

Molecules **2001**, *6*, M210

(2,2'-Bipyridine-N,N')dibutyldiisothiocyanotin

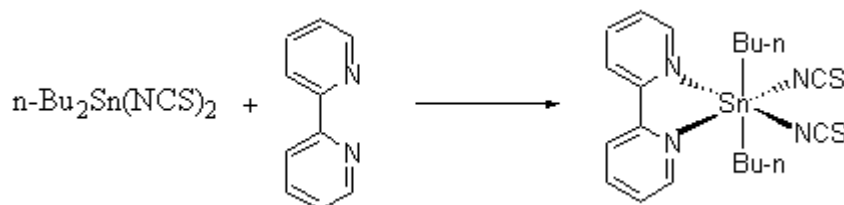
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Received: 5 May 2000 / Accepted: 21 February 2001 / Published: 25 March 2001

Diorganotin dihalide complexes with bidentate nitrogen ligands exhibit some pharmaceutical activities such as antitumour activity, antiviral activity and anti-microbiological activity[1-3], we have synthesized some diorganotin dihalide and dipseudohalide complexes with bidentate nitrogen ligands, one of which is (2,2'-bipyridine-N,N')dibutyldiisothiocyanotin.



A solution of dibutyldiisothiocyanotin (1.40 g, 4 mmol) in benzene (20 ml) was added to a solution of 2,2'-bipyridine (0.63 g, 4 mmol) in benzene (20 ml). The mixture was refluxed for 4 h, the solid that appeared upon cooling was filtered and recrystallized from absolute ethanol to give the title compound as white crystal (1.70 g, 84%).

M.p. 127-128°C.

IR(KBr): 2010 (NCS), 1596 (C=C), 1440 (C=N), 870 (NCS), 770, 730 (C-H), 590 (Sn-C), 470 (NCS).

¹H-NMR(CDCl₃, 250 MHz): 9.21 (d, 2H, H-6 in 2,2'-bipyridine ring), 8.42 (d, 2H, H-3), 8.30 (dd, 2H, H-4), 7.81 (dd, 2H, H-5), 1.68 (m, 8H, 4CH₂), 1.07 (m, 4H, 2CH₂), 0.72 (t, 6H, 2CH₃).

Anal. calcd. for C₂₀H₂₆N₄S₂Sn (505.29): C 47.54, H 5.19, N 11.09; found: C 48.23, H 5.22, N 10.77.

References

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Sample Availability: available from authors and MDPI, MDPI Reg. No.1210.

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