

Synthesis of N,N'-bis (a-methylsalicylidene) 4,4'-diaminodiphenylmethane as a novel complexing agent

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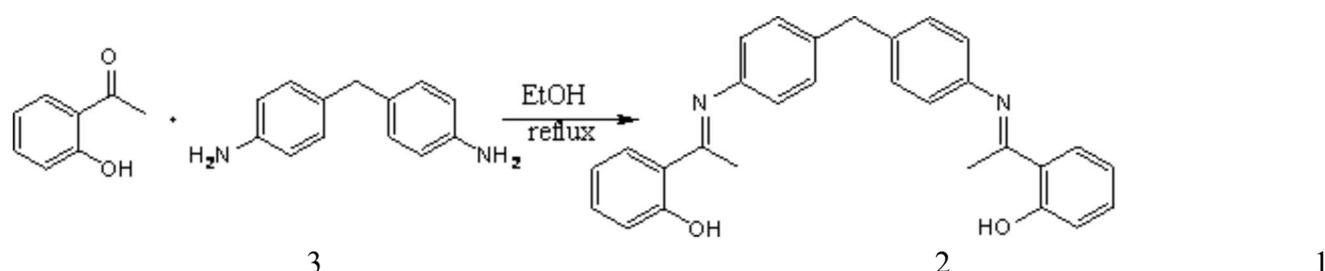
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Schiff base ligands are used in complexation with metals such as V(II) for the enantioselective oxidation of sulfides to chiral sulfoxides. An increasing number of chiral sulfoxides are becoming useful chiral auxiliaries in asymmetric synthesis [1]. Cameron and his co-workers have shown that Schiff base ligands are capable of stabilising cationic methylaluminium centres only when they possess an additional donor arm [2]. Synthesis and spectroscopic studies of the optically active copper(II), cobalt(II) and nickel(II) complexes with Schiff bases have been studied by Szlyk [3]. Schiff base ligands have been used in several catalytic asymmetric reactions [4]. Metal complex Schiff bases have also been used in oxidation reactions [5].



2-Hydroxyacetophenone 1 (2.03g, 1.8 mL, 15.00 mmol) and 4,4'-diaminodiphenylmethane 2 (0.99 g, 5.00 mmol) were dissolved in 10 mL of warm ethanol. The reaction mixture was refluxed for 14h. The solid product was filtered off and washed with ethanol. The pure Schiff base 3 was obtained as a yellow solid (yield 78%)

Melting Point: 120°C

IR (KBr, ν , cm^{-1}): 3244 (OH); 1647 (C=N).

$^1\text{H-NMR}$ (250 MHz, CDCl_3): δ = 2.20 (6H, s, ArCH₃); 3.87(2H, s, Ar-CH₂); 6.61 (2H, d, Ar); 7.06-7.96 (5H, m, Ar); 14.86 (2H, s, OH).

$^{13}\text{C-NMR}$ (62.9 MHz, CDCl_3): δ = 17.06; 40.88; 11.35; 11.24; 12.57; 128.89; 129.52; 129.76; 132.96; 137.67; 138.64; 162.07; 171.24.

MS (m/z): 434 (25%), 316 (37%), 198 (38%), 106 (87%), 77 (20%).

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Sample Availability: Available from MDPI.

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