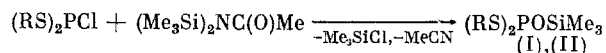


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Silylphosphites containing RS groups at the phosphorus atom have not been reported. We have found that S,S'-dialkyldithiochlorophosphites upon heating and the elimination of trimethylchlorosilane and acetonitrile react with bis(trimethylsilyl)acetamide to form new silylphosphite derivatives, S,S'-dialkyltrimethylsilyldithiophosphites (I) and (II)



R = Et (I) and n-Bu (II).

The IR spectra of (I) and (II) (ν , cm^{-1}): 1255, 855 (CH_3Si), 958-956 ($P-O-Si$), 650 ($C-S$), 580-480 ($P-S$). ^{31}P NMR spectra at 10.2 MHz relative to 85% H_3PO_4 : (I) 168, (II) 163 ppm.

The mild hydrolysis of silylphosphites (I) and (II) leads to unstable S,S'-dialkyldithiophosphites with δP 28 ppm, $J_{PH} = 632$ Hz, which are difficult to prepare by other methods [1, 2].

S,S'-Diethyltrimethylsilyldithiophosphite (I) was obtained in 53.6% yield, bp 118-120°C (10 mm), $d_4^{20} 0.9891$, $n_D^{20} 1.4936$. PMR spectrum at 60 MHz in benzene (δ , ppm, J, Hz): 0.32 s (CH_3Si), 1.32 t (CH_3CS), $^3J_{HH} = 7.5$, 2.77 d. q (CH_2S , $^3J_{HH} = 7.5$, $^3J_{HP} = 9.0$). Found, %: C 35.01, H 7.86, P 13.09, S 25.95, Si 11.72. $C_{17}H_{19}OPS_2Si$. Calculated, %: C 34.71, H 7.85, P 12.81, S 26.44, Si 11.57.

S,S'-Dibutyltrimethylsilyldithiophosphite (II) was obtained in 55.5% yield, bp 94°C (0.03 mm), $d_4^{20} 0.9794$, $n_D^{20} 1.4970$. PMR spectrum in CCl_4 (δ , ppm, J, Hz): 0.25 s (CH_3Si), 0.74-1.10 m (CH_3C), 1.25-1.82 m (CH_2CH_2C), 2.73 d. t (CH_2S , $^3J_{HH} = 7.5$, $^3J_{HP} = 9.0$). Found, %: C 44.59, H 9.10, P 10.71, S 21.77, Si 9.66. $C_{11}H_{27}OPS_2Si$. Calculated, %: C 44.30, H 9.06, P 10.40, S 21.48, Si 9.40.

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