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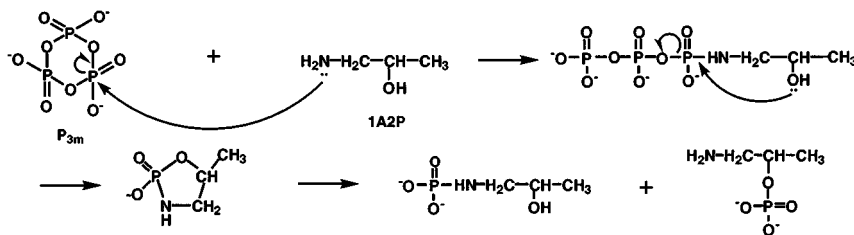
PHOSPHORYLATION OF AMINO ALCOHOLS BY INORGANIC CYCLO-TRIPHOSPHATE

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The phosphorylation of amino alcohols has been achieved using *cyclo*-triphosphate (P_{3m}) in aqueous solution with their maximum yields of more than 98%. The products were imidotriphosphates¹ of 3-amino-1-propanol, 4-amino-1-butanol, and 5-amino-1-pentanol, which were all stable.

The reaction of 1-amino-2-propanol (**1A2P**) with P_{3m} produced its triphosphate derivative. Its yield increased with the reaction time to reach a maximum of 96% after 8 h, and then decreased gradually. The triphosphate derivative of **1A2P** decomposed to two monophosphate derivatives via a cyclic phosphate (Scheme 1). Similar to **1A2P**, the phosphorylation of 2-aminoethanol and 1-amino-2-butanol proceeded with the same mechanism. These imidotriphosphates were unstable and gradually decomposed to monophosphates because of the vicinal OH group.



SCHEME 1

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