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Dibutyldichloro(1,10-phenanthroline-N¹,N¹⁰)tin

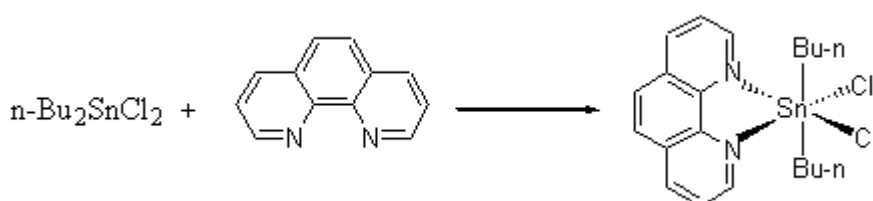
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Diorganotin dihalide complexes with bidentate nitrogen ligands exhibit some pharmaceutical activities such as antitumour activity, antiviral activity and anti-microbiological activity[1-3], we have synthesized some diorganotin dihalide complexes with bidentate nitrogen ligands, one of which is dibutyldichloro(1,10-phenanthroline-N¹,N¹⁰)tin.



A solution of dibutyltin dichloride (1.22 g, 4 mmol) in benzene (20 ml) was added to a solution of 1,10-phenanthroline (0.72 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 (1.82 g, 94%).

M.p. 190-193°C.

IR(KBr): 1620 (C=N), 1574, 1514 (C=C), 850 (C-H), 624, 594 (Sn-C).

¹H-NMR(CDCl₃, 250 MHz): 9.82 (dd, 2H, H-2 in aromatic ring), 8.71 (dd, 2H, H-4), 8.14 (s, 2H, H-5), 8.03 (dd, 2H, H-3), 1.60 (m, 4H, 2CH₂), 1.38 (m, 4H, 2CH₂), 1.06 (m, 4H, 2CH₂), 0.62 (t, 6H, 2CH₃).

Anal. cacl. for C₂₀H₂₆Cl₂N₂Sn (394.81): C 49.63, H 5.41, N 5.79; found: C 49.45, H 5.70, N 5.84.

References

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Sample Availability: available from authors and MDPI, MDPI Reg. No.1204.

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