Synthesis of New bis-Bidentate Nitrogen Ligand: 1,4-bis[(3,5-dimethyl-1H-pyrazol-1-yl)methyl]piperazine

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The product 2 was prepared by the addition of piperazine (C_4H_{10}N_2) to 1 [1] according to the reported procedure [2]. To a solution of the substituted hydroxymethylpyrazole 1 (1.26 g, 10 mmol) in acetonitrile (50 ml) was added piperazine (0.95 g, 5 mmol) and the mixture was stirred. The stirring was continued at room temperature for 4 days. The solvent was evaporated under reduced pressure. The solid was crystallised in ethanol to afford 2 as a white solid (2.31 g, 76%).

Melting point: 158-160°C.

IR (KBr, cm^{-1}): 2270 (CH); 1650 (C=C, C=N).

1H-NMR (60 MHz, CDCl_3): δ= 5.8 (s, 3H, Pyrazol, H^4,4'); 4.6 (s, 4H, 2NCH_2N); 2.6 (s, 8H, 4CH_2-N); 2.30 (s, 6H, 2CH_3).

13C-NMR (300MHz, D_2O): δ= 9.64 (Pz-CH_3); 12.12 (Pz-CH_3); 69.4 (Pz-CH_2-N); 81.75 (N-CH_2-CH_2-N); 106.38(PzC-H); 141.66 (PzC=N); 149.94(PzC-N).
EI-MS (m/z; %): Calculated for C_{16}H_{26}N_{6} : 302.418. Found: 303[M^+] ; 109; 95.

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References

*Sample Availability:* Available from the authors and MDPI.

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