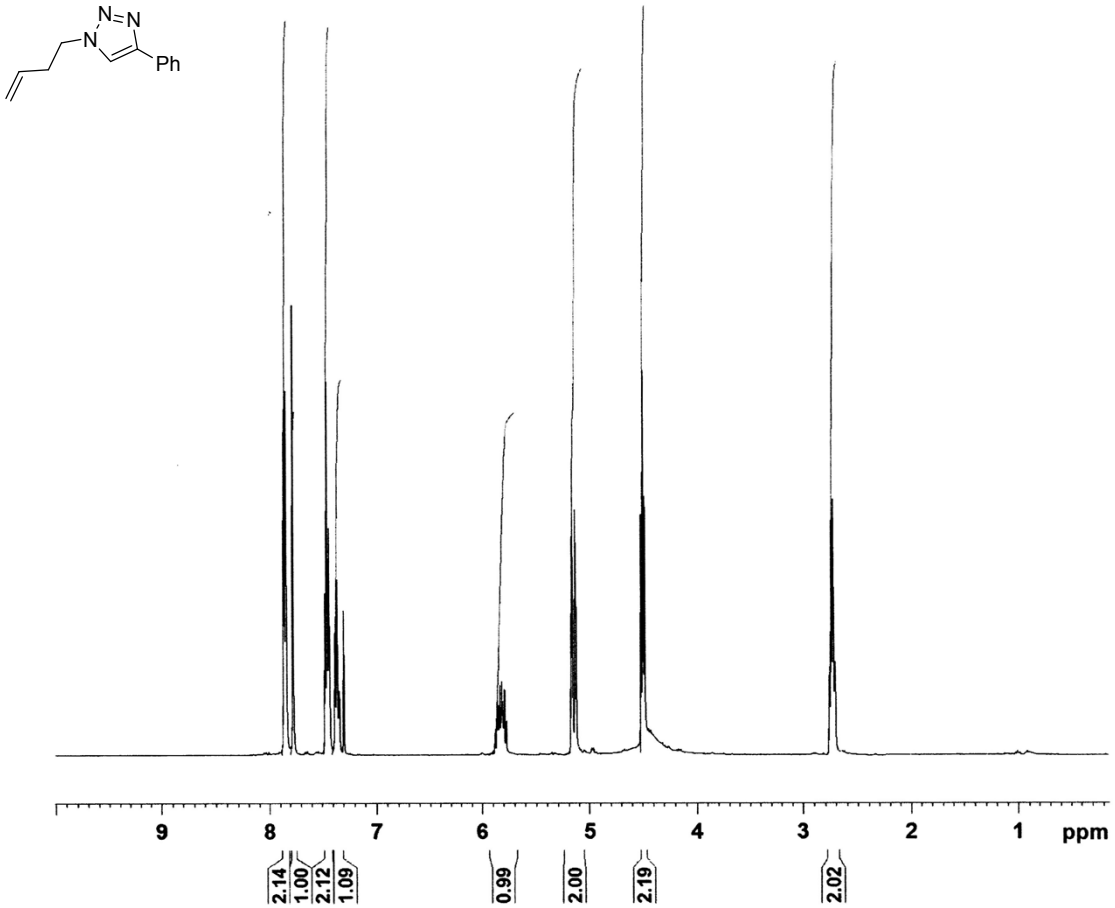
Ethyl 5-(4-phenyl-1H-1,2,3-triazol-1-yl)pentanoate, ***9****, ^{1}H NMR in $CDCl_3$:*



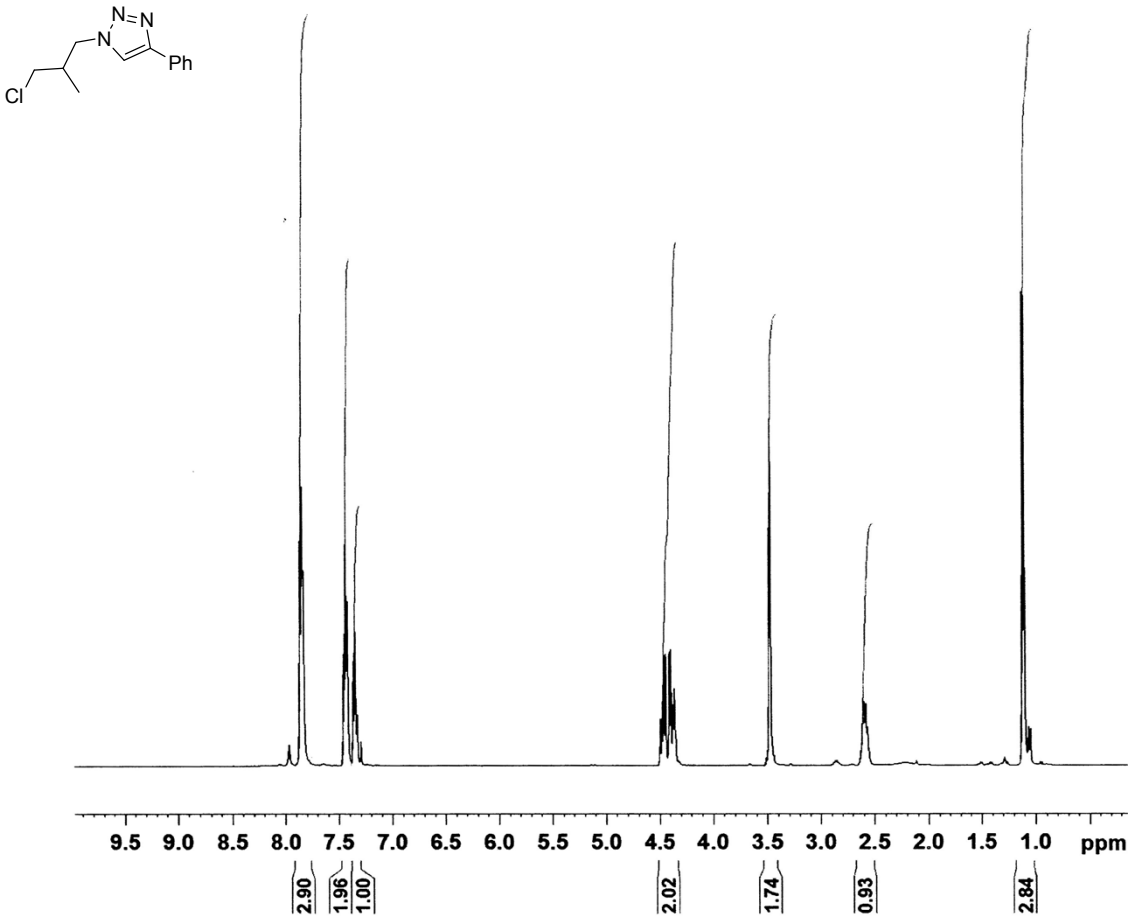
1-Butyl-4-phenyl-1H-1,2,3-triazole, ***10****, ^{1}H NMR in $CDCl_3$:*



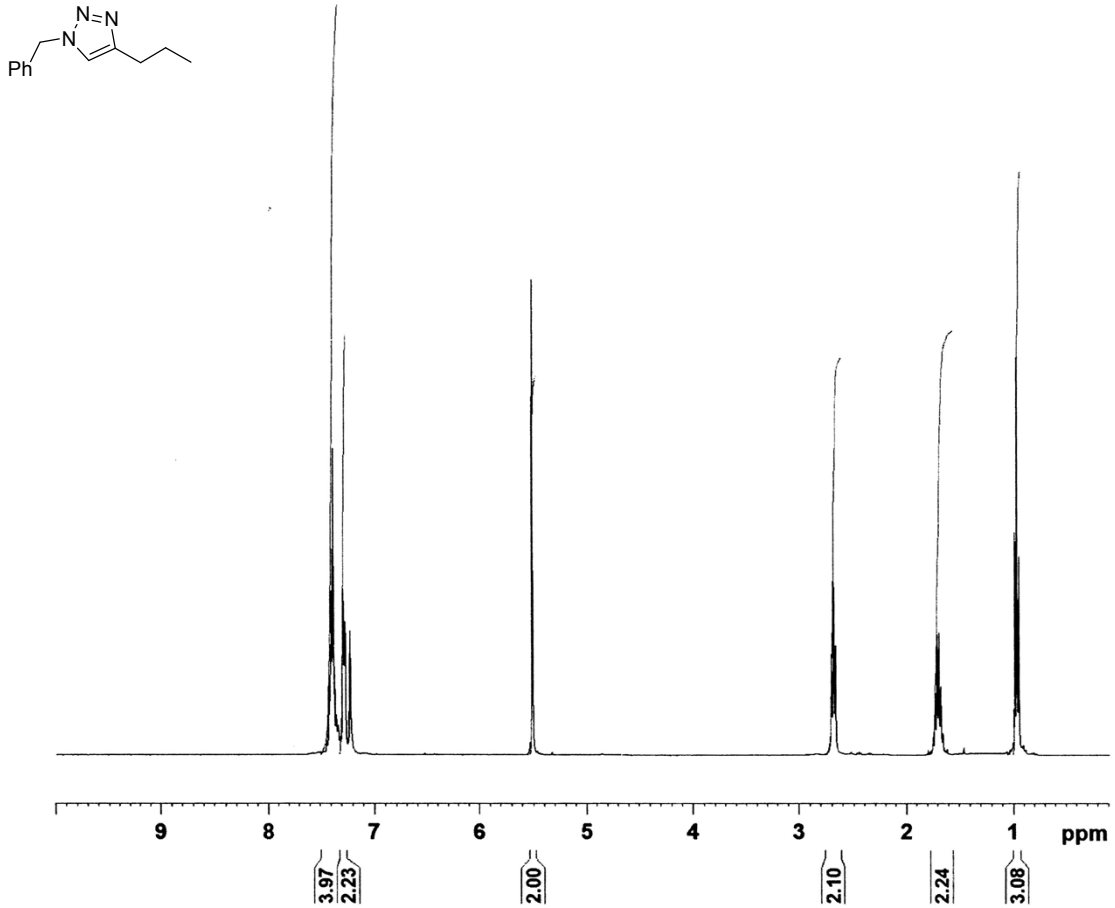
1-(But-3-en-1-yl)-4-phenyl-1H-1,2,3-triazole, ***11****, ^{1}H NMR in $CDCl_3$:*



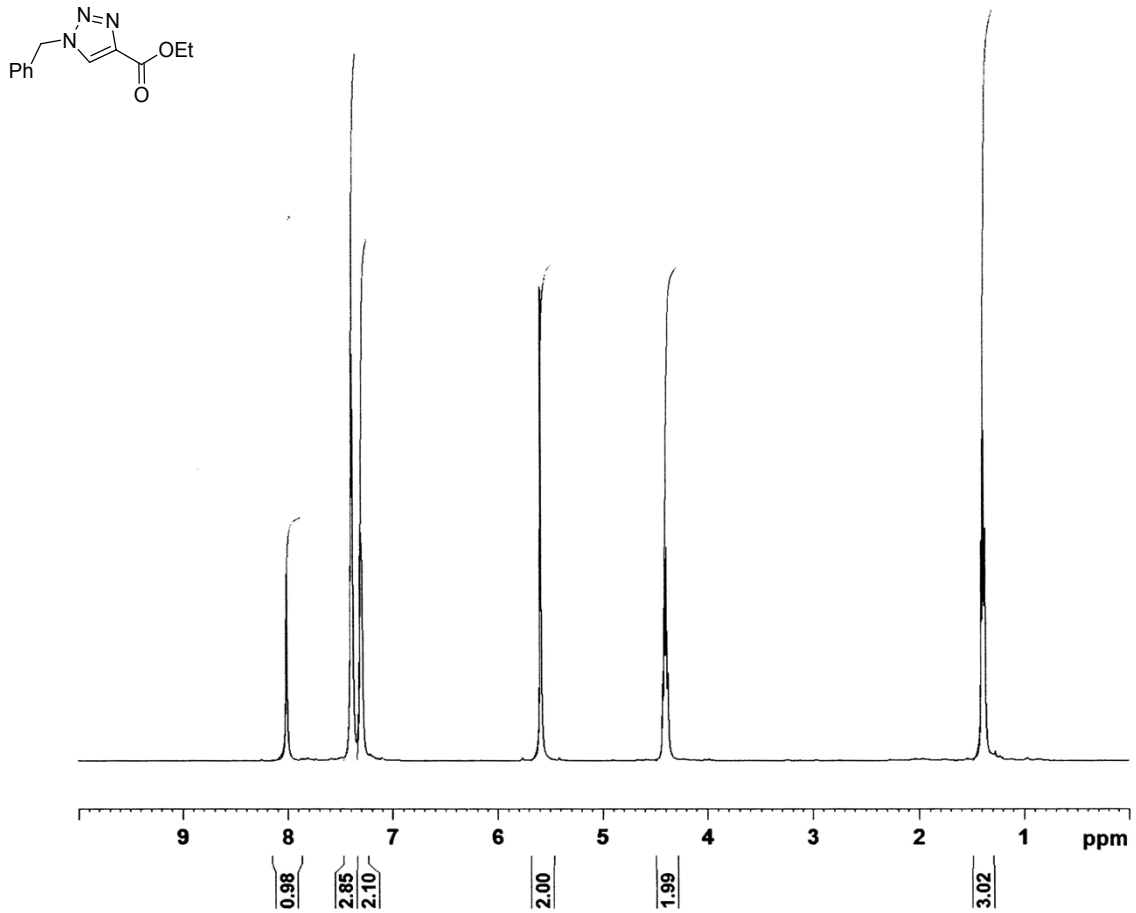
1-(3-Chloro-2-methylpropyl)-4-phenyl-1H-1,2,3-triazole, ***12****, ^{1}H NMR in $CDCl_3$:*



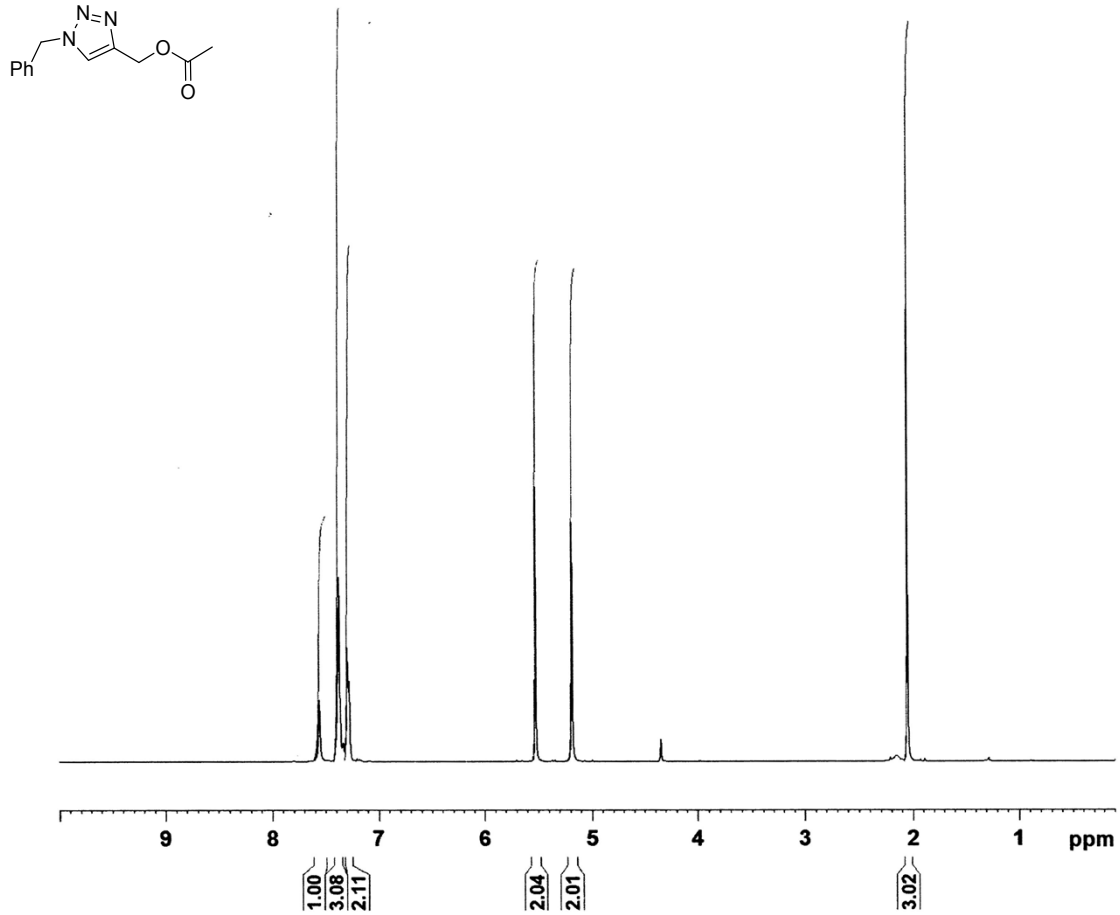
1-Benzyl-4-propyl-1H-1,2,3-triazole, ***13****, ^{1}H NMR in $CDCl_3$:*



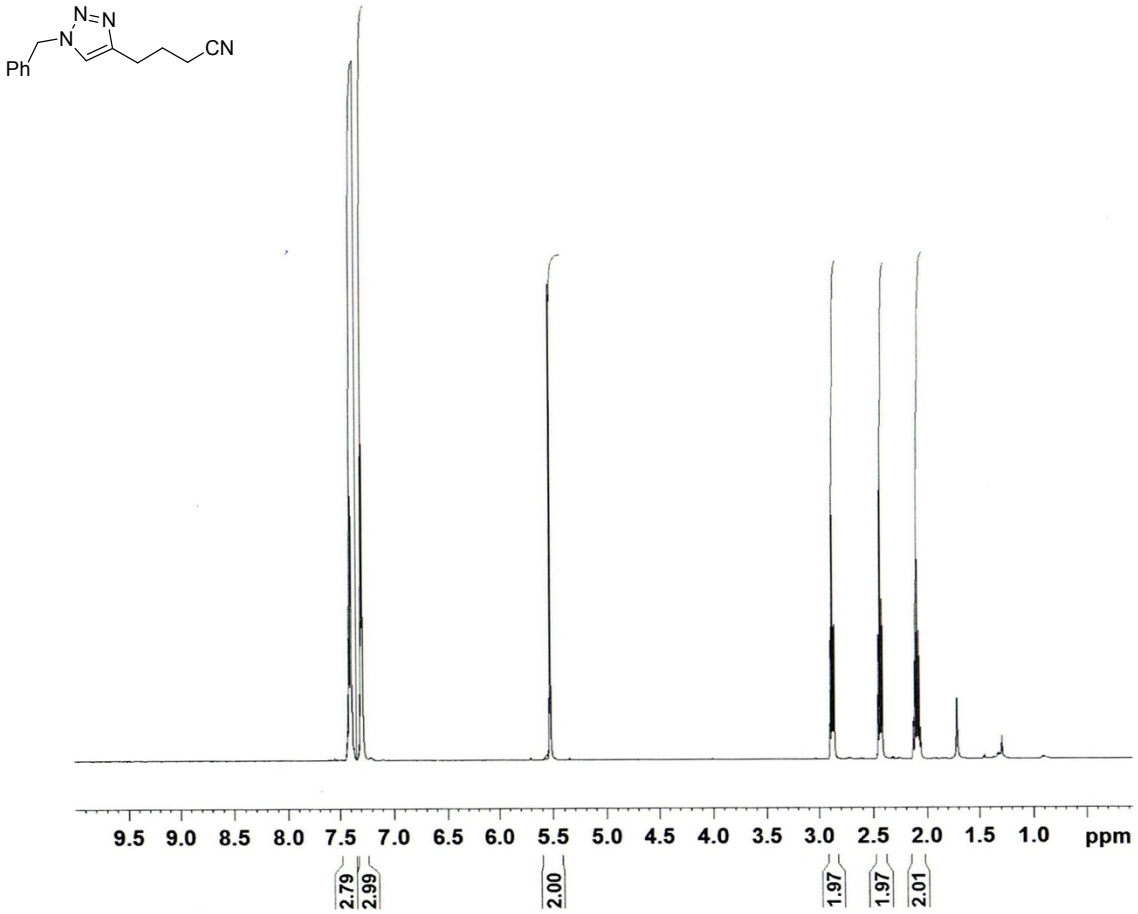
Ethyl 1-benzyl-1H-1,2,3-triazole-4-carboxylate, ***14****, ^{1}H NMR in $CDCl_3$:*



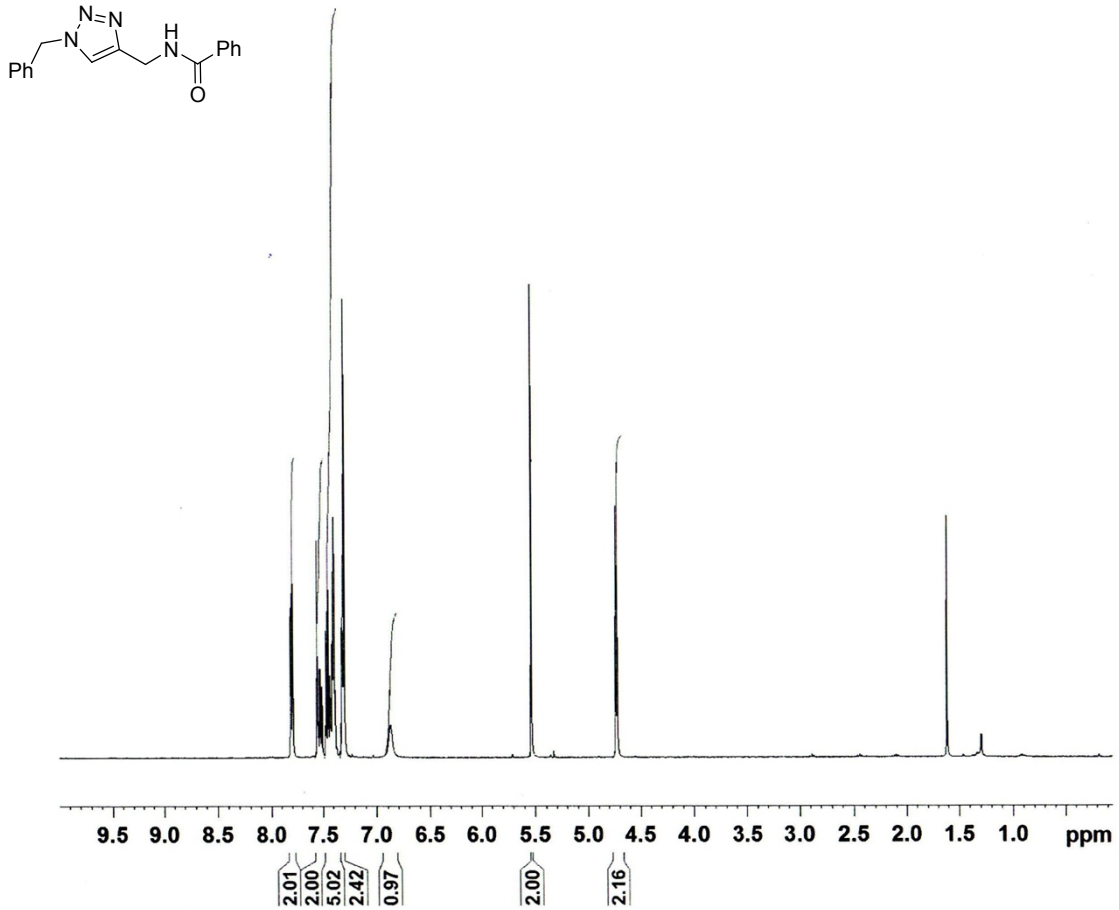
(1-Benzyl-1H-1,2,3-triazol-4-yl)methyl acetate, ***15****, ^{1}H NMR in $CDCl_3$:*



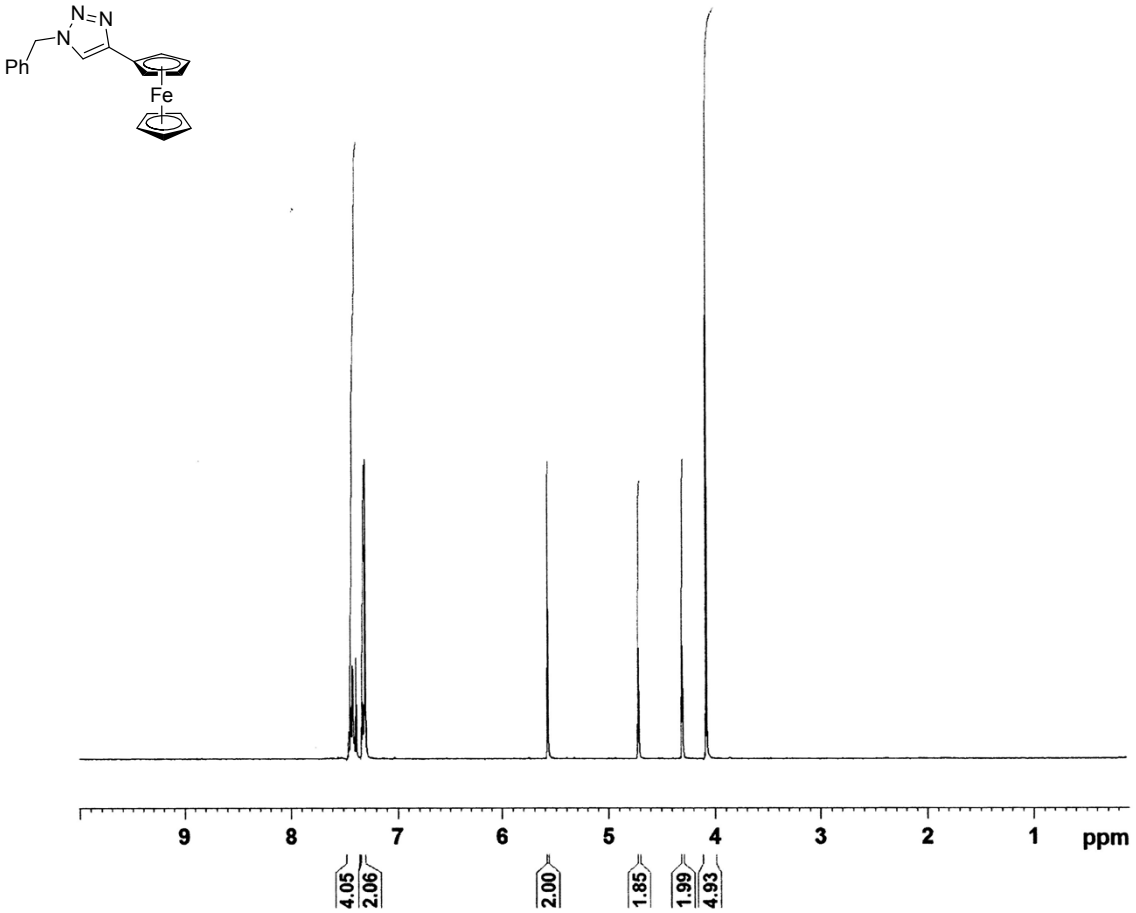
4-(1-Benzyl-1H-1,2,3-triazol-4-yl)butanenitrile, ***16****,* ^{1}H *NMR in* $CDCl_3$*:*



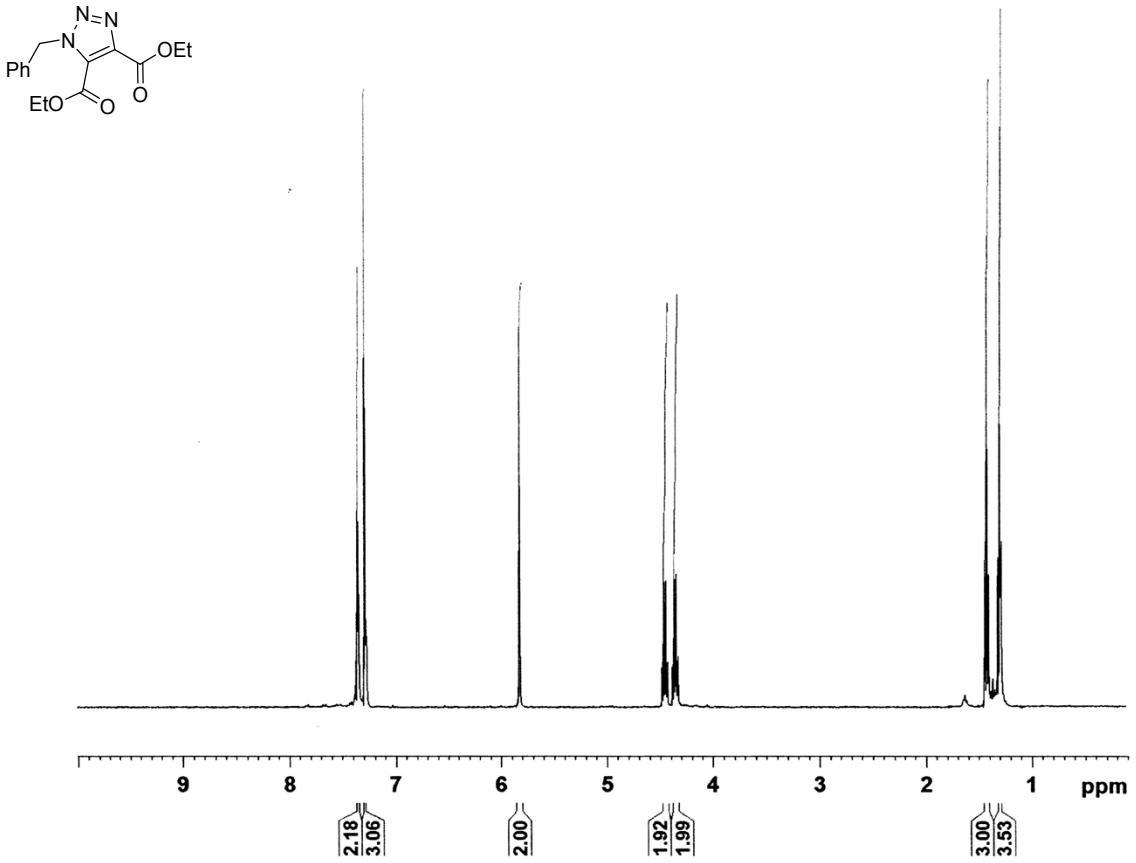
N-((1-benzyl-1H-1,2,3-triazol-4-yl)methyl)benzamide, ***17****,* ^{1}H *NMR in* $CDCl_3$*:*



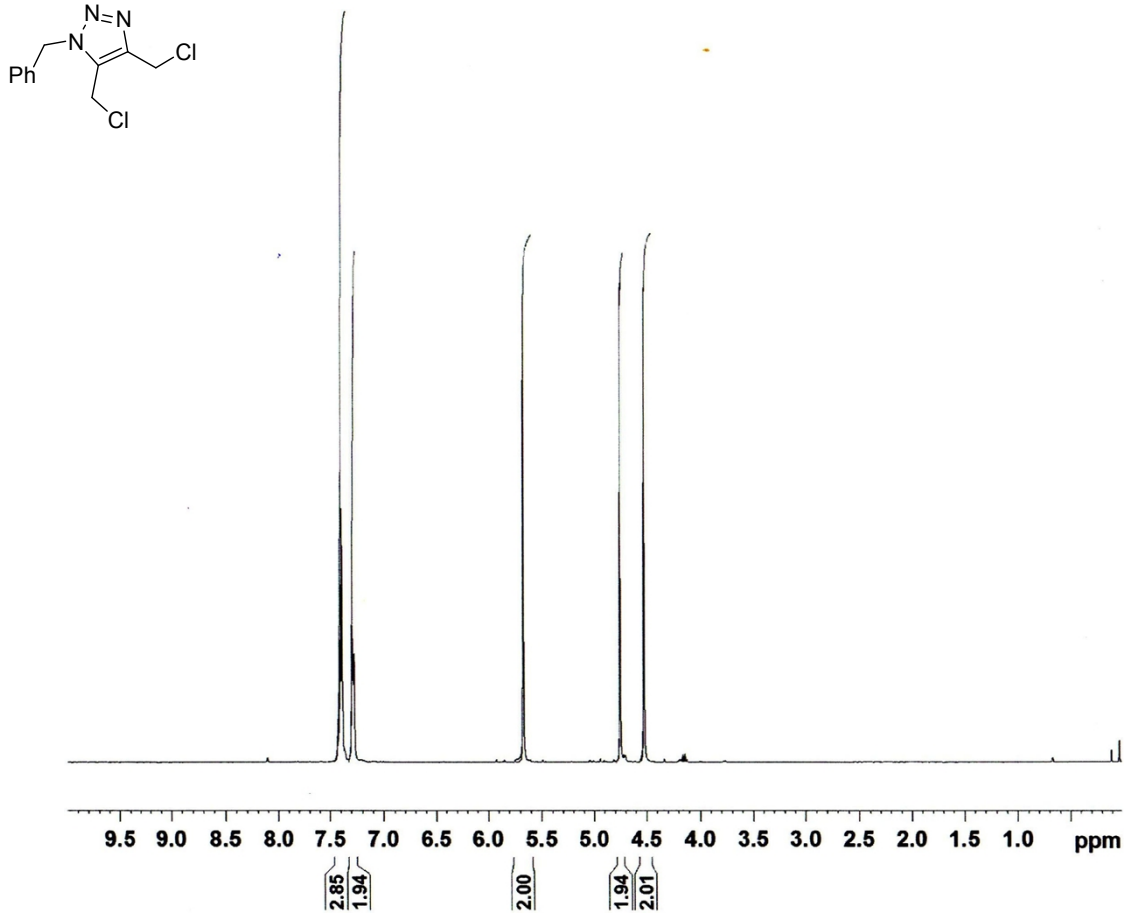
1-Benzyl-4-ferrocenyl-1H-1,2,3-triazole, ***18****, ^{1}H NMR in $CDCl_3$:*



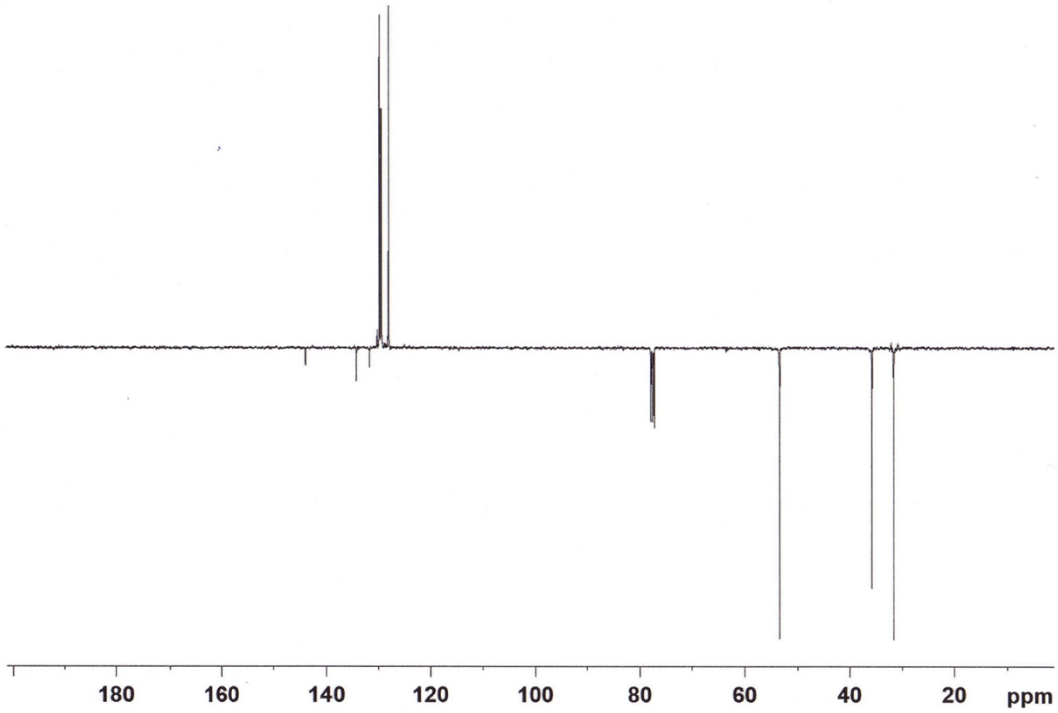
Diethyl 1-benzyl-1H-1,2,3-triazole-4,5-dicarboxylate, ***19****, ^{1}H NMR in $CDCl_3$:*



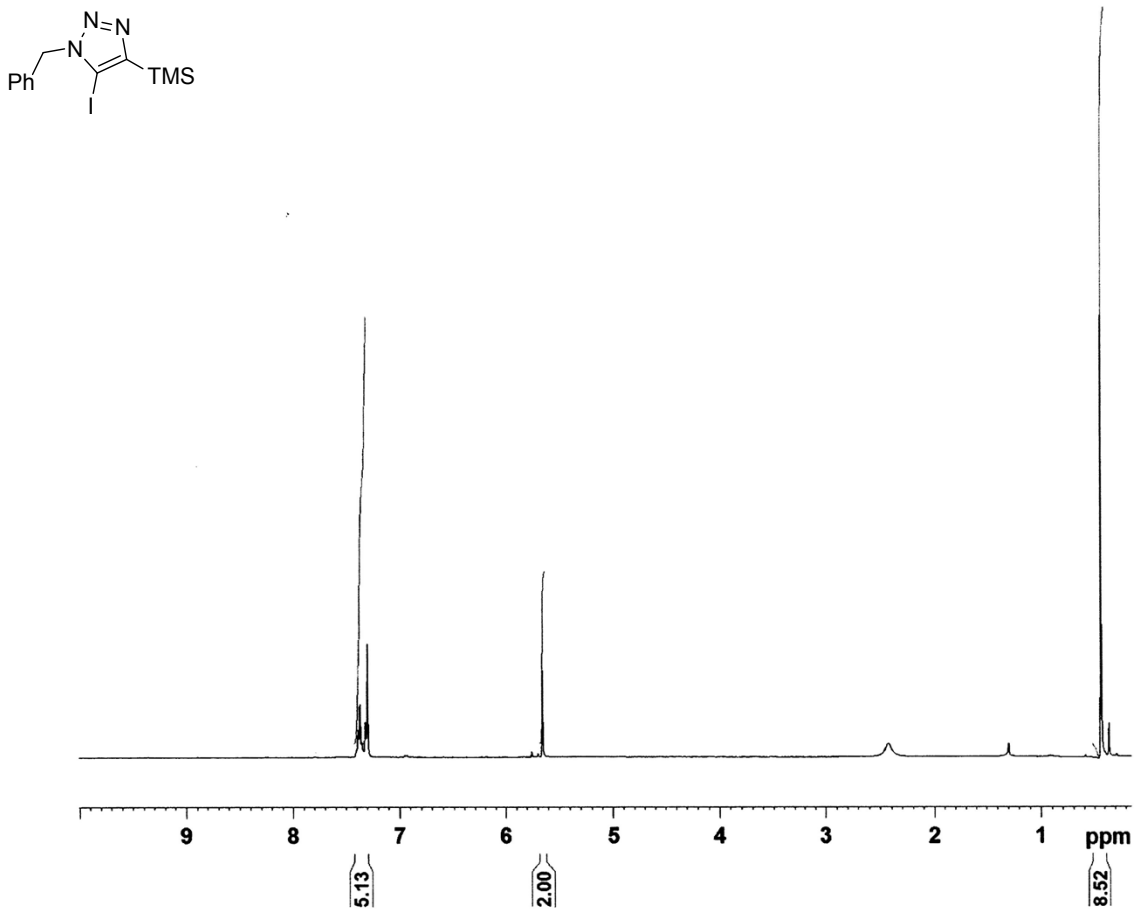
1-Benzyl-4,5-bis(chloromethyl)-1H-1,2,3-triazole, ***20****,* ^{1}H *NMR in* $CDCl_3$*:*



^{13}C *NMR in* $CDCl_3$*:*



1-Benzyl-5-iodo-4-(trimethylsilyl)-1H-1,2,3-triazole, ***21****,* ^{1}H *NMR in* $CDCl_3$*:*



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