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10,14-(Cyanomethyl)-6,18-dimethyl-1,5,9,14,19,20-hexaazatricyclo[14.2.1.1^{5,8}]icosa-6,8(20), 16(19), 17-tetraene

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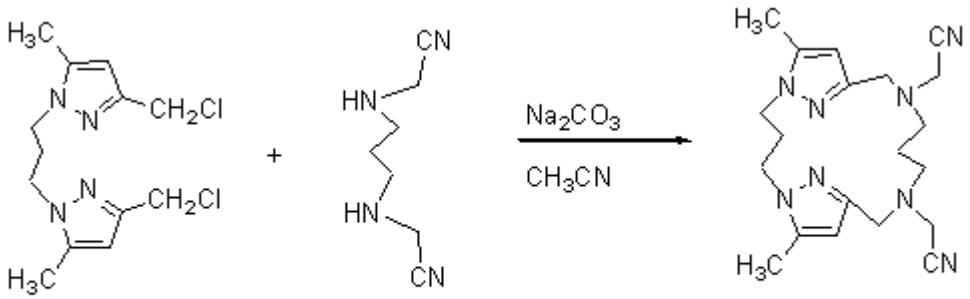
Received: 16 June 2002 / Accepted: 30 September 2002 / Published: 11 March 2003

Keywords: macrocyclic compounds, macrocyclic cavity, pyrazole



1 **2** **3**

A suspension of sodium carbonate (12 g, 120 mmol) in acetonitrile (250 mL) was refluxed under magnetic stirring, then a solution of bis-(3-chloromethyl-5-methylpyrazolyl)propane (**1**) (2.03 g, 7 mmol) [1-3] and diamine **2** (1.9 g , 7 mmol) in acetonitrile (50 mL) was added dropwise. The solution was refluxed under stirring for two hours, filtered and the solvent was removed in vacuum, the residue was purified on alumina column with (CH_2Cl_2/MeOH : 97/3) as eluent to give the macrocycle **3** as an oily substance.

Yield: (1.1 g, 50 %).

$(FAB)^+$ $[M+H]^+$ = 363.

^{1}H NMR (250 MHz, $CDCl_3$) d ppm: 5.93 (s, 2H, HPz) ; 4.00 (t, 4H, CH_2-$\underline{CH_2}$-Pz) ; 3.60 (s, 4H, CH_2-CN) ; 3.50 (s, 4H, Pz-CH_2-N) ; 2.50 (t, 4H, N-$\underline{CH_2}$-CH_2) ; 2.16 (s, 6H, CH_3-Pz) ; 1.60 (m, 2H, Pz-CH_2-$\underline{CH_2}$-CH_2) ; 1.56 (m, 2H, N-CH_2-$\underline{CH_2}$).

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