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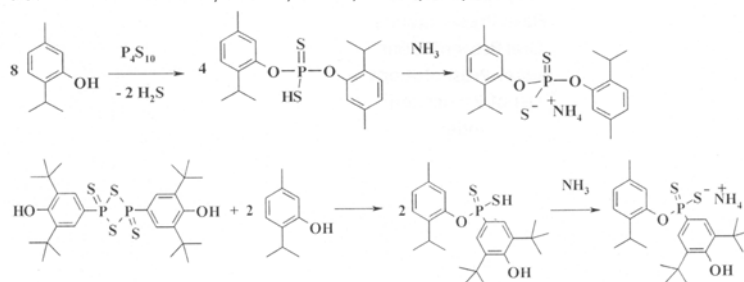
Dithiophosphoric and Dithiophosphonic Acids and Their Derivatives on the Basis of Thymol. Synthesis and Antimicrobial Activity

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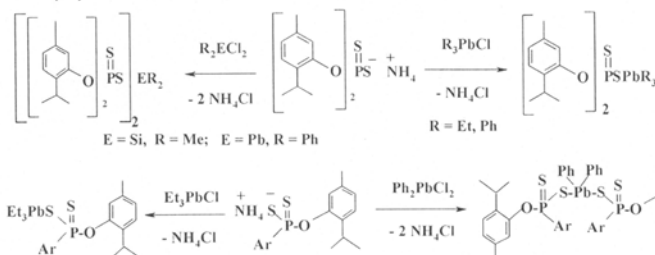
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Organothiophosphorus compounds contained pharmacophoric functionalities in O-aromatic substituents at the tetracoordinated phosphorus atom seem to possess appreciate biological activity. We have studied thiophosphorylation reactions of thymol as one the most accessible aromatic terpeniol. Tetraphosphorus decasulfide has brought about to react with thymol in benzene at 50°C for 2 h with the formation of O,O-di(2-iso-propyl-5-methylphen-1-yl) dithiophosphoric acid transformed into the corresponding ammonium salt. 2,4-Diaryl 1,3,2,4-dithiadiphosphetane-2,4-disulfides react with thymol to yield aryldithiophosphonic acids.



S-Silyl and S-plumbyldithiophosphates were prepared on the basis of the reactions of the corresponding ammonium salt with triethyl chloroplumbane and triphenyl chloroplumbane, dimethyl dichlorosilane and diphenyl dichloroplumbane, and tetrachlorosilane. Triethyl chloroplumbane and diphenyl dichloroplumbane were also involved in the reactions with ammonium aryldithiophosphonates prepared to give S-plumbyl dithiophosphonates and bis(aryldithiophosphonato) plumbanes. Products prepared possess antimicrobial activity in relation to *Staphylococcus aureus*, *Escherichia coli* and *Candida*.



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