Carbamoyl and Thiocarbamoyl Derivatives of 3-Aminopropyl-dimethyl-phosphine Oxide

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A series of fourteen new 3-[N-substituted carbamoyl (or thiocarbamoyl)]-aminopropyl-dimethyl-phosphine oxides have been synthesized and characterized. The compounds were prepared *via* reaction of the 3-aminopropyl-dimethyl-phosphine oxide with the corresponding isocyanates or isothiocyanates. The composition of the compounds was proved by elemental analysis and the structures were confirmed by IR, ^{1}H, ^{31}P, ^{31}P{^{1}H} NMR spectroscopy and by mass spectrometry. The structures of 3[(N-phenyl-thiocarbamoyl)amino]propyl-dimethyl-phosphine oxide (**5**), 3[(N-4-chlorophenyl-thiocarbamoyl)amino]propyl-dimethyl-phosphine oxide (**6**), and 3[(N-benzyl-thiocarbamoyl)amino]propyl-dimethyl-phosphine oxide (**9**) have been confirmed by X-ray diffraction.

Key words: 3-[N-Substituted Carbamoyl (or Thiocarbamoyl)]-aminopropyl-dimethyl-phosphine Oxides, Phosphorus-Containing Ureas and Thioureas, Tertiary Phosphine Oxide